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The Persistence of the Block as an Urban Structure

A Comparative Study of the Typology of the Berlin Block

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For Charlie Jr.

Watching you to explore this world
is one of my greatest pleasures,
I cannot wait to see all the amazing things
you will accomplish.

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ABSTRACT

This dissertation proposes a comparative study of the Berlin block, the city's ubiquitous typology of the late nineteenth century and the form of the 1970s block. The study seeks to examine the block's historical transformation based on the historical and typological interpretation. It sheds light on the specific moment in architectural history, in which the form was reinstated in Berlin's urban fabric. After several decades of extensive criticism of the block since the form's inception, the typology returned and proliferated in Berlin at the time of the Internationale Bauaustellung 1979-1984/87, known as Berlin International Building Exhibition, the IBA. This new planning framework, embraced the formal qualities of the nineteenth century's block in a modified form: its density, dynamic mix of uses and programmes, together with a vibrant street life and spatiality defining urban space. These values were sought in the regeneration of the existing urban fabric as well as in new developments; they were further adopted in the new planning strategy - the 1995 Planwerk Innenstadt, and are said to be yet again reevaluated for the 'vision and inspiration' by the future planning framework, Stadtenwicklungskoncept, 2030 (the Urban Development Concept, Berlin 2030) (Bodenschatz, 2010, Bradley and Hedrén, 2014, Senate Department for Urban Development and Environment, 2013).

The study traces the development of the block, and compares the different typologies across time: during the nineteenth century, and the form of the block developed in line with the 1970s idea as exemplified by Rob Krier and Oswald Mathias Ungers. The objective of this comparison is less an evaluation of the block as representation of history, and instead it is the analysis of the changing logic behind the idea of the block, including its performance as urban structure. Thus, rather than seeing the block from historical perspective the study focuses at its form as an element of typology and morphology. It looks at patterns of architectural transformation, and explores the possibility of reoccurring typological relationships. It is argued that only from that point the resultant blocks can illustrate distinctive approaches providing formal and organisational grounds for the articulation of the city understood as an architectural phenomenon. Profoundly, the study further argues that also from that point we may provide a nuanced reading of the block seen as a gradually evolving form since the nineteenth century. This reading is unlike that suggested by the canon of architectural historiographies. It stands against the dominant historical narrative that sees the twentieth century Modernist planning and architecture as marked by a radical break from history. This study instead demonstrate a continuity of logic behind the idea of the block.

This study's typological comparison and interpretation is proposed to enhance our understanding of the block in historical context. By taking different perspectives on architecture's legacy the proposed interpretation can help to recognise and discover architectural types and connections between them and their history. The findings illustrate how the blocks' different spatial qualities and typological performances define and respond to the role of architecture in the formation and organisation of urban processes. With the view that many publications seeking to understand the urban development and evolution in architecture address the complexities and expansion of the city or insist on architecture's formal autonomy as some sort of language, this study promotes a different view of the built environment by extending our knowledge about architecture's precise relation to the urban environment and history. It also foregrounds the fresh understanding of typology as a changing way of conceptualising and understanding architecture.

The scope of this study concerns the two distinct periods of history. It reviews the historical origins of the block and its early implementation, before comparing it with the block several decades later, when its form reappeared after 1970s. This reading traces the development of the nineteenth century form until the twenty-first century, revealing the results of the typological and historical transformations and reinventions throughout this period. The focus of the study is on the influence of the block within the spatiality and function of the city, highlighting its role as a defining element of the urban space.
This thesis is offered for the use of architectural history and theory, and may also help to inform the future challenges in urban design.

Keywords: *urban typology, Berlin block, design approach, urban development, architectural evolution, Neorationalism, IBA, Rob Krier, Oswald Mathias Ungers.*

TABLE OF CONTENTS

Chapter 1: INTRODUCTION 1

1. 1. RESEARCH OBJECT 2
1.1.1 TYPOLOGY OF THE BLOCK THROUGH THEORY AND PRACTICE OF ARCHITECTURE 2

1.2. LITERATURE REVIEW 4
1.2.1 EVOLUTION OF THE NINETEENTH CENTURY BLOCK 8

1.3. METHODOLOGY 30
1.3.1. TYPOLOGY AS THE METHOD – THE HISTORICAL INSIGHT 30

1.4. THESIS CONTRIBUTION 36

1.5. THESIS STRUCTURE 39

PART 1: THE EMERGENCE AND EVOLUTION OF THE NINETEENTH CENTURY BLOCK 46

Chapter 2: THE MID-NINETEENTH CENTURY THEORY OF URBANISATION AND THE PRACTICE OF THE CITY 47
2.1. CHAPTER INTRODUCTION 48

2.2. CERDA'S THEORY OF URBANISATION 49
2.2.1. CERDÀ'S 'CITY AS FUNCTION' 50
2.2.1.1. TOWARDS THE INTERCONNECTED URBAN FRAMEWORK 50
2.2.1.2. PARADIGM OF URBANISATION AS A METHOD AND SYSTEM OF PLANNING RULES 52
2.2.1.3. CITY AS MOTION VERSUS CITY AS A STATIC OBJECT 53

2.3. EXPANSION OF THE NINETEENTH CENTURY BERLIN 56
2.3.1. PARADIGM OF URBANISATION IN PRACTICE 56
2.3.2. BERLIN EXTENSION PLAN OF 1862 56
2.3.2.1. REGULARISATION OF THE 'OUTDATED' CITY 57
2.3.2.2. EARLY REGULARIZATION OF BERLIN BY KARL FRIEDRICH SCHINKEL 58
2.3.3.3. COMPREHENSIVE PLANNING OF BERLIN BY JAMES HOBRECHT 65

2.4. THE TYPOLOGY OF THE BERLIN BLOCK 70
2.4.1. CRITIQUE OF THE NINETEENTH CENTURY BERLIN BLOCK 70
2.4.2. THE EARLY NINETEENTH CENTURY BLOCK 74
2.4.3. THE 1862 BUILDING PLANS OF THE BLOCK 80

2.5. CHAPTER CONCLUSION 84

Chapter 3: TRANSFORMATION OF THE BLOCK DURING THE NINETEENTH CENTURY 87
3.1. CHAPTER INTRODUCTION 88

3.2. PRACTICE OF THE CITY AFTERMATH OF THE 1862 PLAN 90

3.3. FORMAL AND GRAPHIC INTERPRETATION OF THE MID NINETEENTH CENTURY URBAN RATIONALITY 93
3.3.1. TRACING CHANGE IN LUISENSTADT 93
3.3.2. FORMAL AND PROGRAMMATIC VARIETY AND RECURRENCE – NAUNYNSTRASSE, LUISENSTADT 99
3.3.3. SPATIAL ORGANISATION OF THE NINETEENTH CENTURY BLOCK 103
3.3.3.1. THE FIRST PERIOD, PRIOR 1865 103
3.3.3.2. THE SECOND PERIOD, 1865-1875 108
3.3.3.3. THE THIRD PERIOD, 1875-1885 111
3.3.3.4. THE FOURTH PERIOD, 1885-1895 115
3.3.3.5. THE FIFTH PERIOD, 1895-1914 117

3.4. TRANSFORMATION OF THE INDIVIDUAL BLOCK TYPOLOGY 119
3.4.1. TYPOLOGY OF THE BLOCK AT 34 ORANIENSTRASSE 121
3.4.2. TYPOLOGY OF THE BLOCK AT 40/41 ORANIENSTRASSE 125
3.4.3. TYPOLOGY OF THE BLOCK AT 13 LEUSCHERDAMM (53 ELISABETHUFER) 128

3.5. THE REFORMED BERLIN BLOCK 133
3.5.1. THE NEW BUILDING REGULATIONS 133
3.5.2. THE NEW TYPOLOGY OF THE BERLIN BLOCK – POST 1880 136
3.5.2.1. DESIGN OF HOUSING BLOCK BY THE 'ARCHITECTS-URBANISTS' 137

3.6. CHAPTER CONCLUSION 146

Chapter 4: POSTSCRIPT ON MODERNISM 149
4.1. CHAPTER INTRODUCTION 150
4.2. CIAM's REACTION AGAINST HISTORY 150
4.3. MODERNIST PLANNING AND ARCHITECTURE IN CONTEXT OF BERLIN – THE BEGINNINGS OF CHANGE 155
4.4. CHAPTER CONLCLUSION 158

PART 2: THE TYPOLOGY OF THE POST 1970s BLOCK 160

Chapter 5: THE 1970s THEORY OF 'URBAN SCIENCE' 161

5.1. CHAPTER INTRODUCTION 162

5.2. ITALIAN HERALDS OF THE NEW ERA – *LA TENDNZA* 163
5.2.1. TYPE AND TYPOLOGY IN THE AGE OF ENLIGHTENMENT 165
5.2.1.1. QUATREMÈRE'S NOTION OF TYPE AND DURAND'S NATURE OF MODEL 165

5.3. INFLUENCE OF GULIO CARLO ARGAN AND ALDO ROSSI ON THE ARCHITECTURAL PROFESSION 175

5.4. ROSSI'S DESIGN THESIS 178

5.5. ROSSI'S TYPE MATERIALISED 186

5.6. THE CRITIQUE AND COUNTER-CRITIQUE OF THE THEORY 189

5.7. CHAPTER CONCLUSION 194

Chapter 6: THE RETURN OF THE BLOCK TO THE URBAN FABRIC IN CONTEXT OF THE 1979 – 1984/87 IBA PLANNING FRAMEWORK 196
6.1. CHAPTER INTRODUCTION 197

6.2. URBAN AND HOUSING QUESTION OF THE 1970s 199

6.3. THE INTERNATIONAL BUILDING EXHIBITION, BERLIN 1979-1984/87 203
6.3.1. THEORETICAL FRAMEWORK OF THE IBA 204

6.4. IBA IN PRACTICE 208
6.4.1. THE ALTBAU SECTION 208
6.4.2. THE NEUBAU SECTION 221

6.5. THE PLANWERK INNENSTADT, 1995 233

6.6. THE MID-NINETEENTH CENTURY BLOCK TODAY 236

6.7. CHAPTER CONCLUSION 245

Chapter 7: ROB KRIER: THE SEARCH FOR THE CONTINUITY OF A DISCIPLINE 250
7.1. CHAPTER INTRODUCTION 251

7.2. URBAN SPACE THEORY 252
7.2.1. TYPOLOGY AS A METHOD OF HISTORY AND GEOMETRY 253

7.3. KRIER'S URBAN PROJECTS 264
7.3.1. CITY AS AN OBJECT OF RECONSTRUCTION 264
7.3.2. INTERVENTIONS INTO THE CITY CORE 268

7.4. REINSTATEMENT OF THE BERLIN HISTORIC TYPOLOGIES: THE BLOCK AND URBAN VILLA 270
7.4.1. THE RAUCHSTRASSE SCHEME, 1980 272
7.4.2. THE RITTERSTRASSE BERLIN BLOCK, 1979 276
7.4.2.1. THE INNER SPACES OF THE BLOCK 293

7.5. CRITIQUE THE RITTERSTRASSE BLOCK 296

7.6. CHAPTER CONCLUSION 301

Chapter 8: OSWALD MATHIAS UNGERS: THE QUEST FOR AN ONGOING ARCHITECTURE 304
8.1. CHAPTER INTRODUCTION 305

8.2. MORPHOLOGICAL TRANSFORMATIONS AND *COINCIDENTIA OPPOSITORIUM* 307
8.2.1. SUMMER SCHOOL 1977/78; A *GROSSFORM,* AND *THE CITY WITHIN THE CITY*, BERLIN: A GREEN ARCHIPELAGO 321

8.3. THE POST-1970s BLOCK BY UNGERS 327
8.3.1. THE TYPOLOGY OF THE URBAN BLOCK AT SCHILLERSTRASSE, CHARLOTTENBURG, 1978-1982 327
8.3.2. THE BLOCK AT KÖTHENERSTRASSE, KREUZBERG 1982 344
8.3.3. THE BLOCK AT HALLESCHE UFFER, KREUZBERG 1995 349

8.4. CRITIQUE OF UNGERS' THEORY 360

8.5. CHAPTER CONCLUSION 361

Chapter 9: CONCLUSION 365

BIBLIOGRAPHY 382

Chapter One

INTRODUCTION

1.1. RESEARCH OBJECT

1.1.1. TYPOLOGY OF THE BLOCK THROUGH THE THEORY AND PRACTICE OF ARCHITECTURE

This dissertation considers the block, Berlin's dominant nineteenth century urban typology that prominently re-emerged in the context of the late 1970s architectural and urban debates. Seeking new design and planning paradigm, the planners reoriented their focus on the nineteenth century typology of the block. This reorientation regarded the rethinking of the architecture's autonomous dimension linked to the typological debate initiated in 1960s Italy. Thus, after the demise of Modernism, the typology of the block reappeared in Berlin as it did elsewhere in Europe. Historically, the form generated a vehicle for the grouped dwellings, spanning over four to six floors, it aligned the street providing at once a planning and design tool. In the 1970s, the block was proposed as a solution to both architectural and urban dilemmas of the post-war city.

Yet, at the beginning of the twentieth century, its form came to be seen as all that was wrong with the nineteenth century metropolis: squalid, insalubrious conditions in the buildings with little access to light, the subdued colours of their apartments, walls, floors that matched the grey shades of tenants' clothing (Ladd, 1997). The densely-constructed blocks occupied by a large number often not socially related and seen to be misbehaving tenants, were condemned by the critics at the time. They deemed the form oppressive, illustrating 'the most visible symbol of the forces destroying traditional bonds', the 'dark side of urban growth' (Ladd, 1997: 103), 'the bourgeois tool for suppressing the working class', and even the 'work of Satan' (Hasslum, 2008: 145). It was this understanding of the nineteenth century typology that resulted in the abolishment of the urban block during Modernism, and which directed the design focus on the new ideas about architecture and planning - particularly the new forms of the modernist housing, decentralisation and zoning, that meant to repair the 'ills' of the nineteenth century city. Around the same time, in architecture as in other disciplines, the new movement was directed against what was

considered ‘an obsolete culture’. In literature the 1935 maxim ‘Make it New!’ by the American writer Ezra Pound characterised this very self- conscious break with the history overturning traditional models of representation that began to be expressed in new forms.

Accordingly, soon after its inception to the urban fabric, the nineteenth century block became a subject of extensive criticism. Its form was lambasted by the historians, economists, and social reformers for the reasons of overcrowding and insalubrious conditions in the city. At the beginning of a new century the narrative historiographies saw the block as unruly slums (Isherwood, 1939) and further implied that the ‘diseases, high infant mortality, and suicide’ were a predestined consequence of the form (Brunner, 1996: 25), yet also during the late twentieth century those who wrote about the 1860s block based their views on the same literatures, which held the block responsible for all that was wrong with the Industrial city. In following, also the post-1980s historiographies perceived the spaces of the block as obsolete, squalid and no longer complying with the modern requirements and aspirations (Colquhoun, 1989). Peter Rowe (1993) argued:

> The courtyard form […] essentially remains a pre-modern housing type, most commonly found in many nineteenth century urban rental districts […]. [Its] very closed and cellular form is characteristic of nineteenth-century technology and urbanism and not of the horizontal mobility and flexibility of twentieth century cities. The *Siedlungen* and garden apartments for their part, were authentic modern housing types (Rowe, 1993: 168).

Throughout Modernism the nineteenth century block was therefore seen as the relic of the past, and its dense form was generally disapproved of, deemed rightly supplanted by the new forms of the Siedlungen. During that time, the 1933 Charter of Athens was still defining the city planning, typically separating the urban functions, living and leisure (Colquhoun, 1989). More so, in the 1950s and 1960s the planning authorities in Berlin as elsewhere in Europe, sponsored large scale demolition programmes that replaced the pre-modern block with the individual ‘towers in the park’ and traffic friendly infrastructure (Blake, 1993, Urban, 2012).

After the demise of Modernism, the planners looked back at the urban tradition for inspiration and alternative to the modernist city (Kleihues, 1993). The block returned to the urban fabric in the late 1970s, adapted to current needs. At that time, the historical reviews of the urban block were developed against the background of the late 1950s debates over good city form and the role of architecture in the city. To date, this urban debate has not been resolved; whilst the block is currently undergoing the renaissance and appears in a number of masterplans (such as Berlin, Paris - Bercy, Barcelona, Madrid, Rome and London Docklands[1]), there is still little academic research on the typology of the changing phases of the building block. It also appears that the theory continues to underemphasise this architectural and urban form's contribution to the city, with its formal and organisational capacity. With regards, it became crucial to undertake the thorough and highly selective theory review, to determine those studies provided by the architects and urban theorists who offered conspicuous spatial and formal analysis of the block; and which, more importantly, would not be set outside the time to which the form of the block belonged. Below I call upon the key perspectives illustrating the background and the overview of the history of the urban typology of the block. The next section therefore aims to locate this typological research in the larger body of knowledge.

1.2. LITERATURE REVIEW

This section sets the research context of the thesis, with the focus on the works that concern the formal and spatial qualities of the block and the debates over the role of architecture in the city. Those selected for the review are: the 2005 publication *Urban Forms: The Death and Life of the Urban Block* by the French architects, urban theorists and planners: Philippe Panerai, Jean Charles Dapaule and Ivor Samuels, and the 2009 book

[1] Promoted as a 'New London Vernacular', the terraced UK housing typology stemmed from the historical Georgian terraces - the 'mansion block' of the early twentieth century. As such, the transformation of the form may be seen as comparable with the evolution of the Berlin block. This UK housing typology is discussed in two publications: *Housing Design Guide* (2010) by London Development Agency, also in *A New London Housing Vernacular* (2012), by Urban Design London and Design for Homes.

chapter *Drawing and Dispute: The Strategies of the Berlin Block* by the architect and educator Katharina Borsi. Unlike the broad literature on the block seeing its form through other than a spatial and formal lens (which I also call upon below), these two accounts suggest that the work of architecture and other urban elements play a key role in the disposition and differentiation in the city. Both texts strictly relate to the typology of the block as urban form and are the closest to the subject of this thesis. The authors' illustration of the processes of typological and morphological evolution of the block enable me to build upon the existing body of knowledge. For these reasons these texts act as a core of my review in section 2.1. However, as the sketch of the block describing other than the typo-morphological accounts is important, below I also briefly demonstrate the wider scope of the ideas about the nineteenth century form as mostly propagated by the post 1870s literatures.

The majority of the historiographies illustrated the nineteenth century block from the anachronistic perspective of 'housing' (Rückert, 1914), linking its structure to health and hygiene problems (Hegemann, 1930, Isherwood, 1939) rather than poverty and the unethical work of profit-hungry development (Ladd, 1990, Ladd, 1997, Bernet, 2004). These writings further view the block as a social construct - a cause of diseases and crime (Bruch, in Eberstadt, 1909), an economic and environmental phenomenon (Baumeister, 1876, Rückert, 1917) and an object of style (Stübben, 1890, Stübben, 1890a, Sitte, 1889), rather than the formal outcome of planning principles active around the mid nineteenth century (Suttcliffe, 1989). Consequently, these accounts disregard the spatial and structural qualities of the form and its relation to the urban space, providing superficial reading of the nineteenth century typology.

In opposition, the architectural and urban histories described by Turner, 1996, Choay, 1969, Choay, 1997, Borsi, 2009 and Panerai et al, 2005, illustrated that across the mid nineteenth century Europe and around the time of the Industrial Revolution, the block was a successive form of the planning principles, understood as a form creating 'one whole with the city'. At the time, engineers were given powers to regulate urban conditions of the 'outdated' cities with the view to prepare them for modern life. These early planners adopted a specific approach to understanding the urban form, seeing it as a single framework linked across all

its urban scales. At the time of planning for Paris (1853-1871) Baron Haussmann eloquently reasoned this new approach:

> In 1853 Paris was still a collection of juxtaposed parts, whose particular characteristics were no longer meaningfully related to the viewpoint or behaviour of an increasingly mobile and shifting population that was actuated by the capitalistic drive for accumulation of wealth. It had apparently never occurred to the successive authors of earlier plans that Paris as a whole, or simply the right or left bank, could one day become a single organism quickened with a unique life (Haussmann, 1858, in Choay, 1969: 16).

It is important to note that this regulatory approach, which aimed at the new solution seeing the city as one 'single organism', could not be developed as based on theory. The discipline of planning had not yet been invented, thus also the design method for the city and building was simply a function of common and similar understanding of the needs and conditions at the time (Matzerath, 1984, Ladd, 1990). This perspective is crucial to this thesis' discussion concerning the arrival of the ubiquitous Berlin block typology to the nineteenth century urban fabric (Chapter 2).

Several unbiased studies satisfyingly explained the development of the city and the block from the perspective of the socio - cultural and political situation at the time. These reviews are: Brian Ladd (1990), the *Urban Planning and Civic Order in Germany*, 1860-1940, also *The Ghosts of Berlin, Confronting German History in the Urban Landscape* (1997) by the same author, and Iain Whyte and David Frisby, *Metropolis Berlin 1880-1940* (2012). The further analysis of the block from the political and environmental perspective is illustrated in *The Movement for Housing Reform in Germany and France, 1840-1914* by Nicholas Bullock and James Read (1985). The authors shift the perspective from the socio-economic condition prevailing at the time, and bring focus to the ongoing attempts of contemporary planners to legislate numerous housing reforms. Their apt illustration demonstrates the pejorative tone of the critiques, virtually focused on social discomfort and inadequately tying the formal and spatial values of the block to the poverty typical at the time. Further works foregrounding

policy and general elements of urban design are included in: the *Social Aims of Urbanisation* by Henry Syrkus (1984), also in the *Architectural History of Stettin 1808-1945* by Waldemar Łopuch (1999), and in the *Tenement House in Northern Europe* by Peter Fiuk (2004).

Given the broad surveys of these accounts, they contain neither spatial nor formal studies of the block conducted at a one to one level. Furthermore their perspectives are set outside the time to which the early block belonged, and do not illustrate the precise picture of this urban typology seen as a strategic model providing formal and organisational grounds for the articulation of the urban environment. Furthermore, by dismissing the spatial and organisational qualities of the block, these studies neither explain the context and relationship of the block with the city, merely following the canon of historical narratives seeing development as based on the linear succession of forms.

In addition, the existing works that regard the typology of the block largely focus on the nineteenth century exemplars (Geist and Kürvers, 1980, 1984, 1989, Isherwood, 1939, Fiuk, 2004, Kozinska, 2004, Sonne, 2005, Sonne, 2009, Borsi, 2009, Makała, 2011, Lejeune, 2017), With the vast number of these publications written in languages other than English, this reduces access to them by English readers.
Unlike the relatively large number of literatures on the nineteenth century typology of the block, the most recent 2017 Routledge publication by Florian Urban, *The New Tenement: Residences in the Inner City Since 1970* offers perspective on the post 1970s block. The book however discusses the 1970s typology as a positive form of urban living, and neither illustrates the changes of the structure as they occur, nor does it describe the links of the block with the post-modern city overall. It seems that for the reason of limited scope of the book, this publication did not allow for an in-depth study of the post 1970s typology conducted at the local one to one level. It instead presents the multi-city illustration of the postmodern blocks from around Europe: Rotterdam, Copenhagen, Berlin, Glasgow and Vienna.

In response to these accounts I propose a closer review of a small number of studies that specifically describe the formal properties of the block from the perspective of the form's relation with its urban environment, and the block's formal and spatial transformation.

These texts are: *Urban Forms: The Death and Life of an Urban Block* (2005) by Phillippe Panerai, Jean Castex, Jean Charles Depaule and Ivor Samuels, and *Drawing and Dispute: The strategies of the Berlin Block* (2009) by Katharina Borsi.
Such selected review specifically illustrates the typological changes in the block, yet most importantly, unlike other accounts it illustrates the evolution of form allowing me to build upon the existing body of knowledge, enabling me to answer this thesis' question:

How did the block persist and transform as an urban structure between the nineteenth century and after 1970s?

1.2.1. EVOLUTION OF THE NINETEENTH CENTURY BLOCK

Across the nineteenth century Europe the cities faced with the reality of an Industrial Revolution, sought to regulate the urban spatial and formal conditions.
Without one normative urban theory, the engineers responsible for the establishment of the new order typically adopted two different regulatory approaches (Benevolo, 1980). The first can be exemplified by the 1853 plan of Paris that involved making of adjustments within the organisation of the city. The second, was based on the expansion of the urban fabric - as in case of the 1862 Berlin. The graphic examples of the 1853 Paris and 1862 Berlin seen on the maps below demonstrate a difference between these methods (Fig. 1.1).

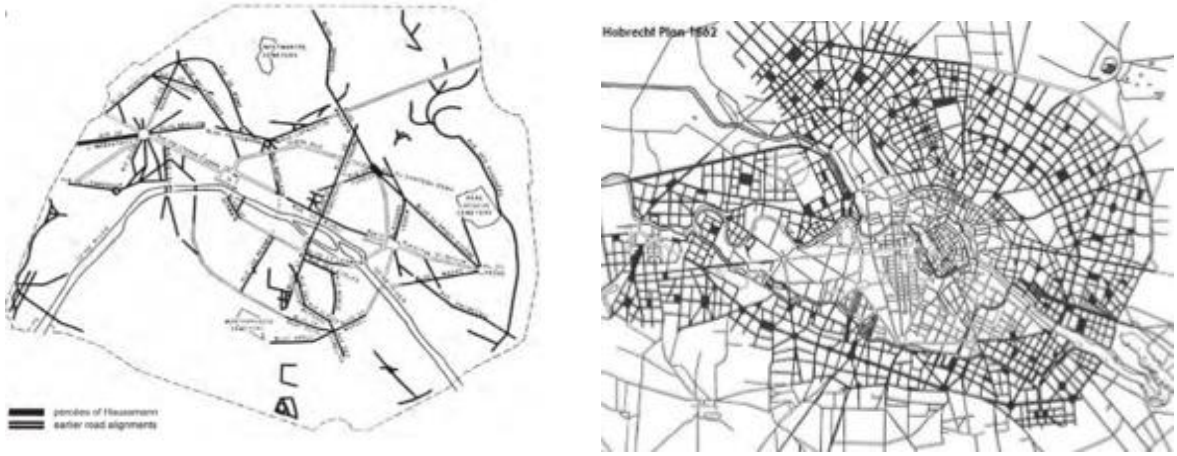


Fig. 1.1 Paris Plan of 1853, the irregular cuts implemented within the city fabric (L); Berlin Plan of 1862, the quadrangular grid applied outside the city original walls (R);
Ref: Panerai et al, 2005: 12 (L), Bodenschatz, 2010: 1987: 54 (R).

In Paris, Baron Eugene Haussmann worked within the existing urban tissue and firstly adopted a layered system of cuts - the *percées* (Panerai, et al, 2005) to the old structure of the city. These cuts, as seen on the figure above, run diagonally across the fabric of Paris subdividing the large rectangular blocks of land; the resultant spaces were later divided into individual plots, and prepared for the construction of the new building blocks. In contrast, in Berlin, Joseph Hobrecht extended the city outwards, merging the existing villages into its fabric.

The adjustments made to the city fabric are marked on the maps (Fig. 1.1) by thick black lines illustrating the extent and difference in applied changes. The maps further feature the application of wide axis and a generous network of roads, which logically linked the urban areas. This illustration clearly suggests that the planning around the mid nineteenth century was implemented in stages and preceded the building stage. Accordingly it firstly considered an outline of streets followed by the development of the building block. For that reason, as explained by Phillippe Panerai, et al(2005), the discipline of planning could dictate neither the block's aesthetics nor its organisation for which the typology was vastly criticised. It shows that around the mid nineteenth century the city design fundamentally aimed at the logical interlinking of the overall urban space. This perspective clearly rebukes the early superficial critiques of the form, seeing the 'wrong' design of the block as a consequence of the planning doctrine.

Accordingly, the authors clarified that as the nineteenth century urban organisation was applied in pursuit of the overall connectivity and cohesiveness, it therefore regarded all urban scales: the streets and squares, parks, blocks, plots and buildings. Thereby, as in Paris also in Berlin, the new distribution of spaces marked a new mode in planning, within which, the typology of the individual block could be described as a 'subordinate type' – a form subservient to the first stage of the planning process (Fig. 1.2) (Panerai et al, 2005: 13). Highlighting the flexibility of the planning process in Haussmann's Paris the authors stated:

> if the relationship [of *percées*' to plots of land] was mediated by the type of building, we would find ourselves faced with a *subordinate* type, which was often adapted in a

rather improvised manner. The organization of the *perceé* dominated the plan; each building […] was nothing more than the results of this cut, a small separate unit, and was incapable of being separated from the global organisation (ibid).

What Panerai et al call *subordinate* type we might also highlight as a way of organising the city through adaptable, reproducible and also flexible typology represented by the building block. Its form, whilst 'subordinate' to planning, was integral with the overall city.



Fig. 1.2 Urban blocks of Paris (L) and Berlin (R) as units organising the urban space; Ref: Anderson, 1986: 281, 291, Syrkus, 1984: 81

This further shows that the arrival of the building block on the plan of Paris was forerun by the arrangement of the *perceé* that dictated the outline of diverse and often acute land blocks divided into building plots varied in form. This new plot organisation was achieved through a system of cuts and assimilation with the old subdivisions as seen on the Figure 1.3.



Fig. 1.3 The new Parisian tissue that ensures continuity of the build-up area; Ref: Panerai, 2005: 15

This intersection of old and new structures was accomplished in a way that ensured the continuity of the whole organisation distributed across the entirety of Paris. The new arrangement of streets on the urban plan provided the setting for the future built environment, which would soon be accomplished in the form of the built up perimeter blocks (Ibid: 15).

As authors further illustrated the practice of cuts, which resulted in the application of either triangular blocks based on the figure of *St. Andrew Cross* (Fig. 1.4) - the irregular and centripetal development occurring from the perimeter towards the depth of the block, or, the regular distribution of the long and often narrow blocks, built up from plot to plot and lined up perpendicular to the street (Fig. 1.5). In the rectangular and narrow blocks, their form is reduced in depth, and has its central line bisecting the block longitudinally; the block further includes the shared internal spaces, between two or more coordinated plots, represented by the joint courtyard.

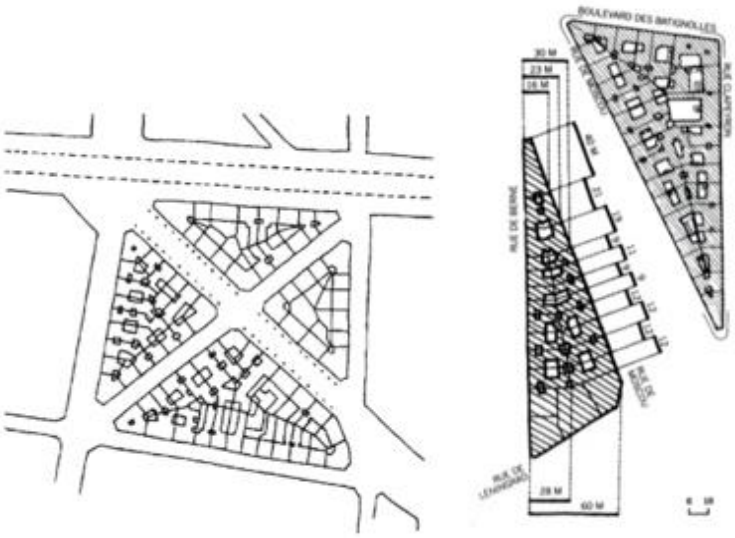


Fig. 1.4 Hausmann's block; percées implemented according to St. Andrew cross (L), and the triangular blocks of land with the irregular development occurring from perimeter towards the depth of the block (R); Ref: Panerai et al, 2005: 15, 16

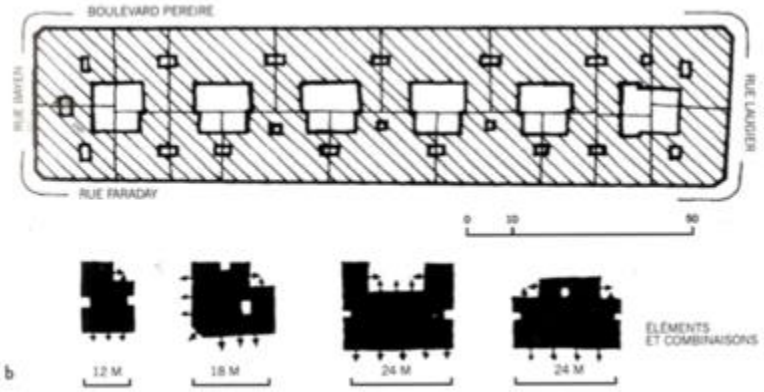


Fig. 1.5 The rectangular and narrow block layout in the block with the regularly distributed shared courtyards and buildings reduced in depth; Ref: Panerai et al, 2005: 23

The above figures demonstrate that the shape of the plot had a direct impact on the individual form of the building. Accordingly, Panerai et al reflected on the relevance of the nineteenth century building block in urban planning for its possibility of multitude of forms that are adaptable and applicable to various parts of the larger and former organisation. We note that whilst the form of the building block was subordinate to the form of the plot, the typology can be recognised for a collection of similar shapes individually based on the figure of the letter **L**. Their consequent combinations created further building forms, based on the figures **U** and **T**. This formally transformative quality of the block allowed continuous application of the buildings on the larger plots such as block's edges at the corners (ibid: 22).

Panerai et al do not explore the interrelationship between the shape of urban plots and ground floor plans of the blocks; the authors focus primarily on the importance of the individual parcel plot, which they see as an architectural type; the plots arrangement and combination was however linked with the figure ground plans of the building and thus with the entire city. Looking at Figure 1.6 and Figure 1.7, we may contextualise this illustration noting the correlation of plots with edges, i.e. acute corners (Fig. 1.6), with the corresponding ground floor plans of the building blocks (Fig. 1.7).

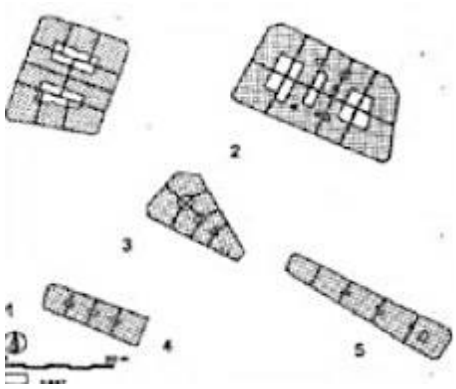


Fig. 1.6 Variety of forms of urban blocks dictated by the form of the plot; Ref: Boudon et al, 1977:58

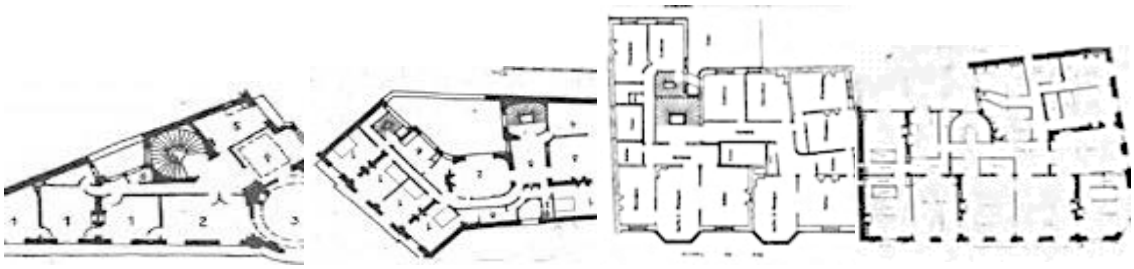


Fig. 1.7 Individual building plans corresponding with the shape of the plot; 1859 - 1878 (acute in shape, blocks as inner parts of the larger rectangular organisation, and corner typologies) dictated by the plot shape; Ref: Wrobel, 1971: 294, Boudon et al, 1977: 157,159

Panerai et al's illustration of 'Hausmannien interventions' marks an important study objective and shows that the old structure of the pre-haussmannien block demonstrated an ability to accommodate new forms, and thereby to unify the 'old' with the new design. As shown, the pre-1853 block's regular, undifferentiated arrangement of spaces could be broken, allowing the cut-off blocks, to then be mended and interlaced with the newer urban

fabric. This notion, as Panerai et al pointed out draws the urban block as an unit inseparably connected with the whole fabric of the city, further suggesting the high inclusiveness and resilience of the early block.

Thus as a spatial unit, the early block was able to provide the city with a continuous and uninterrupted network; its form linked closely together the space of a street with the block's internal spaces. This perspective highlights the possibility of the different typological designs, illustrating the form as a subordinate type, yet also, as the coordinated and compatible with the whole city urban typology. It thus appears that the urban blocks outlined by and mapped at the time of planning for the new city, became an answer to the way of organising the new urban space. They at once provided a *form* and *a method* of urban design suggesting the high flexibility of the typological process.

In the passage below, the authors further highlight the flexibility of the block, this time linking its form to the question of the block's ownership:

> At one end there was a central authority, which called on large financial groups, which would deliver some completed large arteries. […] At the other end of the spectrum, the plot continued to be recognised as the unit of intervention suitable for the erection of a blocks of flats. The same owner could have a certain number of flats, but scattered around and not part of a whole or a physical unit of intervention (Ibid: 11).

Along with changes on the urban plan and changes of ownership, the authors also illustrated the formal transformation of the early block, namely its heights. At the time of the development of the Hausmannian blocks, the new typologies were to provide means of inhabitation for the large numbers of urban migrants (Matzerath, 1984, Tafuri, 1980). This formal transformation coincided with the new building regulations that succeeded the 'outdated' 1783 Royal Ordinance, and further point to the direct role of the bourgeoisie in the establishment of the new construction laws. In consequence of the new 1852 and 1859 legislation the blocks were higher, and as a result of *perceés* superimposed on them, they

would also lose their regularity of the urban plan. In 1852 and 1859 the new blocks measured up to 20 meters high, whereas in 1902 their heights increased to 22 metres, further permitting an additional two storey (six meters height) within the space of a mansard roof.
Accordingly, seen as the result of the 'capitalist' requirements of densification' of the city (Panerai, 2005: 14), the new building laws indeed met the requirements of densification in Paris. Profoundly however they also prompted the establishment of the new Parisian quarters in the result of which the block's height and its commercial activities were dictated by the proximity of the Parisian centre (Papayanis, 2004 and Sutcliffe, 1993).

Panerai et al further note that along with the residential functions, the haussmannien block contained other uses. For instance, in the long and narrow rectangular blocks fronting the long street (as seen on Fig. 1.5), commercial functions were only located at the edges of the block - making the 'face' of the block free of 'mixed use' and simply 'bare'. These long rectangular blocks differed from the buildings located nearer the grander piazzas or large boulevards. Accordingly, the authors argued that these new blocks accommodated a vast number of retail spaces, often set back from the street line and fronted by arcades (Fig. 1.8). Similarly, the trading activity that could take place over one or two floors, 'wholly depended on the status of the streets that surrounded it, on their position in the hierarchy of the city or the district [i.e. the Parisian centre], … [giving] a particular meaning to each front' (ibid: 25).

Although Panerai et al do not explore in detail the formal changes as they occurred and affected the residential block, nevertheless they suggest that the modification was not limited to the inclusion of additional architectural elements such as arcades, 'glass roofs, steel walls, cast-iron columns and metal beams' (ibid: 26). Other authors point out that the new block for instance also promoted the new story - the *piano nobile* - its importance was emphasised in the exterior of the block: the rich ornamentation, plaster bas relief and continuous balconies, which reinforced the perspective and distinctive style of the Parisian street (Copeland, 1995, Sutcliffe, 1993). With its most prominent floor reserved for the building owner, the new typology codified Paris of Haussmann as 'the bourgeois city 'par excellence'' (Panerai et al: 1).

These formal changes clearly suggest that the pre-haussmannien block allowed both, planimetric and sectional changes. With its generous and undifferentiated layout, the early block was unlike the haussmannien typology that began to differentiate between its interior spaces i.e. the large rooms in the block fronting the street, and the smaller rooms located at the back or in the attic space, and also the arrangement of the block's spaces in the courtyard.

Figure 1.8 illustrates these typological changes noted in the variegated façade of the block, and the building's section - as marked by the vertically descending heights of the dwelling spaces.

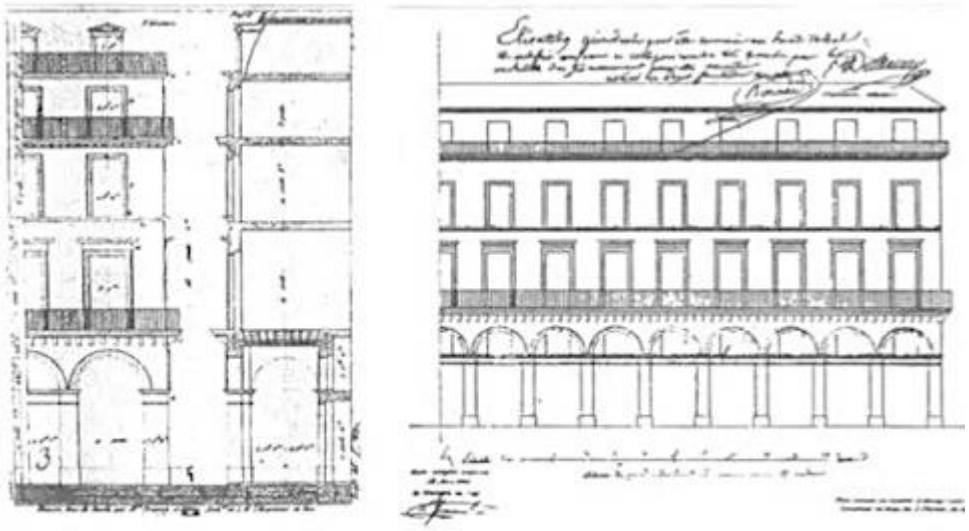


Fig. 1.8 Section and the façade of the Haussmannien block; Ref: Benevolo, 1980: 175

This underlines the fact that the regular distribution of spaces in the early block undifferentiated across its whole volume, allowed Haussmann to transform the buildings' external and internal spaces with ease. This lack of differentiation further allowed the introduction of the new functions into the haussmannien block. These changes happened as the authors explained, in accordance to the 'substitution terms':

> [The old block] should be understood as a system of differences, which allowed for an organisation of the complexity of the tissue. It was a model for integrating activities and established the possibility of distributing some multiple functions. It

> worked as an efficient system, which did not have to designate changing and relative functions, but rather the association and exclusion relationships between functions and places. It was then subject to the application of rules of integration, conceived in such a way that the functions were defined in substitutions terms (one function could be substituted for another), over time, which took into account historical change, modification, 'do-it-yourself' (i.e. recuperation of an empty and available structure), even the diversion of access ways (Panerai et al, 2005: 25).

Accordingly, Panerai et al allows us to see that following Haussmann's interventions in Paris, the block's formal evolution was concurrent with its programmatic transformation.
From a dense and tight fabric of the early block and the use of its' whole ground-floor area, the new organisation illustrated 'the interior of the block to be a place for a larger land use and a less tight plot subdivision'. The transformation of the courtyard, now seen as a 'protected and hidden interior, which was of lesser importance', instigated the change in the status of the block. The new block featured the 'functionally separated spaces' that excluded the 'workplace' from the 'private residential block'. As such, it was unlike the old block's spatiality that 'mixed together living quarters, exchange and work places and […] collective facilities' (ibid: 27).

The authors thus suggest that the early block held tightly together different programmes, living spaces, 'modest workshops and offices'; it simply shared its undifferentiated status with the surrounding urban spaces of courtyard and the street. Yet, with the new hierarchy established in the city (the specific zone or district), also the hierarchy in the block's organisation has changed. 'What begun to disappear with the haussmannien block was the interior of the block with its [many] functional properties and the richness of its articulation' (ibid). The authors elaborated:

> In the haussmannien city the block had only a reduced multifunctionality left. […] One could measure how many layouts proved to be unuseable and to what extent the logic of the type has to be modified. It would then be interesting to ask to what extent the type retains its content in these difficult cases and eventually to note at

> which point the type becomes impoverished by not being able to accommodate spatial changes, so that the functions are accommodated in an organic way (ibid: 26).

Tracing the development of the nineteenth century Parisian block, Panerai et al identified the formal transformation as the *reduction* of the block's spatial performance that was paralleled by the 'process of classification, separation and specialisation' in the city.
As authors further suggested, in the nineteenth century city 'seen as a combination of blocks', these processes affected both the workings of architecture together with urban elements and their transformation continues to the present day.
Furthermore, the authors allow us to understand that despite the difference in spatial organisation of the pre-hausmmannien block and its successor, their forms were 'compatible', suggesting again the inclusiveness and robustness of the early block.
Seen as such, the pre-hausmmannien blocks may continue to be recognised as the basic unit of urban subdivision: an 'indispensable element for the structuring of the city' and the robust and persisting 'unit that could be assembled with others' (ibid).

It is noteworthy that the book written in 1970s shares the widespread at the time critique of the modernist architecture and planning: as having shaped an impoverished environment, an 'inhumane anonymity' promoted by the 'abandonment' of the street and isolation of buildings from their urban context. By addressing the interrelation between spatial and social interaction, Panerai et all follow in their study of form the approach of the French school of urban sociology founded on the method of Henri Lefèbvre (Moudon, 1986, Moudon, 1992, Moudon, 1997, Gauthiez, 2004). Accordingly, the book's authors focus on the typology of the block as a unit of spatial practice – the spatial dimension of social practice that Lefèbvre illustrated through 'gestures, journeys, body and memory, symbol and meaning' (Lefèbvre, 1974). Consequently, in line with the Lefèbvre's critique of the alienating urban space of abstraction, which accompanied the rise of capitalism, Panerai et al favours the social qualities of the pre-haussmannien block that preceded the 'consummate' and 'aggressive' capitalism (ibid: 2, 14).

To them, the pre-haussmannien block embodied a rich spatial practice associated with versatile programmes that span a broad range of social life. On the other hand, Haussmann's block is associated with an 'impoverished' building type and the beginnings of the reduction of spatial experiences that weakened the social life in the block. These changes, as authors note are a consequence of pulling apart the urban fabric, so that the dwelling becomes increasingly important and isolated from the urban context. The book thereby follows the argument of increasing separation of programmatic and impoverished socio-spatial values of the new block typology:

> Under Haussmann […] [a]ll the public space became monumental and this included the ordinary streets. Many of these residential streets had an overblown appearance, with a heavy respectability that gave the facades an accumulation of cultural references. But, above all, their monumentality came from their impassiveness. Business were driven out of them, (with the occasional exception of the two ends of the block); the street was free of the daily bustle; its space was surprisingly abstract, and had the same form everywhere divorced from time and defined in its form and use: it did not know any variation. […]
>
> Since the haussmannien block was not capable internally of incorporating a variety of functions, one can observe that some single-function blocks appeared. […] The monument block, which was not far removed from the single-building block, which succeeded it after the definitive devaluation of the monument, was common (ibid: 28).

It appears that the haussmannien single function blocks, recognised for their triangular and shallower rectangular forms (as previously seen on Fig. 1.4, Fig. 1.5), further branded by the authors as the 'monument blocks', gradually succeeded the older type that created part in the quadrangular organisation prior to the Haussmann's cuts (as seen on Fig. 1.3). The new 'homogenous' block featured a new level of formal and spatial organisation, recognised at the individual status of the plots and buildings and also at the 'face' of the block (as

previously seen on Fig. 1.8 and Fig. 1.6, Fig. 1.7). These new typologies demonstrated reduced multifunctionality and density of their ground floor, separating (or in Panerai et als' words - 'protecting') the building from the courtyards, consequently also ceasing the earlier, single articulation of the block with the city (Fig. 1.9).

Built between 1857 and 1882, the new typology obtained a different urban status. As a function of coordinated building practice, it spanned across several plots and amalgamated several courtyards and several building blocks. Its form ceased to feature a series of interlocking spaces and articulated a single homogenous sequence. It also began to differentiate the interior of the block from the surrounding spaces, and varied the private status from the public.



Fig. 1.9 'Richness' of spaces in the pre-Haussman block (L), juxtaposed with the 'impoverished' homogenous typology developed after 1857; Ref. Panerai et al, 2005: 4, 5

Panerai et al illustrate the ongoing linear evolution of the block, using the blocks from different settings. The next 'stage' of the typological development is exemplified by the Amsterdam new housing districts constructed between 1913 and 1934. The authors

describe the difference between their analysis of the Amsterdam school of thought, and that provided by the architectural historiographies. Whilst the latter see the approach emerging at the beginning of the twentieth century as concerned with 'the games played with brickwork and decoration': the materials, external ornamentation and communal value predecessor of the modernist aesthetic, Panerai et al see the Amsterdam block as 'more of a series of experiments on the urban blocks with a starting point in a reflection on housing cells and their combination' (ibid: 56).

The authors posit the example of the block at Spaarndammerbuurt developed between 1913 and 1921 as five urban blocks that create a part in a larger development (Fig. 1.10).

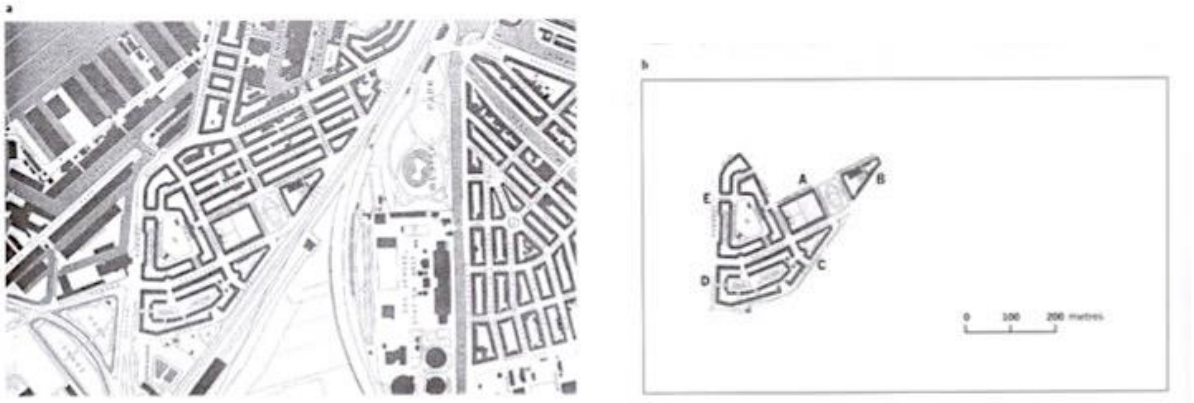


Fig. 1.10 Spaarndammerbuurt Block, Amsterdam; Plan of the area, and the five block sector designed by various architects; Ref: Panerai et al, 2005: 68

These five blocks named A, B, C, D, and E (Fig. 1.10 – on the right) were designed by different architects and can be clearly distinguished from the surrounding fabric. The authors understand the new organisation as the 'upgraded' stage of formal and spatial development from the haussmannien block; here, the blocks are illustrative of yet another way of formal and spatial arrangement; they illustrate differentiated, yet still coherent design. Their spatiality is organised by the perimeter building, which follows the urban block's outline on the plan. All five blocks clearly define the space of the street, designating the internal space within the block. These inner spaces are publicly accessible, however their organisation on the plan and their picturesque character, sketch them as communal spaces conceived for the enjoyment of residents of the surrounding blocks: 'On the streets or on the square, the facades express an urban order, even a monumental one in some

cases, while in the backs the private gardens of the lower dwellings and the balconies of the higher floors allow for extensions and alteration' (ibid: 66-67).

Some blocks (Block A, and Block C seen on Fig. 1.10 – on the right) integrated civic programmes like schools and post offices; they also featured a different entry arrangement, with the access to the block not only from the street, but also from the courtyard. Often, the ground floor dwellings surrounding the courtyards, included independent small gardens. In other blocks without direct access to the interior garden (Block C and Block D) balconies act as the substitute to the back garden. The new arrangement, as authors claimed, illustrated the evident 'negation of the nineteenth century city planning' (ibid: 73).

The authors also noted that rather than individually, these blocks were conceived as one coordinated design. The overall plan of the area depicts the new typology as specifically arranged, in accordance to the position of the streets, park, inner squares or gardens. As seen on Figure 1.11 such design resulted in different formal and spatial articulation of the block - profoundly in its internal spaces. Consequently, it also appears that from the status of the 'subordinated' type of the pre-haussmannien and also the early haussmannien block, the successive form obtained a different status, controlling the space of the public void.

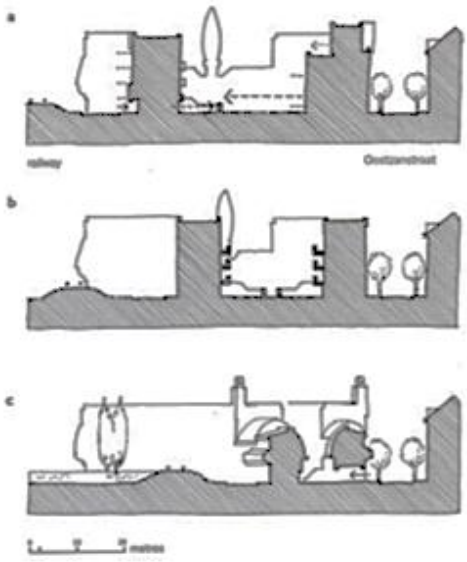


Fig. 1.11 Varied spatial organisations of the blocks Ref: Panerai et al, 2005: 71.

The new design practice further included the implementation of the coordinated facades; such an approach can also be seen in another example from Holland - near Amstel, where the different architects proposed a design of interrelated blocks, facing each other across the road (Fig. 1.12). Here the blocks determine the relation of their form to the public spaces of the city: parks, crossroads, avenues, and, like the haussmannien block, also control the perspective on the street.

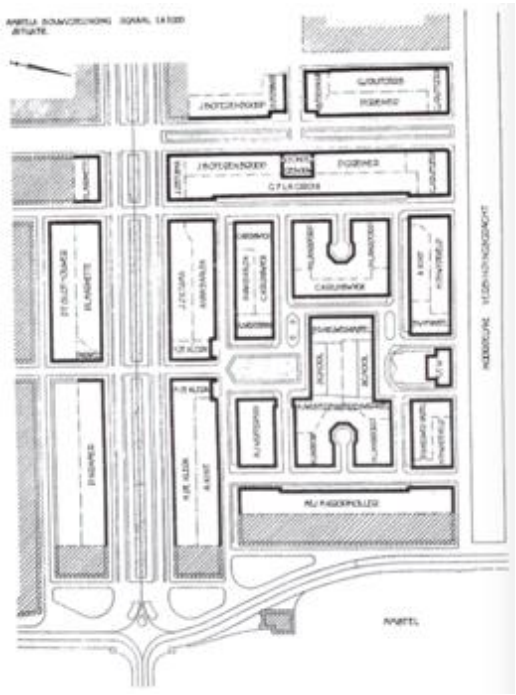


Fig.1.12 The area near Amstel, under coordinated design of J. Gratame, (a former associate of H. P. Berlage); Ref: Panerai et al, 2005: 85

The following stage of the 'stretching and dissolution of the block concept' is exemplified by yet another setting - the new *Siedlungen* housing district in Frankfurt, Germany, and developed between 1925 and 1930. Unlike the Amsterdam arrangement, the configuration of the blocks in Frankfurt is opened and organised into parallel rows – the bars. The new approach to form designates the block (or the group of blocks), to the single programme. The block bars are described by Panerai et al as 'fragmented into distinct zones, each zone governed by its own set of rules'; authors further differentiate between the early Siedlungen organisation, orchestrated by the careful sequencing of ground level spaces

(with the ground floor designated for instance to the zone of gardens belonging to the individual dwellings), and the ground floor plans of the larger Siedlungen that were implemented later:

> The large Siedlungen no more played on the grid differences in the interior of the same development, as in the previous phases, nor on the affirmation of a pre-existing urban order, but on the systematic repetition of a unit (the row) and on the affirmation of an internal logic, independent of the contextual conditions of the site. They referred to a simple combinatory logic which suppressed all traces of the block (Panerai, et al, 2005: 110).

The authors elaborated:

> From this time onwards the relationship of the building and its surrounding space was no longer the same. In the tall buildings the subtle differentiation between the facades, […] had disappeared. […] the building became detached from the land, and the external space, which was no more connected with the buildings, lost its status. In the rows of small houses, the same disintegration of the tissue was less noticeable. An exception was that the central space of the block, which had been protected from sight and out of the way from the public domain, ceased to exist (ibid).

Thus, for Panerai et al the organisation of the Siedlungen blocks differentiates between the smaller and varied forms that include the external spaces assigned to the blocks (i.e. the protected entrances to the cellars and the location of dustbins); to the larger, stricter and regular slabs that lack any connection with the urban space. This transformation can be noted when looking at sections of the Römerstadt smaller blocks (Fig. 1.13), and the blocks of the Siedlungen Westhausen that are independent of the urban context (Fig. 1.14).

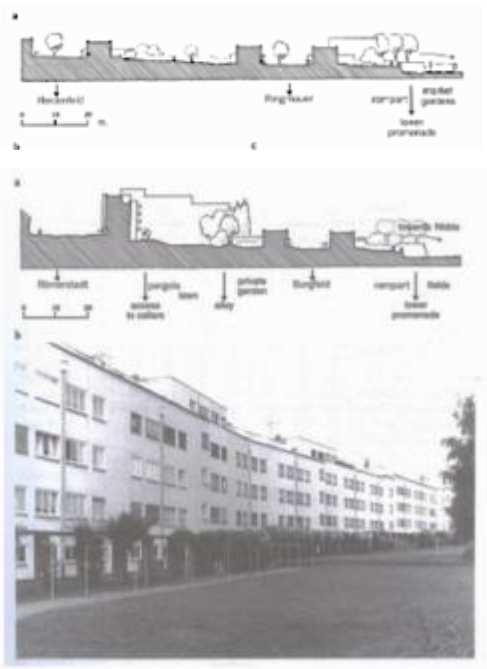


Fig. 1.13 Ernst May, Siedlungen Römerstadt, sections across the site and the photograph showing large courtyard garden; isolates the service area from the central space of the courtyard by the screen formed by a pergola; Ref: Panerai et al, 2005: 100, 101

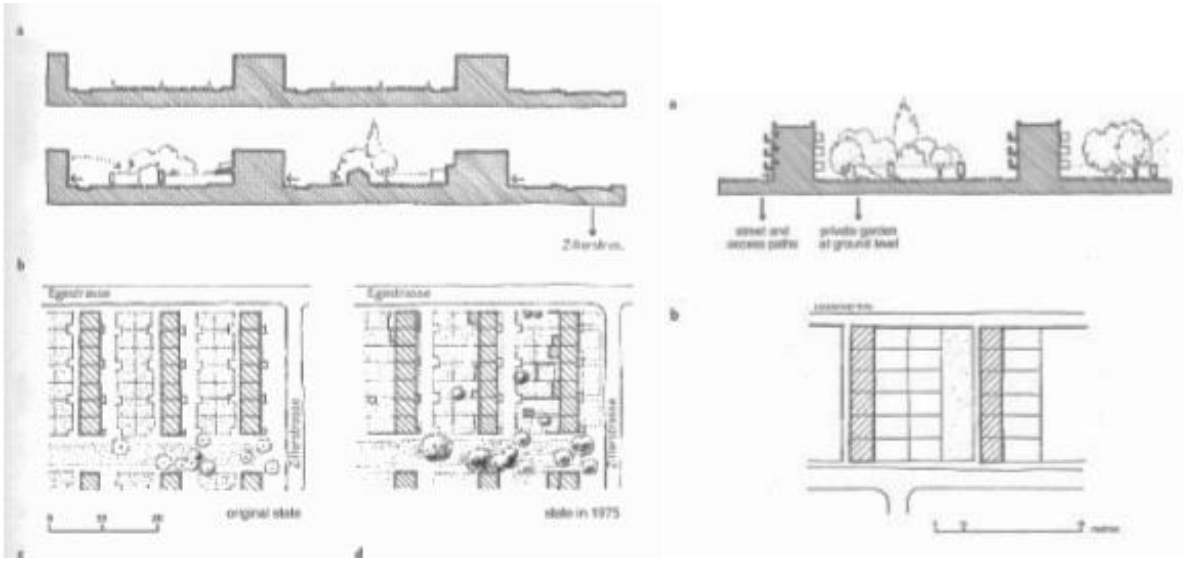


Fig. 1.14 Siedlung Westhausen - section and plan showing regular distribution of north/south facing bars; Ref: Panerai et al, 2005: 104, 105

The next stage of the 'block's dissolution' is seen by Panerai et al as the 'logical outcome of the evolution of the block' (ibid: 111). It was followed by the fascination of the modernist architects with the tall buildings - the 'vertical urban block' (ibid: 116). The new typology demonstrated the total abolishion of coordination between the façade and the floors' organisation, and also the new relation between the modular, serial architecture and the urban space. This relation was now based on the breaking of a grid and rearrangement of the block's edges - the process that began to privilege lower density and status of the 'indifference' over a mutual dependence.

The perspective proposed by Panerai et al allows to see the typological continuity of the nineteenth century block via subsequent typological changes: from the dense, and compact yet porous organisation of the pre-1853 buildings, through the succeeding blocks of Haussmann, the hollow arrangement of the Amsterdam block at the beginning of twentieth century, the pulled apart fabric of the Ernst May's modernist slabs in Frankfurt, and further, the *Unité d'Habitation* towers. Still, because of the careful selection of the historical examples, the authors describe the same one-dimensional historical development founded on the 'negation' of the spatiality on the early block and the dispersion of urban dwellings, as proposed by Walter Gropius in *Das Neue Berlin* (1929), and Ernst May in *Das Neue Frankfurt* (1930). Theirs is the same diagrammatic interpretation of the formal evolution *vom Block zur Zeile* ('from the block to the bar') that supported the alleged progression of forms based on transgression; such sequence, where each formal step is treated as intermediary and thus also ought to be overturned in the name of modernity, became repeatedly used by the historiographies to explain the linear development of the modernist housing projects.

In addition, their account 'capturing the formal qualities of space' describes a clear preference of the spaces in the early block. By mourning the perceived loss of social tissue in urban areas, and also the loss of its significance in the production of the city and architecture, their reading parallels Henri Lefébrve 's late 1970s account of the urban space. Thus, whilst the authors deal with the linear evolution of the architectural form, this perspective appears to cloud over the focus on the parallel changes in the structure of the city overall; the book does not investigate the possibility of changing (and recurring)

typological relationships in the building's interior, nor does it explore the transforming relations between the building and the surrounding space. Such account thereby overlooks the formal potential of typology that contributes to its own development, re-development, and also the evolution of the city. It therefore does not support this thesis' view on typology as the strategic means of design and understanding architecture and the city.

Accordingly, as the book ends up with the postscript on the present day American and English urbanism, it does not follow the full trajectory of the changes in the block typology, namely, the *return* of the nineteenth century form to the fabric of the post-1970s cities, and which this thesis aims to illustrate. By not addressing these objectives, the book projects only a partial account of the formal and spatial evolution of the block.

However, whilst Panerai et al drew upon a linear evolution of architecture, Katharina Borsi, in her 2009 book chapter *Drawing and Dispute: The Strategies of the Berlin Block,* illustrated a different account. Unlike the one-dimensional reading of the French authors, and the accounts of historiographies declaring block as a dense, supposedly rigid form, to which the modernist *Siedlungen* provided a formal response (Colquhoun, 1994, Rowe, 1993[2]), and 'even a rebellion against' the historic fabric (di Palma, Periton and Lathouri, 2009: 5), Borsi proposed a clearer illustration of the early nineteenth century typology. Borsi illustrated the nineteenth century block as a flexible and permeable form that blurred differences between the internal and external spaces. Borsi further suggested the superficial understanding of the early block adopted by the Modernists; the 1860s block, seen as rigid, 'closed and cellular form' (Rowe, 1993: 168) with its 'labyrinthine and squalid courtyards' (Colquhoun,

[2] In his overview of the modern housing, Peter Rowe examines general typological examples of housing. Yet, the author altogether overlooks the formal explorations of the blocks that around 1870 were built in Germany. Those 'upgraded' forms of blocks, have not yet been based on the avangardist approach of a green setting (exemplified by *Siedlungen*); their form supported the street-block development, contributing to a bounded urban space, and featuring the perimeter block typology with re-organised edges and multifunction. Similarly, Alan Colquhoun (1994) sees the dissolution of the dense fabric of the mid-nineteenth century block, and appearance of the new form of *Siedlungen*, as 'a direct answer to the *Mietskasernen*' (Rowe, 1993, Colquhoun, 1994) (here, the *Mietskasernen* translates as the pejorative description of the nineteenth century block typology = the army barracks) .

1994: 226) was further viewed as no longer adequate to the modern living. Yet, as observed earlier, this perspective was set outside the time to which the early form of the block belonged; Borsi explained this understanding paralleling it with current architectural standards according to which:

> [the] lines tend to be representative of closure, rather than flexibility. Furthermore our current definition of housing typologies depends on differentiation between the building and its urban surroundings: not only are projects characterised by a clear delineation in plan but they are also seen as distinct from other functions (Borsi, 2009: 133).

Borsi further explained that the reading of the drawing lines in plan as 'representative of closure emerged at the same time as the concept of modern family' - what Panerai et al similarly see as the time of increased importance of the dwelling. Borsi elaborates that the criticism of the early nineteenth century block's plans, as a closed set of 'stifling and oppressive' spaces, ought to be seen as rooted within the precondition of our times and the 'domain of the domestic' (ibid: 150).
Accordingly, as I will demonstrate in Chapter 3 (which traces a graphic evolution of the early block), the planimetric drawings of the Berlin block circa 1860s precisely illustrate the lines that do not represent demarcations and instead are flexibly definable as linking or dividing spaces.

More so, Borsi pointed out that with the development methods of study and analysis in the nineteenth century, the spaces of the block became gradually rigid and codified. The author linked the formal 'stiffening' of the elements of the early block, and the increased reorganisation of its' spaces to the arrival of the modern family, regularization of family spaces, concept of the community, and the self-contained housing as mechanisms of control. In her chapter of the book, Borsi proposes the nineteenth century block as a strategic site, across which the discussions about management and control of the urban population were articulated.

She also describes the change from the urban field as interlinked across its scales to the urban spaces and inhabitants configured and differentiated across the fabric of the city – and which the author recognised as a 'terrain of the urban'. The term describing the engagement with a vast variety of discourses, paralleled Michel Foucault's term of 'discursive formation' (1972) to illustrate the construction 'of knowledge in terms of a set of relationships between [the city's] subjects, objects, concepts and strategies' (Borsi, 2009: 134, 151).

Whilst Borsi noted the trajectory of the block from the form with flexibly organised spaces, to the stricter demarcation of the block's elements defined according to specific programmes, the author also indicated that this evolution was paralleled by the socio-spatial change in the city: 'The consolidation of the blocks into quarters is aligned with the division of the population into definable groups, and the block's internal differentiation into self-contained domestic units marks the space of appearance of the modern family'; the author, in analogy to Jacques Donzelot's rise of the modern family seen as the 'mechanism of liberal government', illustrated the account of the block's evolution as a result of the ongoing, and conditioning of each other questions about the urban space, and governing in the city (ibid: 134).

Borsi's account of the evolution of the nineteenth century form from the perspective of the complex shifts in spatial interrelations, and between the form and the management of population, together with Panarai et al's suggestion of architecture and urbanism as indissolubly connected, laid out a sound bases for this thesis.
We may summarise that around the 1980s the new critiques appeared that were concurrent with the reinstatement of the block to the urban fabric after 1970 (Kürvers and Geist, 1984, Bullock and Reed, 1985, Bernet, 2004, Panerai et al, 2005, Borsi, 2009, Bodenschatz, 2010, Urban, 2018). Yet despite the recognition of the block's positive values by urban historians, planners and architects, many existing surveys of the historic model contain no comprehensive spatial analysis of the Berlin form at the specific level.
The study thereby builds upon these readings of the block for its legitimacy.

A process diagram seen on the Figure 1.15 illustrates the summary of literatures on the block that provided a rationale for this study.

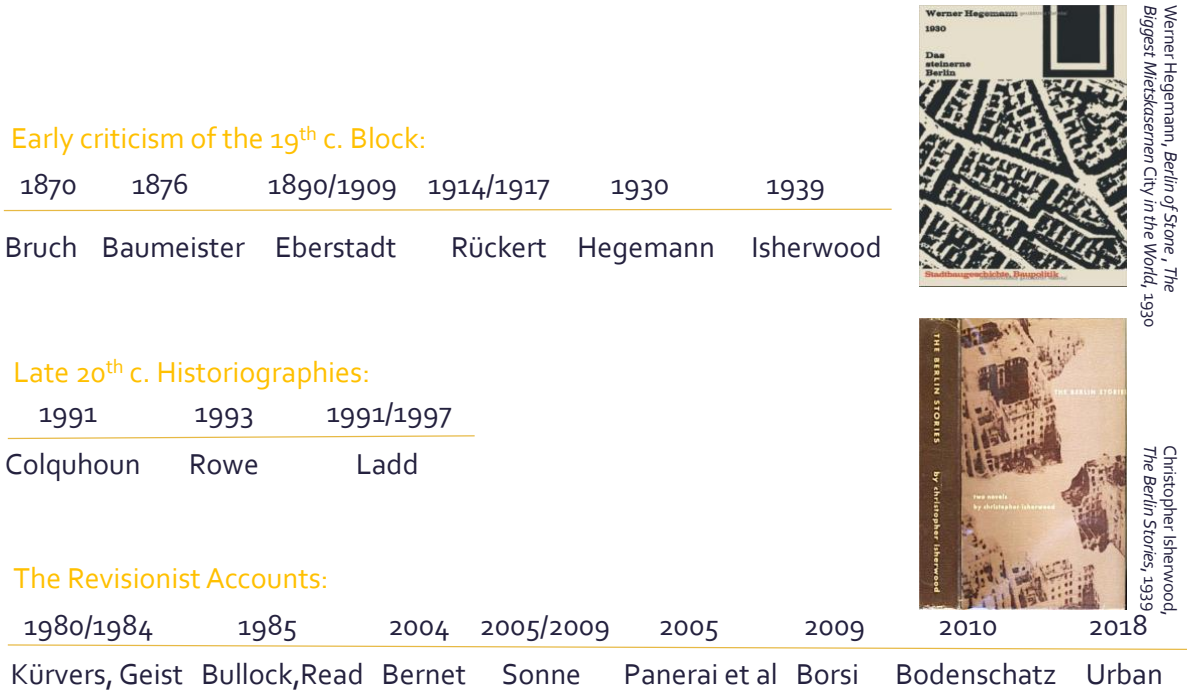


Fig. 1.15. Process diagramme of the critiques of the block**;** Ref: Author, 2018

1.3. METHODOLOGY

1.3.1. TYPOLOGY AS A METHOD – THE HISTORICAL INSIGHT

This thesis recognizes the changing logic behind the idea of the block and interrelations and variations between the different phases of transformation. As such it promotes a typological way of looking at the built environment. Typology is seen as extending our knowledge about architecture's precise links to the urban and the role of the discipline in the formation and organisation of the city. It further allows to comprehend that the development of the city may not only be driven by the succession of forms as the canon of Moderninst historiographies suggest, but can also be based on a different, non-linear possibility of history - exemplified by the reappearing of the architecture's material and return to the previous stage.

As seen earlier, the accounts of the 1862 urban plan and the block given by the historiographies of the twentieth century dismissed the organizational value of the block's typology, and virtually focused on the social discomfort. Such criticism refused to acknowledge the unique typological qualities of this architectural and urban form. It also seems that the criticism was underpinned with the highly arbitrary and judgmental overtones rooted within later established (post 1880) aesthetics of the block design and also the later modernist approach to design.

Yet, as shown earlier, the typological approach to buildings and urban spaces around the mid-nineteenth century transpired further upgrade; it enabled the structure to function differently in line with the contemporary needs. This idea (elaborated upon in PART 1 of this thesis) was depicted by the Spanish engineer Ildefonso Cerdà in his 1840 theory of urbanization, which depicts the space of the city as a 'foundation' structure. Accordingly, the typological analysis of the mid nineteenth century block documents the ongoing workings and reworkings of the architecture and urban material, drawing the nineteenth century block as a form that had a direct role in the evolution of the city. Whilst this account presents an original contribution this thesis makes to knowledge, it also shows that the specific arrangement of spaces in the nineteenth century form finds analogy with the notion of *resilience* in landscape architecture that today is considered a way forward in planning and urban design (Allan and Bryant, 2011, Turner, 1996).

However, as I will demonstrate in PART 2, the reinvented form of the postmodern block became something else altogether. In the 1970s, after almost a half a century of the Modernism, typology was seen as a tool for linking historical processes and architectural design, and reframing the relationship between the city and its architecture through history, typology and context. It played a key role as a theoretical, formal, and socio-cultural approach, providing a system of analytical investigation through which the city and its forms could be articulated. The 1970s typology indicated continuity with the past, opposing the modernist mechanistic approach and the standardised models distanced from history. Anthony Vidler (1977), described how in the 1970s the group of the Italian opponents of modernist tradition - the Neorationalists – focused on the 'nature of the city itself, emptied

of specific social content from any particular time and allowed to speak simply of its own formal tradition' (Nesbit, 1996). In result of the new design theory, the typological projects performed as formally and functionally differentiated from the urban fabric.

To some, the post 1970s typology with its limited variation and visual cohesion, appeared as an inadequate means to pursue growth and innovation. To those critics who understood this limitation (Moneo, 1978, Colquhoun, 1996) deemed a relationship between the design process and typology based on the laws of 'science' and 'art', and seen as a result of intuition. Typology was compared to a tool that allows us to retrieve and comprehend the architectural meanings of the past cultures exemplified by their forms imbued with symbols.

Accordingly, this thesis sees typology as a different way of understanding and conceptualising an evolution architecture. In line with the objective set by Alan Colquhoun (1989): 'if criticism is to carry out its function of making judgments, it must have at its disposal the norms, which belong to the architectural tradition – a ground against which to measure and evaluate the possibilities of the present' (Colquhoun, 1989: 19), for each distinct period of history I looked first at the theory that was concurrent with the arrival of the block to the urban fabric during the nineteenth century and after 1970.

Therefore, the changing approaches to urban typology are embedded in this thesis via the chronological narrative of different periods of actual developments and written theory. First, by addressing the 1840 theory of urbanisation by Ildefonso Cerdà, (PART 1), this study looks at the nineteenth century projects exemplified by Karl Friedrich Schinkel, Peter Joseph Lenné, Baron Haussmann, James Hobrecht and Gustav Assmann. In PART 2, this thesis describes the principles of the theory of the Neorationalism and its fascination with the eighteen century theories of type and model by the French Antoine- Chrisostome Quatremére de Quincy and Jean-Nicholas-Louis Durand. This part presents key leitmotifs of the postmodern theory of urban science (as proposed by Aldo Rossi – the figure-head of the Neorationalists), and turns attention to the practitioners who addressed this theory proposing their own take on it - Rob Krier and Oswald Mathias Ungers.

With the view that typology as a formal disciplinary approach provides the most suitable method to study and compare urban forms of the block at different scales – I use Peter Lack's current-day definition that allows for better understanding of the typological framework used in this study:

> [it] isolates the attributes of the architectural coherence, identifies them as characteristics, in order then to compare them with similarly abstracted attributes from other context and to define similarities or differences. Since Quatremere de Quincy at the latest, the history of architecture has described this kind of approach by the term typology, and understands it as the abstraction of formal attributes into the principle, called type that describes the commonalities of a series of different, but historically concrete models.
>
> From the beginning this systematic and abstracted view includes the possibilities of a guideline for action beyond literal imitation ('imitation par principle') as well as a tool for comparative architectural criticism (Lack, 1995: 93).

Thus, after the selection of theoretical frameworks, this thesis analysed the block in terms of both its internal and external (urban) configurations. However, due to the time constrains, the internal analysis of the post 1970s typology was not possible.
Unlike the data concerning the construction and alterations made in the 1860s block gathered by one public organ of the Building Police, which at present can be publicly accessed from archives, any formal and spatial changes made to the post 1970s block were mostly documented by the individual architectural firms. This makes the process of locating the real time data difficult, and would not be feasible for the time frames of this thesis.

Furthermore, whilst the planimetric and sectional configurations in the blocks designed by Rob Krier were relatively well documented by the theory (particular the Rauchstrasse and Ritterstrasse block), the typological works of Oswald Mathias Ungers on Berlin block have not been widely publicised. Consequently, the reading of the Ungers' projects was approached mainly through the architect's design theory, and externally from the observational studies at the block scale. Equally, the observational analysis during the past

four years and twelve visits to the research settings, allowed to assessed the most current changes in the nineteenth century blocks.

The reading of texts and reproductions of plans, drawings, historic photographs and author's own diagrammatic/annotated plans and photographs played a very important role in this thesis. It further involved intense fieldwork inclusive of measured observation and site surveying. The resulting study drew on over 4,000 images sourced by the author from the research setting, the archives (the *Staatlische Museen*, *Kreuzberg Museen* in Berlin, SStiftung Preussische Schlösser und Gärten in Berlin-Branderburg, and the British Library in London), and the archival data reproduced in secondary literatures. The archival findings, exemplified by the Building Police records seen in Chapter 3 (Figure 3.9), demonstrate formal and programmatic evolution of the spaces of the nineteenth century block. Supported by the maps from the same period, these annual documents give the nuanced picture of the gradual changes. Interpreted together with the plans, they scrupulously detail the year of construction, the dates of every formal, spatial and structural transformation in the block, and also the form's adaptation (and re-adaptation) to the new programmes and tenures. Remarkably, the broad details regarding every plot of land and the block in the city. Grouped in accordance to different epochs, this data is available for public view at the Berlin Federal Archives, and online at: http://www.bundesarchive.de. In conjunction with the archival data reproduced by Christiane Bascón-Borgelt in the 1983 German text: *Von Schuppen zum Gewerbehof-Bauten der Kreuzberger Mischung*, provided invaluable source for this study.

Overall, the study consequently involved primary and secondary research and followed a qualitative historic and interpretive method. In accordance with the description of historical and interpretive research (Wang and Groat, 2002), the theory and history sources were selected first, then evaluated, assessed and organised in order to interpret them later. This research offers therefore the triangulation of historic and architectural narratives with the author's commentary. The interpretative and theoretical understanding of the form,

aims to provide critical perspective on comparison of the the spatial performances of the blocks across time.

The process diagram seen on the Figure 1.16 summarises the typological approaches and methods used in this thesis.

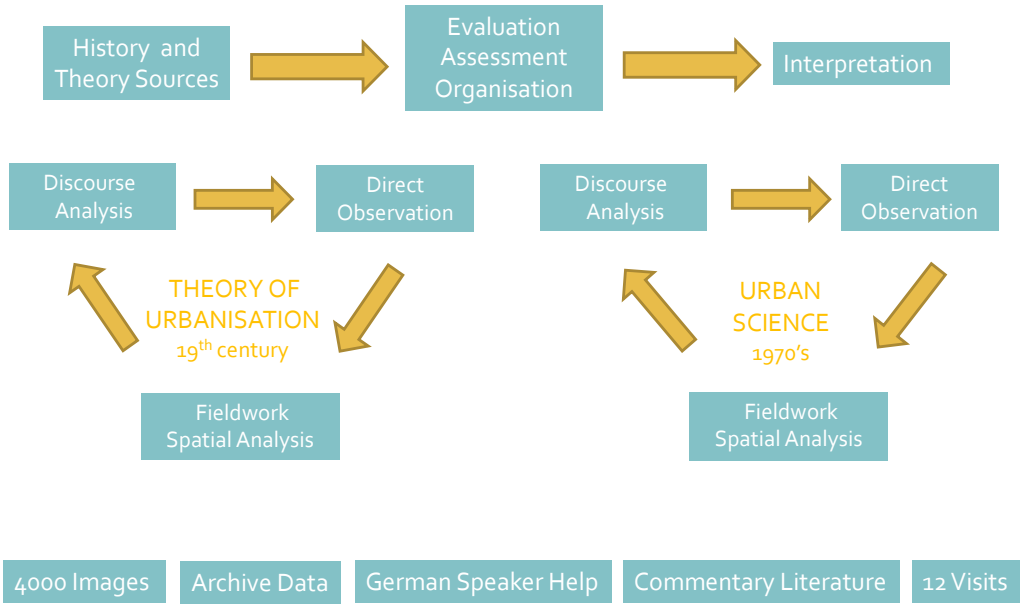


Fig. 1.16 Research Methods and Approaches; Ref: Author 2018

In summary, this thesis illustrates a specialised topic that investigates a particular geographical/temporal context - the urban typological morphology in Berlin. It concerns two distinct periods of history – during the nineteenth century and after 1970. Locations maps, included in every case study i.e. chapters describing the nineteenth century transformation of the Oranienstrasse Area (Chapter 3), the developments of the Berlin International Building Exhibition - IBA (Chapter 6), the works of Rob Krier (Chapter 7) and projects of Oswald Mathias Ungers (Chapter 8), help to understand the shift between the scales, from the city to the district to the block and the internal dwelling.

1. 4. THESIS CONTRIBUTION

With the view that typology as the disciplinary method is the most suitable approach for the formal and spatial comparison of the postmodern block with the nineteenth century form, this research argues for the revision of the spatial performance of the block across time to show a different perspective of history.
It further argues that it is only through the reading of the formal and organisational relations incepted to both historical and post-1970s form of the blocks, we may recognise detailed qualities of design method, typical for the different phases of development: the interrelations and variations between them, and also the picture of the architecture's links with the city' development.

Building on the existing studies, this research presents the detailed tracing of typological transformations in the study area, adding new evidence and analysis. As illustrated earlier, this research makes a contribution to our understanding of typology as a changing way of conceptualising and understanding architecture.

Based on the historical and typological interpretation this study investigates the Berlin block as an architectural typology and an urban configuration, which emerged in Europe in the nineteenth century and has seen a variety of critiques, transformations and reinventions.
In one comprehensive study, this thesis identifies and compares two distinct periods of the block development, during the nineteenth century and post 1970s.
The focus of the investigation is on the influence of the block within the spatiality and function of the city, highlighting its role as an element of urban space. The study consequently makes a contribution to the existing histories and debates about the block as a typology, particularly at urban scale. The typology of the block is illustrated as an influential and persistent form of city building.

The study firstly reviews the historical origins of the block and its early implementation, and then compares this with the revival of the block several decades later. It argues that the early nineteenth century block is porous, dynamic and adaptable to change in ways that later 'improved' forms (post 1880) and reinterpreted typologies (post 1970) fail to achieve.

It also argues that the former typology makes a more integrated contribution to the form of the city, whereas the latter tends to operate in autonomous blocks that are more separated from their context in different ways.

Unlike the canon of modernist historiographies seeing development as one way evolution, describing progress that happens in the linear and 'coherent manner towards the end' (Gauthier, 2005: 87), this in-depth analysis reveals both the typological similarities and variations between the nineteenth century forms and their post 1970s successors as they occurred and reoccurred. The nuanced shifts in the spatial interrelation between the forms of architecture and the city show a different possibility of formal development shedding light on the way the block renders continuity with the city and history.
This reading relies less on the historicist context – the block as a representation of history - and foregrounds the typology and morphology of the block itself. It thus stands in contrast to the accounts of the dominant twentieth century Modernist planning and architectural historiographies that marked a 'radical' break from history.

The evidence presented here suggests that the block is itself a transition and evolution of earlier forms. This reading focuses on the persistence of the block as urban form instead of the form's dissolution. It aims to extend our knowledge about architecture's precise links to the urban and history and about the possibility of a continuous spatial reasoning about the idea of the block.

This research reveals changes in typology of the block across time on one hand, and on the other it compares the block's formal transformation within the evolution of the overall structure of the city: from the fluid understanding of the form during the nineteenth century, through the Berlin block's formation and transformation as it occurred at the time, to the change in the urban logic that emerged around the third quarter of the nineteenth century; the gradual disengagement of architecture from the urban from circa 1880 continues until present day. Through pulling, shearing, withdrawing and establishing anew architectural elements, this thesis demonstrates detailed changes and the transforming potential of architecture, which contributes to its own evolution and the growth of the city.

Through analysis of the different phases of the block in Luisenstadt (today Oranienstrasse Area of the Kreuzberg) and Charlottenburg, this thesis therefore illustrates the complex relationship between architecture and urbanism, revealing the typology of the nineteenth century block as a persisting form that undertakes the ongoing complex formal and spatial changes[3].

This comparative reading, unlike the surveys of Berlin typology concerning either the nineteenth century block (Borsi, 2009) or the post-modern forms (Urban, 2018), is proposed as one comprehensive and detailed typological study. With the view that such research, illustrating the synthesis of the contemporary and historical fabric studied at one to one level, received no academic scholarship (Mouldon, 1997, Davey and Clelland, 1987), it is thereby proposed to fill this gap in theory.

It is not the intention of this study to suggest whether the transformation of the block was successful or not. Such different research could certainly provide an essence for another PhD thesis. Instead this work strictly concerns the spatial and formal analysis of the block. It aims to enrich the debate of theory and practice of architecture about different ways we may draw upon architecture's past and the links of the discipline with the city. It therefore further brings contributions to the literatures on the theory (i.e. the field of typology, comparative spatial analysis of the block) and history of architecture (i.e. the evolution of the nineteenth century and the post-1970 structure of the block and the city).

Furthermore, with the view that the debate over the use of pre-modern, modern and post-modern forms is still discussed today, and also, that the blocks continue to provide a model for architectural and urban design around the globe, the study may enrich the discourse of the practice in the ways that we may draw upon an architectural past. Seen from this perspective the patterns of development described here highlighting the spatial and

[3] this reading corresponds with my childhood experiences. Growing up in Stettin, Poland, I spent my childhood, living in the nineteenth century apartment block. This enabled me to witness the spatial transformations across the block's different scales: changes in flat layouts, adaptation of the attic places to condominium style apartments, with roof patios, or studios, the transformation of the ground floor apartments for commercial spaces, retail or medical cabinets. These changes included the form and spatiality of the block, its programme and modes of ownership, and they continue until the present day. It can be said that as an early career researcher, I approached the subject of my study from these early experiences.

organizational specificity of the previous architectural solutions, allow the extraction of the key valuable elements for the potential application and comparison with European contexts elsewhere.

1.5. THESIS STRUCTURE

The research question logically led to the organisation of this thesis in two parts. The study consequently describe the emergence and evolution of the block during the nineteenth century (PART 1), and the form's reappearance after 1970 (PART 2). The short mid-section on Modernism – aimed to promote the chronological narrative of the thesis and the account of continuity of the spatial reasoning about the block, against the narrative of the Modern Movement marking a 'radical break' with the past.
Figure 1.17 graphically illustrates this organisation.

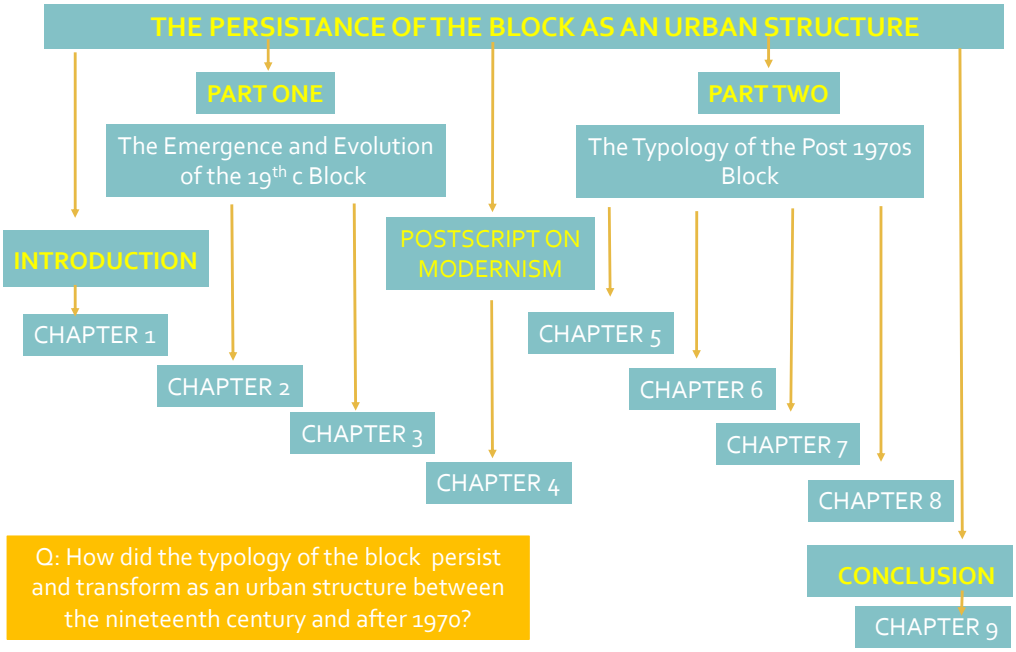


Fig. 1.17 Study organisation; Ref: Author, 2018

PART 1: THE EMERGENCE AND EVOLUTION OF THE NINETEENTH CENTURY BLOCK

CHAPTER 2: THE MID-NINETEENTH CENTURY THEORY OF URBANISATION AND PRACTICE OF THE CITY

This section describes the 1840 theory of urbanisation by the Spanish engineer Ildefonso Cerdà, whose theoretical tenets illustrate specific architectural and urban rationality concerning the form in the first half of the nineteenth century. This section demonstrates the theory as developing in parallel with the practice of planning occurring in the cities around Europe at the time. It also examines the history and method of the nineteenth century planning and building in Berlin, as implemented by Joseph Hobrecht in his 1862 Berlin's extension plan, and the model plans for building blocks from the same year, prepared by Berlin's municipal building officer Gustav Assmann. Through the graphic counterparts to Cerdà's textual thesis Chapter 2 describes the Berlin plan and the inception of the block to the urban fabric. It demonstrates a specific approach to the typology that projected the city as a *function* – a well performing urban organisation, in which the block was seen as a strategy for building the city. In opposition to the critiques of form by the historiographies, this chapter argues for the analysis of the formal and organisational properties of the mid nineteenth century urban block with the view to illustrate the precise relationship between the city and its buildings.

CHAPTER 3: THE TRANSFORMATION OF THE BLOCK DURING THE NINETEENTH CENTURY

This section traces the dual account of the nineteenth century evolution of the Berlin block: the 1860 block and the 'upgraded' post-1880 typology. On one hand it shows that the nineteenth century's technological advances raised various questions and aspirations regarding the block. Building upon Katharina Borsi's account (2009), and also the historical investigations of the fragment of Luisenstad described by Christane Bascón-Borgelt in *Von Schuppen zum Gewerbehof-Bauten der Kreuzberger Mischung* (From the Dump to Trading Estate – Building of the Kreuzberg Mix) (1987), this section provides comprehensive illustration and interpretation of the changes in form and policy, as they occurred at the time.

Following from the argument raised in Chapter 2, this chapter examines the nuanced transformation of the 1860s Berlin form. It illustrates the block's formal and spatial response to the rapidly changing needs of the city, demonstrating the mid nineteenth century structure of Berlin as a dynamic and resilient urban framework.

On the other hand, and paralleling Panerai et als' illustration, Chapter 3 also describes the late nineteenth century search for the new forms of architecture and the new urbanistic ideas. In Germany as elsewhere, in pursuit of 'a better, more humane, more environmentally friendly city', the 'architects-urbanists' (Ladd, 1997) promoted the new typology of the block, 'conceived as a whole rather than the sum of individually built parcels' (Lejeune, 2015: 281). As such, these spaces ceased to perform as a platform for the formal and spatial development of the city.

This dual account serves the comparison of the formal and spatial changes between the original block and the 'upgraded' model. More profoundly, by tracing and interpreting the evolution of the nineteenth century urban and architectural plans of Berlin, this chapter argues that the broad questions raised since the arrival of the 1860 block, helped to establish the new organisation of the city into formally and programmatically distinct segments.

CHAPTER 4: POSTSCRIPT ON MODERNISM

To promote the chronological narrative, this section looks at the Modern Movement's building and planning ideas that were developing in Europe around 1920 - the time, when the nineteenth century block was abolished [4]. However, as argued in Chapter 3 demonstrating the arrival of the new typology of the 1880 block - seen as a subsequent step in formal development continued from the previous stage (most notably signalled by the loosening of the urban fabric), this short chapter illustrates the spatial and typological development during the early twentieth century.

[4] In 2005, Wolfgang Sonne proposed a comprehensive account of reformed block typologies. In his report titled *Dwelling in the Metropolis: Reformed Urban Blocks 1890-1940*, the author demonstrated that the enlarged form of the perimeter block continued to be built during the modernism. Later in the 2009 journal article of the same title, he also made an argument about the late nineteenth century blocks as the successful housing models and relevant typology for the future urban dwellings.

Thereby in conjunction with the previous chapter, Chapter 4 argues that the twentieth century Modernism, commonly perceived as a 'break away' from the past, already had its beginnings in the third decade of the nineteenth century.

Accordingly rather than seeing the progress in architecture and planning as based on the succession of forms, this section strongly promotes the view of evolution as based on continuity of the typological material. The brief account of spatial and formal changes that occurred in Berlin between 1920s to 1960s and described in this chapter, foretells the return of the block to the fabric of Berlin around 1970.
Chapter 4 therefore acts as a prelude to PART 2 of this thesis.

PART 2: THE POST-1970s TYPOLOGY OF THE BLOCK

CHAPTER 5: THE 1970S THEORY OF URBAN SCIENCE

This chapter examines the arrival of the postmodern thought – the 1970s theory of Urban Science by Aldo Rossi, and the typological debate instigated by the Italian Neorationalists (known also as the Tendenza Group). It describes their fascination with the history, such as the eighteen-century theory of type and model by Antoine-Chrisostome Quatremère de Quincy and Jean-Nicholas-Louis Durand, which offered a break from the modernist doctrines. Critical of the Modern Movement's deployment of urban space, the 1970s urban theory prioritised the relationship between architecture and the city. Accordingly, Chapter 5 provides theoretical context for the reading of the post 1970s typology of the block (Chapter 6, Chapter 7 and Chapter 8), which reappeared in Berlin at the time of the 1979-1984/87 Building Exhibition, the IBA. The following chapters will also examine the post 1970s relationship of the block to the surrounding space.

Yet, in Chapter 5 I argue that the Neorationalists' revision of eighteenth century type and their insistence on architecture's formal autonomy, history and means of abstraction as a design approach and disciplinary knowledge, oversimplified the value of typology. I further argue that this interpretation demonstrated the lack of ability to articulate the architecture's precise relationship to urban, and also its impoverished contribution of the discipline to the city in its formal and organisational capacity.

CHAPTER 6: THE BLOCK IN CONTEXT OF THE 1979 – 1984/87 IBA PLANNING FRAMEWORK, AND THE 1995 *PLANWERK INNENSTADT* (Plan Inner City)

This section illustrates a moment in history, during which the typology of the block returned to the city design. Aligned with an explicit departure from modernism, the form reappeared during the new planning framework, Berlin IBA 1979-1984/87, and continuing from it - the 1995 Planwerk Innenstadt (Plan Inner City).

With the arrival of the new post-modern urban theory of Aldo Rossi, the two-streamed IBA framework (the Old Building Section - Altbau IBA, and the New Building Section - Neubau IBA) marked the shift towards the new formal and spatial organisation of the urban areas. Based on development and renovation, the movement was not reserved for Berlin alone, and occurred elsewhere according to local specificities (intensity of student protests, differences in governmental protectionism and finance, and changes in buildings' ownership) (Pugh, 2010, Urban, 2017). Yet, it was the IBA that became an international point of reference for reappraisal of the context of the historical European city, reinstatement of the historical ground plan of Berlin along with the deployment of formal aspects of the nineteenth century block (Bodenschatz, 2010).

Drawing upon the IBA's formal and spatial objectives, the block continued to render the image of the post-modern Berlin during the second phase of the critical reconstruction, the *Planwerk Innenstadt.* With the view to repair the inner city, after 1995 the planners looked at the nineteenth century urban plan and its dense, five story blocks, as preferred forms of development.

This section illustrates the post-1970s block as a result of diverse theoretical interpretations pursued at the time. It argues that unlike the overall connectivity of the form and space known from the mid nineteenth century, the postmodern architects and planners sought the minimum coordination of the building and the urban space. Instead they overconcentrated on the visual and analogical links between the new forms, the city and the past.

In addition, this chapter also compares the postmodern blocks with the analysis present-day situation of the 1860s century block from the area of Oranienstrasse. The results provide a testimony to the historic typology 'credited with providing the robust network of streets and parks' of Berlin. It also illustrates the form of the 1860s block, as a remedy against the present-day problems of the city, the urban restructuring and gentrification, seeing it as a strategy of 'culture of resilience' (Nowy and Colomb, 2013).

CHAPTER 7: ROB KRIER: THE QUEST FOR THE CONTINUITY OF ARCHITECTURE

Chapter 7, in conjunction with following Chapter 8, investigates the ways in which, history was used during the IBA by the key member of the Neorationalist debate - Rob Krier. This section starts with the review of Krier's design thesis, and follows with the examination of spatial and formal qualities of his winning IBA competition entries, the blocks at Rauchstrasse (1980) and Ritterstrasse (1979) in Kreuzberg.

This section unravels the recurring stylistic themes from across Krier's repertoire, his influences drawn from the legacy of architecture, which demonstrate the specific take on history. Highly critical of the perceived lack of urbanity in the modernist planning, and ambiguity of its' architectural language, Krier's projects render his quest for the 'return to the inner city' and repair of the traditional urban fabric, as founded on the nostalgic undercurrent, the likability and familiarity factors.

In this chapter I argue that Krier's interpretation of the past driven by the image, may be seen as a static disposition and a missed opportunity, which undervalued architecture's contribution to the city in its spatial and organisational capacity. Yet, I also argue that such literal approach to history could be seen as a welcomed return of the historic architectural material to urban design, and it also opened the discipline to the more 'evocative' method of history demonstrated by Krier's contemporary, Oswald Mathias Ungers.

CHAPTER 8: OSWALD MATHIAS UNGERS: THE SEARCH FOR AN ONGOING ARCHITECTURE

Chapter 8 looks at the works of yet another key member of the 1970s typological debate, Oswald Mathias Ungers, known also as OMU. This section starts with the review of the architect's design theory and serves to de-codify Ungers' thought behind his use of typology. It then examines the blocks built during IBA and *Planwerk Innenstadt* from the perspective of their spatial performance, and the links of the typology with the past.

It shows that similar to Krier, in his works in Kreuzberg and Charlottenburg Ungers also references the values of the pre-war nineteenth century Berlin. Yet, rather than using history as a material deposit, copied and placed in a new context, Ungers' forms show the possibility of a different typological approach and method of using history. Developed on the foundation of Rossi's idea of transformative and autonomous type, the core of Ungers' design ideas show potential of dynamic reality of history and provide an alternative to Krier's approach.

However, I also argue that as a method founded on analogies, metaphors and abstractions of the past, Ungers' typology rendered his forms as ambiguous, and similar to Krier's deployment of forms, it illustrated a static arrangement of the architectural elements. Conceived as typologically autonomous, Krier's and Ungers' blocks were unlike the fluidly arranged spaces of the nineteenth century forms. Chapter 8 once more underlines that the postmodern take on typology underemphasised the strategic contribution of the architecture to the city in its formal, spatial and organisational values.

CHAPTER 9: CONCLUSION

This thesis ends with the summary of findings, and recaps contributions that this research makes to our understanding of typology as a changing way of conceptualising and understanding architecture. It identifies the limitations of the study and determines future research potential. It concludes with a speculation about the further persistence of the block seen as an urban structure.

PART 1

THE EMERGENCE AND EVOLUTION OF THE NINETEENTH CENTURY BLOCK

Chapter Two

THE MID-NINETENTH CENTURY THEORY OF URBANISATION AND PRACTICE OF THE CITY

2.1. CHAPTER INTRODUCTION

Chapter 2 introduces the mid nineteenth century urban theory illustrating a close and precise relationship between the architecture and the city. The theory developed by Ildefonso Cerdà in 1852 and only implicit in the 1862 practice of the Berlin extension by James Hobrecht, depicted the city and its' architecture as one unified framework of interlinked spaces, and underlined the flexible nature of boundaries from the space of the street, all the way to the single room (Borsi, Porter, Nottingham, 2016). This specific understanding of the urban space strongly links the theory of urbanisation with the method of the city development as exemplified by the work of Hobrecht on the 1862 urban plan of Berlin, and also evident in construction atlases from the same year prepared by the Berlin municipal building officer, Gustav Assmann.

This chapter introduces the objectives of the nineteenth century urban approach.
First it looks at Cerdá's textual work, regarded as 'the founding work and archetype' of all subsequent theories of urbanism (Choay, 1997: 272, Soria y Puig, 1995, Neuman, 2011, Arendt, 1958). Fundamentally, Cerda's unique take on architectural form and its role in the city, also, establishes the theoretical and practical modus operandi for the formal reading of the nineteenth century block in Berlin.

Chapter 2 then portrays the formal and organisational properties of the typology of the nineteenth century block as applied to the spatial arrangement of urban areas in Europe around the mid nineteenth century. Through example of Hobrecht's Berlin's extension plan and building atlases prepared by Assmann, it will demonstrate the specific approach to typology of the Berlin block as strategy for building of the city.

Accordingly, this section illustrates the entry of the block into the fabric of Berlin, depicting it as conditioned by the number of questions set outside the discipline; through the graphic counterparts to Cerdá's textual thesis, urban plan of Berlin together with its blocks project the city as a *function* – an interlinked, dense and well-performing spatial organisation. I therefore argue that only through the investigation of the spatial performance (or the typological arrangement and urban functioning) of the form in the city, the reading will show a precise relationship between the city and its buildings and illustrate the nineteenth century urban structure as a dynamic and resilient form.

2.2. CERDÁ'S THEORY OF URBANISATION

In the face of Industrial Revolution, advances in technology were rapidly intensifying the need for modernisation of the urban structure and a search for the answers to challenges facing the growing cities. With no binding agreement for design objectives, urban authorities across Europe appointed engineers for the new task of urban planning (Gideon, 1941, Mumford, 1961, Sutcliffe, 1993). Around mid 1840s in Spain, Ildefonso Cerdá began to develop his planning ideas that were later published under the title *Teorià general de la urbanización* (1867). This textual work articulated the first highly coherent and empirically based thesis of the city building. 'Tedious to read' (Choay, 1997: 235) due to the extensiveness of its text (two volumes of 800 pages each), *Teorià* covered formal properties of architecture along with the wide range of objectives. As the first compendium to planning, it demonstrated a complex strategy for the organisation of urban areas. This section illustrates the main objectives of Cerdá's work based on Françoise Choay's interpretation.

2.2.1. CERDÀ'S 'CITY AS FUNCTION'

2.2.1.1. TOWARDS THE INTERCONNECTED URBAN FRAMEWORK

In her 1969 book: the *Planning in the Nineteenth century* Françoise Choay argued that during Cerdá's time the structure of the city was treated both in theory and practice as an object forming an *undifferentiated* urban organisation. It linked all urban forms within one field and encompassed all forms of architecture and urban spaces. This field operated as one system connecting urban tissue across all scales. The author explained that the purpose of Cerdà's paradigm of *urbanisation,* was to give a *unity* to the whole project. It also illustrated a new approach to planning that was meant to transform the traditional city faced with the reality of Industrial Revolution, into one regularized and 'operative whole' (Choay, 1969: 16).

Accordingly, all forms of architecture (dwellings, churches, hospitals, jails) and urban spaces (parks, squares and streets) were treated as the constituent parts of one existing urban structure, and coined by Cerdà's term - the *urban framework*. Given that this unique notion insolubly interlinked all architectural forms and urban spaces to operate fluidly within the entire urban system (Choay, 1997)[1]. This framework has further connected the practice of dwelling and the living within one urban field. Interlinked and connected, the city for the first time was comprehended as a *function* and arranged in accordance to the dynamics between the forms used for *rest* (habitation) and *movement* (circulation). Choay (1997) further explained:

> Urbanisation as a concrete fact exceeds the limited concept of the traditional city in order to embrace all possible settlements, whatever their size and degree of dispersion. Cerdá gives it a functional definition, the first of its kind: urbanisation resides nothing else than the relation between rest and movement, or rather between the spaces that accommodate human repose and those that facilitate

[1] The nineteenth century term illustrates a holistic idea to planning, and by analogy can be linked to the twentieth sustainable notions of development, i.e. Metabolist movement, organic architecture, or green infrastructure ideas (Kurokawa, 1977, Wright, 1914, Burges et al,1988).

> movement, that is buildings and the network of streets. By thus reducing the process of spatial organisation to the combinations of spaces destined for habitation and channels of communication, Cerdá formulates for the first time the two basic concepts that remains today the operative poles of urbanism: habitation and circulation (Choay, 1997: 237).

This illustration suggests that during the nineteenth century, the organisation of the city thus the urban performance, was based on the equal hierarchy of the buildings and spaces around them. In result of such arrangement, urban plan performed as an *undifferentiated* and highly functional structure.

This new notion raises the question as to what prompted the Spanish engineer towards the new dimension concerning the organisation of the city. In response, Cerdá's commentators point out to the reality of Industrial Revolution and advances in technology. They further describe engineer's astonishment with the technological inventions as mentioned in the opening pages of his *Teorià*. There Cerdà describes the moment when for the first time he witnessed the development of a rail transport, which made him realise that the city's future may look like 'the whole travelling world'. In this world, the main means of transport - the big steam engines automobiles - will be crossing and linking the cities. Because of this realisation - Choay argued - he placed an emphasis on the notions of *movement* and *circulation* that would became one of the main objectives his theory of urbanisation (Choay, 1997).

Accordingly, the city planned according to these new values would not only be linked across all its scales, but also projected as a 'foundation' capable of incorporating future changes (Neuman, 2011). Cerdà clearly envisaged that due to progress and further advances of technology, also the urban forms would undergo further evolution and accordingly they need at once to become 'a container' (an 'object') of design, as well as 'an instrument'- 'the method and a system of rules'(Choay, 1997: 242).

2.2.1.2. PARADIGM OF URBANISATION AS A METHOD AND SYSTEM OF PLANNING RULES

Choay (1969) explained that Cerdà's complex paradigm was equally concerned with the 'functional' objectives and the 'historical perspective […] applied to urban history'. Prompted by the newly developing methods of history at the time, the engineer recognised that the evolution of form is a 'process in which something fresh is created at every moment' (Lichtheim, 2008). His objectives for inaugural city design included:

> [a] research into taxonomy of not only cities and planning methods but also urban elements (traffic arteries, streets and plazas, housing, gardens and so on), which must be based on the historical evolution as well as functional analysis; a priority of traffic problems in any planning for the present or future;
>
> In Cerda's work, this semantic priority given to urban circulation is symbolized by the fact that this function is the basis of his classification of the cities, the criterion, by which the various phases of urban history are put in chronological order. The structure of the most ancient cities is adapted to pedestrian circulation *(locomocion pedestre);* later it is transformed to fit, successively horseback *(locomotion ecuestre)*, an intermediate stage of dragged sledges *(rastrera)*, and finally the wheeled vehicle *(rodada).* The latter is in turn divided into ordinary (horse power) and perfected *(perfeccionada)*, which used the steam engine […]. A distinction is thus made between the traditional and the improved *rodada* which is contemporary with *ciencia urbanizadora* (urban science) (Choay, 1969: 26).

The above illustration explains Cerda's approach to urban organisation as extracted from the analysis of the historical changes of the city areas. He noted correlation between the different modes of urban circulation over time. The development placed in the chronological order illustrated fluid progression outlining differences and similarities over time. Recognition of different temporary phases allowed Cerdà to distinguish between the traditional and the transformed (or 'perfected') results of urban evolution. It further

transpires that for Cerdá any transformation was underpinned by the overall 'functionality' and the fluid performance of the whole urban organism at any stage of development.

Overall, the methods of 'historical perspective' illustrated the significance of the new technologies and their effect on urban space; in other words, technologies clearly stimulated the process of updating, (or 'perfecting') the no longer well-performing city. As mentioned earlier, back in Cerdá's times the process of modernising was catalysed by the Industrial Revolution. The rapid technological development also required a shift in thought about how to approach an 'update' of the urban environment. Cerdà's solution - almost rooted within the Einstein theorem stating that 'the problems created by the prevalent way of thinking cannot be solved by the same way of thinking' (László, 2007:18) - went beyond the contemporary practice of a static vision of the city. Promoted at the time by Honoré de Balzak (1799-1850), the idea of a 'perfectly organised, changeless and more cooperative with guilds and estates' city was an intellectual justification of the 'fixed' and traditional city. Such notion was borrowed from the methods of natural sciences, most profoundly Georges Curvier's descriptive and 'static models of nature' (Higonnet, 2009: 178). Against such vision of an outdated city seen as a static object, Cerdà proposed his theory of urbanisation, reading the urban structure as an 'urban organism' in motion.

2.2.1.3. CITY AS MOTION VERSUS CITY AS A STATIC OBJECT

For Cerdá, the nineteenth century city could no longer be studied from the point of pre-Industrial values, neither in static numerical nor rigid administrative or cultural terms. Instead, he envisaged it as continuously transforming; a *foundation* set for further 'update' that would embrace all new developments. With fluctuating boundaries 'exist[ing] to accommodate the endlessly mobile population' his city was in motion, always open to change; at no point could it be fixed. It was further not based on the repetition of previous solutions, but rather was founded on the grounds of previous urban experiences: the 'discontinuous succession of constellation of social practices' (Choay, 1997: 239).

Choay pointed out that whilst this evolutionary approach of Cerdà was prompted by the advances in methods of history and advances in technology, it was further influenced by the developments in natural sciences. Indeed Cerdà's methods for city design holds clear analogy with Charles Darwin's (1809-1882) evolutionary thinking. Paralleling Darwin's theory, which sees the human organism as one working system relying on circulation, nourishment, digestion and elimination, the engineer sees the new city as an 'urban body' (or 'urban object') [2] - a single network of spaces for movement ('circulation') and rest ('habitation') set out for fluid performance.

This explains the duality of Cerdà's notion of *urbanisation* as coining the unique relation between the 'spaces facilitating movement' and the 'spaces of human repose'. These spaces, seen as *undifferentiated,* were mutually important and equally dependant on each other at all levels of the *urban framework*. '[F]rom the systems of cities, interconnected by a universal notion of functionality, down to the house by way of city block' (Choay, 1997: 240).[3] This all-inclusive framework also 'embraced all urban settlements' - the blocks, streets, parks and squares - 'whatever their size or degree of dispersion' (Choay, 1997: 237). By connecting all urban forms, the city projected by Cerdá was set to perform as an ongoing development and also foreseen as a dynamic and highly resilient field.
This observation is crucial at the time of comparison of the nineteenth century blocks with their post-1970s successors.

[2] Choay (1997) explained that both terms were used by Cerdà in exchange; by treating the city in terms of an inanimate *object* or the *artifact,* and also as a *living organism* - the *body,* he appears to embed his theory of urbanization with a paradox. However, this 'apparent contradiction between the *organism* and *artifact* [he] resolves by the means of bold conception of the (urban) body as a machine' which could be updated, illustrating the city as an ongoing development. Choay further asserts the example of that update – i.e. the development of 'the underground channels of the city' (Choay, 1997: 242) that perhaps envisaged the sewage network, rainwater or the future sub terrain transportation systems.

[3] Choay (1997) and Colquhoun (1986) asserted that this twofold interaction of Cerda's paradigm between spaces of 'movement' and spaces of 'rest', encompasses a particular quality of dynamic fluidity; as such it also holds analogy with the modern physics theory of *flux* and *inertia* – the twin concept of one theory. This model is used by the present-day science, adopted for instance by the molecular biology or statistical thermodynamics; Kelly, (2010) and Janssens (2012) further observed that more recently, the same approach emerges through the mechanisms of the Quantum Theory.

Choay and others further point out to the scope of topics considered at the time of the planning for the new city. Given that in the first half of the nineteenth century, the municipalities held no legislations for the planning of urban areas (Mumford, 1961), many aspects regarding the urban space were brought together by the array of specialists from various fields (i.e. doctors, municipal governors, building police, economists and university professors). Prompted by the increasing concerns about urban hygiene, they discussed, and projected for different objectives related to the urban organisation (Suttclife 1980, Choay, 1997, Gerosa, 2001, Borsi, 2009). Drawing upon these experiences, Cerdá too placed emphasis on the importance of the diverse considerations regarding the urban form. He thereby proposed his *Teoríá* as a 'multi-disciplinary approach' (Neuman, 2011: 137), where questions about the city and its buildings were juxtaposed with questions of economy, politics, hygiene and property ownership (Soria Y Puig, 2005).
This perspective is important. It clearly shows that around the mid nineteenth century the cities were organised according to the highly integrated and comprehensive urban logic that illustrated the tight relation between the urban forms, and other objectives embracing all past urban developments and advances in knowledge.

Given that Choay's analysis is based on a textual reading of *Teoría* rather than spatial illustration of the later developed by Cerdá 1852 Plan for extension of Barcelona, the notion of the *city in motion* performing as one undifferentiated urban framework, can be explained when looking at the growth of Berlin circa 1860. At the time, James Hobrecht and the city architect Gustav Assmann sought to expand, regulate and modernise the no longer functioning fabric of the Prussian capital.

Exemplified by Berlin, the graphic account which follows, aims to illustrate the specific understanding and performance of the urban space around the mid nineteenth century Europe. Equally, it will also demonstrate the block conceived as one entity with the city. The following sections therefore seek to portray the analogy between the urban and architectural thought of Cerdà and the practice of the city from the same time. [4]

[4] With the view that neither Hobrecht nor Assmann wrote the theory, Cerdà's textual work serves as parallel to their developments in Berlin. It could further be argued that it played an influential role in

2.3. EXPANSION OF THE NINETEENTH CENTURY BERLIN

2.3.1. PARADIGM OF *URBANISATION* IN PRACTICE

James Hobrecht's (1825 – 1902) extension plan of 1862 sees the city as a unified network of spaces similarly to Gustav Assmann's description of the block interior as a variable number of linked spaces; both the extension plan of Berlin and the plans of building blocks, underline the flexible nature of boundaries from the space of the street all the way to the single room; as such, these graphic counterparts are illustrative of the strong link with the Cerdà's textual work developed around the mid 1840s and published in 1867 (Borsi, Porter and Nottingham, 2016). The following close reading of the structure of Berlin from around the mid nineteenth century will demonstrate the thorough and systematic attention to integrating the urban forms with the broad objectives set outside the questions of architecture.

2.3.2. BERLIN EXTENSION PLAN OF 1862

Commissioned by the municipal authorities of Berlin, the 1862 plan extended the city outside the city walls. It projected the development of a network of streets, piazzas and gardens on the land free from any development, and further also provided provisions for the already built up areas and their infrastructures (Matzerath, 2004). Paralleling Cerdá's vision of a highly integrative and encompassing future changes to the city, the 1862 Berlin plan also allowed for the later development of the 'below the surface interchanges, such as water and sewage'[5] (Sutcliffe, 1981). After decades of criticism of the plan, most recently Hobrecht's plan was renown as exemplifying the practice of the integrative and

---

the development of European cities, yet at the time of concluding of this research I have found no evidence proving this hypothesis.

[5] Three years before the development of Berlin, James Hobrecht designed and oversaw the construction of the sewage network in Stettin, a Prussian city closely connected by trade with Berlin at the time (today, situated in North-West Poland) Stettin extension plan of 1871 stemmed out from the proposal plans designed by Hobrecht in 1861 (Stettin State Archive, doc. No.813).

comprehensive planning[7] (Choay, 1969, Bernet, 2004, Sonne, 2005, Borsi, 2009, Stimmann, 2009), thus paralleled Cerdà's holistic urban thought.

2.3.2.1. REGULARISATION OF THE 'OUTDATED' CITY

As mentioned earlier, the need for an update of urban areas emerged everywhere across the mid-nineteenth century Europe largely as a consequence of the concerns with the public health. However, the hygiene and sanitary considerations alone do not explain the unique all-inclusive approach to the urban space and form. In response to the limited idea of the traditional, locked in the walls static city, the new practice was governed by the functional considerations, essential to the overall workability of the city faced with the modern needs[8]. As portrayed by *Teoríà*, during the mid-nineteenth century the new planning incorporated the existing districts, streets, and old block lines, and the new developments were conveyed with respect of the old fabric. Such practice meant to give a new city a well-functioning form that could easily evolve further. It sought to *regularize* the old city. The term is borrowed from Haussmann's *Mémoires* (1890-1893) and was used by Choay (1969) who explained *regularization* in following:

> the form of critical planning whose explicit purpose is to regularize the disordered city, to disclose a new order by means of a pure, schematic layout which will disentangle it from its dross, the sediment of past and present failures (Choay, 1969: 15).

In this light, the practice of *regularization* aimed to integrate the 'disordered' parts of the city and establish a new spatial order with new circulation system. Still, whilst we may now

[7] Typically, the origins of the comprehensive planning are associated with the 1853-1870 extension of Paris by Baron Georges Haussmann (Newman, 2011).

[8] The new all-inclusive methods of planning indicated a change from the previously practised *fragmentary* planning approach. Thus, in Berlin, prior to the 1862 Hobrecht's plan, the architects and landscape architects were involved in the design of the parts of the city (Choay, 1969, Kuck, 2010). I elaborate on this in Section 2.3.2.2.

attribute this practice to the mid nineteenth century thought, [9] the historical research indicated that the change towards the new urban approach was not sudden. It is therefore in particularly interesting to bring up an example of the earlier planning, the 1817 Plan for Central Berlin by Karl Friedrich Schinkel, to justify this thought. Although the 1817 plan did not survive the test of time, the recent historiographies suggest the use of the similar all-inclusive approach to form by Schinkel as the method used around the mid-nineteenth century Europe.

2.3.2.2. EARLY REGULARIZATION OF BERLIN BY KARL FRIEDRICH SCHINKEL

As seen on Fig. 2.1, at the end of the eighteen century the land outside Berlin's walls functioned as separate villages, each featuring a highly differentiated spatiality. In search of the reform, the city authorities commissioned Schinkel to prepare the amalgamation of the juxtaposed districts into the new walls of Berlin. His task was 'to establish new urban links amongst the disjointed sections of the city, and to clean up the chaotic streets of the *Spandauer Vorstadt* and the *Dorotheenstadt* north of Unter Linden' (Lejeune, 2009: 73).

[9] Concept of *regularisation* of the urban areas is typically recognised by the theory as belonging to the twentieth century. At the time, the Modern Movement efforts to distribute parts of the city in a regularised manner, saw the city as an object of commodity, which could be ordered regulated or improved through science and theory. This became the leading modernist manifesto directed against the nineteenth century city perceived as chaotic and insalubrious (Scott, 1999, Hermansen–Cordua, 2012, Holston, 1989, Dennis, 2008). However, I use this term with reference to the mid-nineteenth city after Françoise Choay (1969), and explain it in section 2.3.2.1 .

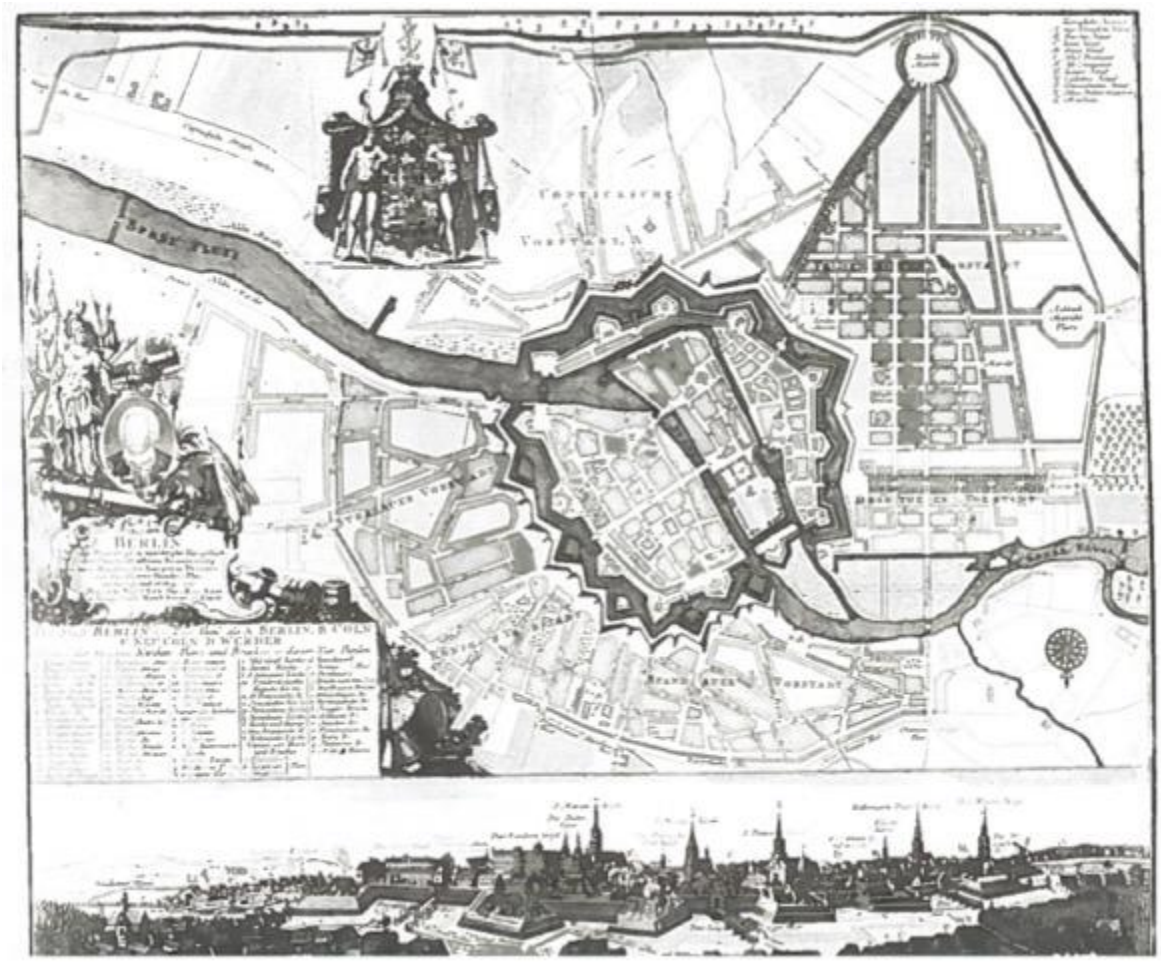


Fig. 2.1 Berlin's late eighteen century fortifications and villages outside the city walls; situation plan before Schinkel's development of 1817; notable different approaches in formations of various districts: *Dorotheenstadt* to the north-east of the map, the *Spandauer Vorstadt* to the South, and the *Copnicksche Vorstadt* (Köpnicker Feld) to the north; Ref: Choay, 1969: 33

The only survived fragment of the 1817 Schinkel's plan for Central Berlin (Fig. 2.2) illustrates the insertion of the new blocks into the existing fabric and the consequent densification of the Berlin's center. Echoing Choay (1997, 1969), Lejeune (2009) asserted that this new spatiality was achieved in pursuit of unity, to regulate the poorly performing urban space. The 1817 fragment of the plan depicts buildings grouped into the block organisation instead of individual, free-standing structures. The individual buildings are further planned according to the singular plot arrangement, thus we may agree that also their ground floor plans were subordinated to the plot of land on which the block was built. This type of planning clearly mirrors the workings of the *subordinate type* illustrated by Panerai at al's, which demonstrates tight correlation and fluidity between forms of architecture and spaces of the city. Correspondingly Lejeune (2009) noted that in Schinkel's description of the

typology of the block, the architect related to the form as 'an object […] whose relationships should be studied dynamically' (Lejeune, 2009: 74). This reading clearly suggests Schinkel's emphasis on the link between the building and urban forms and the dynamic relationship between them[10].

Looking at the map (Fig. 2.2), it could further be argued that Schinkel's organization of the block as a group of interlinked yet individual buildings, complied with the overall functionality of the city.

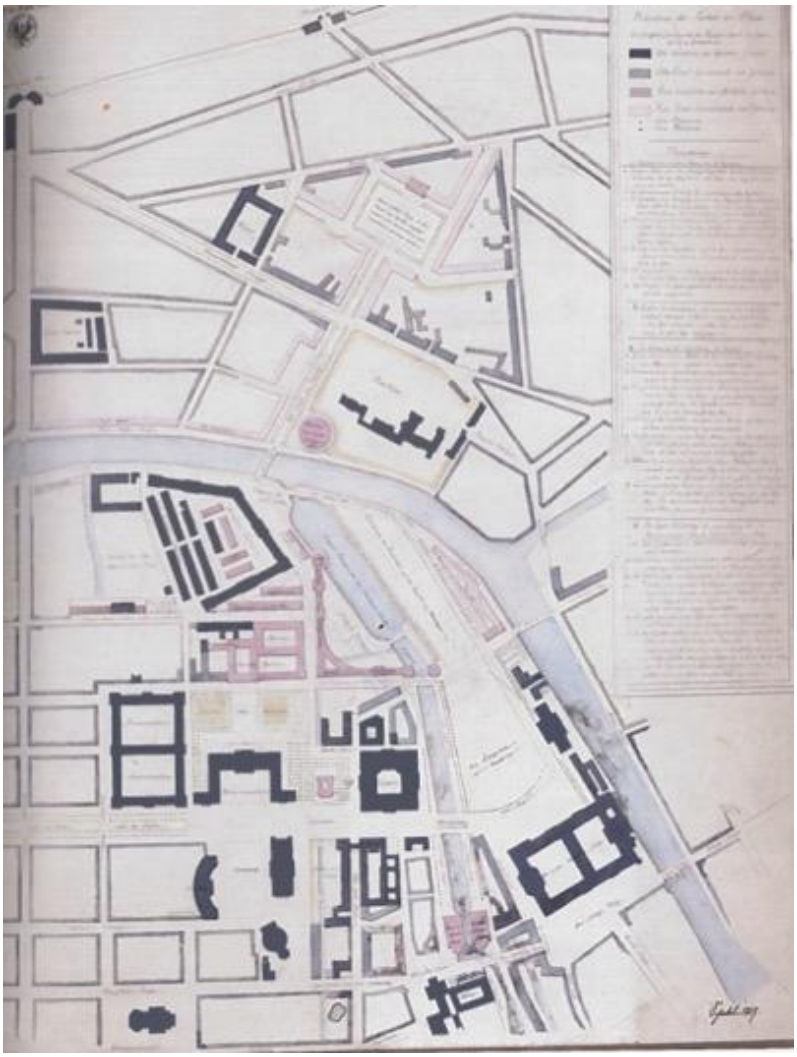


Fig. 2.2 Part of the 1817 Schinkel's Plan for Central Berlin. Blocks marked in dark grey depict the existing royal and public buildings, grey - the existing blocks other than public buildings, red - the proposed royal and public buildings, pink - the proposed new blocks with other than public function: Ref: Bildarchiv Preussischer Kulturbesitz/art Resource

[10] This addressing of the overall spatiality have only recently renowned Schinkel not merely as an architect of individual buildings but also an early planner (de Zurko, 1957)

It is noted that the newly arranged blocks are organised in accordance to movement and appear to delineate the space of the street. Yet also, Thus, they also distinguish the ordinary places of habitation (marked in grey and pink), from the royal and public buildings (marked in dark grey and red). This focus on programme, points out to the specific understanding of hierarchy in the early nineteenth century city, which distinguished between public buildings or spaces of importance (i.e. opera houses, railway stations, jails, or public squares) and the ordinary fabric.

This focus on functionality, workability and the overall performance of the outdated Berlin, together with the grouped arrangement of buildings 'in relation with the landscape and the natural environment' (Peschken, 1979), have earned Schinkel the title of the 'pioneering functionalist' (Behrend, 1937: 38) and the contributor 'to the development of a total urban design' (Pundt, 2008: 114). More importantly, this fact demonstrated that Schinkel's method indeed finds analogy with the highly inclusive approach to urban form developed in theory by Cerdá and practiced around Europe some thirty years later.

Still, Schinkel's quest for modernization of the 1817 Berlin, was achieved on relatively small scale. Seeking better performance of Berlin, Schinkel aimed only at transformation of the certain 'chaotic' parts of the city (Spandauer and Dorothenstadt). Such method however corresponded with the typical at the time fragmentary approach to urban development (Kuck, 2010, Choay,1969)[12].

Historian Ulrich Reinisch (1992) illustrated an example of such fragmentary planning by district. In 1834 the *Köpnicker Feld*[13] - one of the Berlin's districts located within the city

[12] It is also worth noting that as urban planning was not theorized, in Berlin at the time to some degree the order and distribution of streets was executed by the eighteen century law on street lines, the *Fluchtlinien* (1794). Still around 1840, when Berlin entered into an early phase of industralisation, the outdated law allowed for the liberal subdivision of land on the disintegrated agricultural plots (and at the high costs of expropriation process). Due to this fact Berlin established intricate structure of blocks and open spaces (Suttcliffe, 1981) featuring collection of differently drafted Berlin's parts, as previously seen on the Figure 2.1.

[13] Today, this area around the Oranienstrasse forms part of the Kreuzberg district, and was also chosen for this study.

walls to the east of the center - was proposed for a grid plan development. In critique of a plan - the Crown Prince of Prussia Friedrich Wilhelm IV - drafted a new plan, seen on the Figure 2.3. Instead of a grid it depicts a large circular square and radiating from it six boulevards.

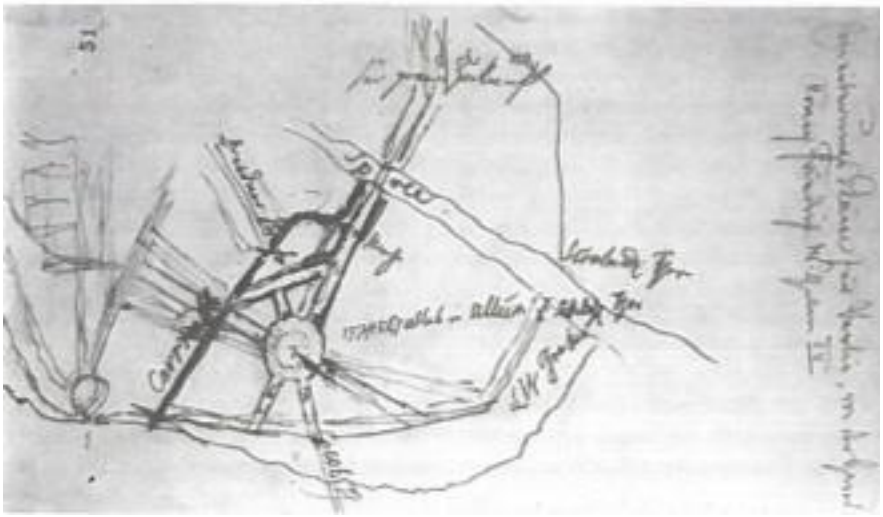


Fig. 2.3 Friedrich Wilhelm IV's sketch for the *Köpnicker Feld* in Berlin; Ref: Stiftung Preussischer Schlösser und Gärten Berlin-Brandenburg, Schloss Charlottenburg

In 1935 Schinkel responded to the Prince's new organization with a pragmatic note:

> The layout of the four-sided blocks, which must avoid using pointed angles, should adapt itself to the preexisting road pattern in order to provide overall easy connection and a good organisation within the new district (Schinkel, in Lejeune, 2009: 80)

The architect's reply suggests that in place of the Prince's absolutist idea, he would prefer more *rational* solution accommodating the already existing urban spaces: gardens, fields and roads. Along better overall connectivity and organisation Schinkel's solution would naturally also lower the costs of land expropriation.
It is further noteworthy that almost in lieu with Schinkel's objectives, in 1844 and 1853 the landscape architect Peter Joseph Lenné designed a boulevard (Bernet, 2004) around the Köpenicker Feld area of Luisenstadt with network of open spaces (Fig. 2.4).

As seen below, the 1844 Situation map by Lenné illustrates generous block spaces for future development; the whole arrangement is intersected with the rationally arranged network of streets , four-sided blocks, and a number of parks and squares. The new organization simply guaranteed the overall connectivity. It linked the fabric with the neighbouring districts of *Dorotheenstaadt* (to the west), the 'old' Berlin (to the north), and *Spandauer Vorstadt* (to the north-east); furthermore, the plan also linked Luisenstadt with the important at the time waterways, connecting the district with the river Spree via Luisenstädtisher Kanal and Landwehrkanal (Bentlin, 2017).

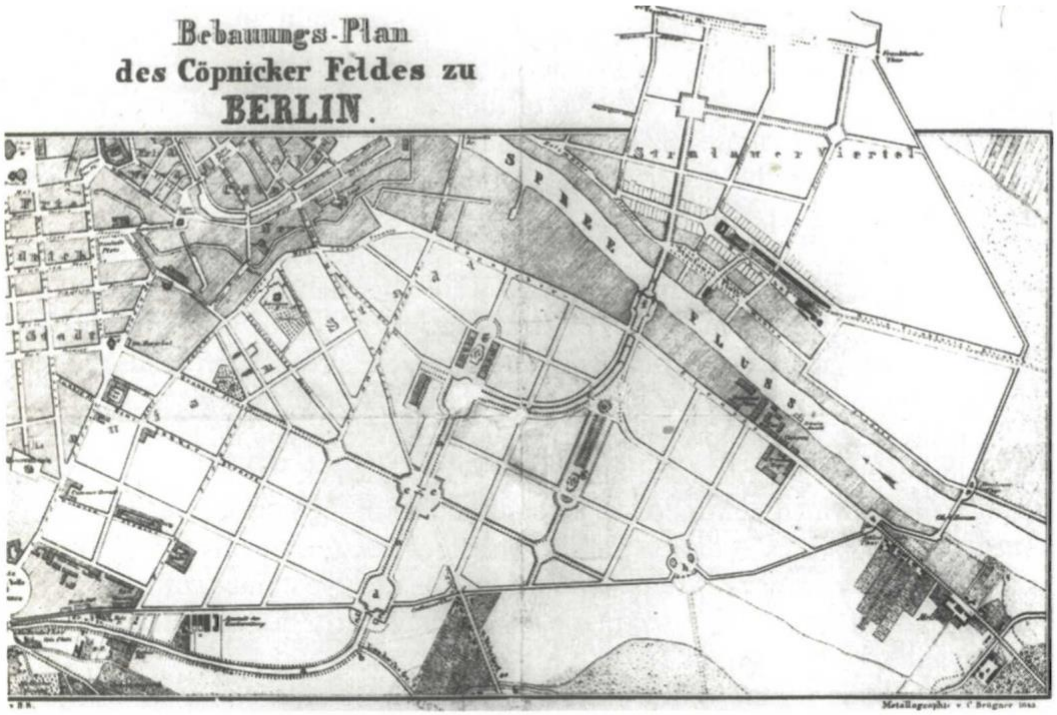


Fig. 2.4 Situation plan c.1840, prepared in cooperation with royal Landscape architect Peter Lenné; Ref: Ref: Bentlin, 2017

Interestingly, these early attempts at unifying the urban space provided the subject of critique by Werner Hegemann. In 1963, ridiculing the 1817 plan for what he believed the 'individualistic design over unified form', Hegemann summoned Schinkel's method to planning 'a declaration of bankruptcy for the art of city building', and further accused the architect with the lack of abilities to improve Berlin:

> Schinkel was unable to go beyond the traditional weaknesses of Berlin urbanism; on the contrary, he made them worse. He did not create any square of coordinated design, and none of his buildings was effectively well located in the urban context (Hegemann, 1963: 182).

Hegemann's perspective illustrated however a 'virulent' account based on superficial reading of the early planning proposals. The critic clearly ignored the 1840 contribution of landscape gardener Peter Joseph Lenné to the history of Berlin's planning, and in particular the designs of parks and squares of *Köpnicker Feld* (Lejeune, 2009).
More significantly, we may view Hegemann's critique as retrospective, given that the 'art of the city building' has not been established in Schinkel's times, and it will only emerge at the end of the nineteenth century. His critique, abhorrent towards the nineteenth century planning, appears to parallel the modernist position towards history.
Still, despite Hegemann's devastating account more recently, the 1817 plan for Central Berlin was acclaimed for its 'innovations', 'imaginations, farsightedness, and also the breadth of the changes, which this young architect was willing to attempt' (Pundt, 1972: 126).

Yet, it will be 45 years after development of the plan when the idea of the city as synthetized and united network of spaces would be commenced on a much larger scale and for the first time in the history of Berlin - when on July 26th 1862 James Hobrecht presented his comprehensive solution for the future of Berlin. Not surprisingly also this planning conception provided subject of contagious criticism by Hegemman, who indirectly accused Hobrecht and Schinkel of early 'culprability' (Lejeune, 2009).

2.3.3.3. COMPREHENSIVE PLANNING OF BERLIN BY JAMES HOBRECHT

Berlin extension plan of 1862 illustrates the regularly allocated network of spaces for movement that preordained the spatially of Berlin as programmatically undifferentiated fabric (Fig. 2.5). The plan depicted the new city as a unified network of interconnected spaces and was based on the logical linkage of the dispersed and differentiated fabric of the pre-1860s Berlin. As seen on the Figure 2.5, Hobrecht extended the city outwards merging the existing villages within the new fabric. His inclusive 'concentric' approach (Bentlin, 2017) was unlike Haussmann's method for Paris that reshaped the already existing city through the applied system of cuts (*percèes*). Instead, Hobrecht drafted an extensive network of streets in areas free of any development, and intersected in varied forms large squares within the new structure of the city. As seen on the figure below, the newly marked routes resulted in well-ordered gridded organization, prominent for its regular large blocks.

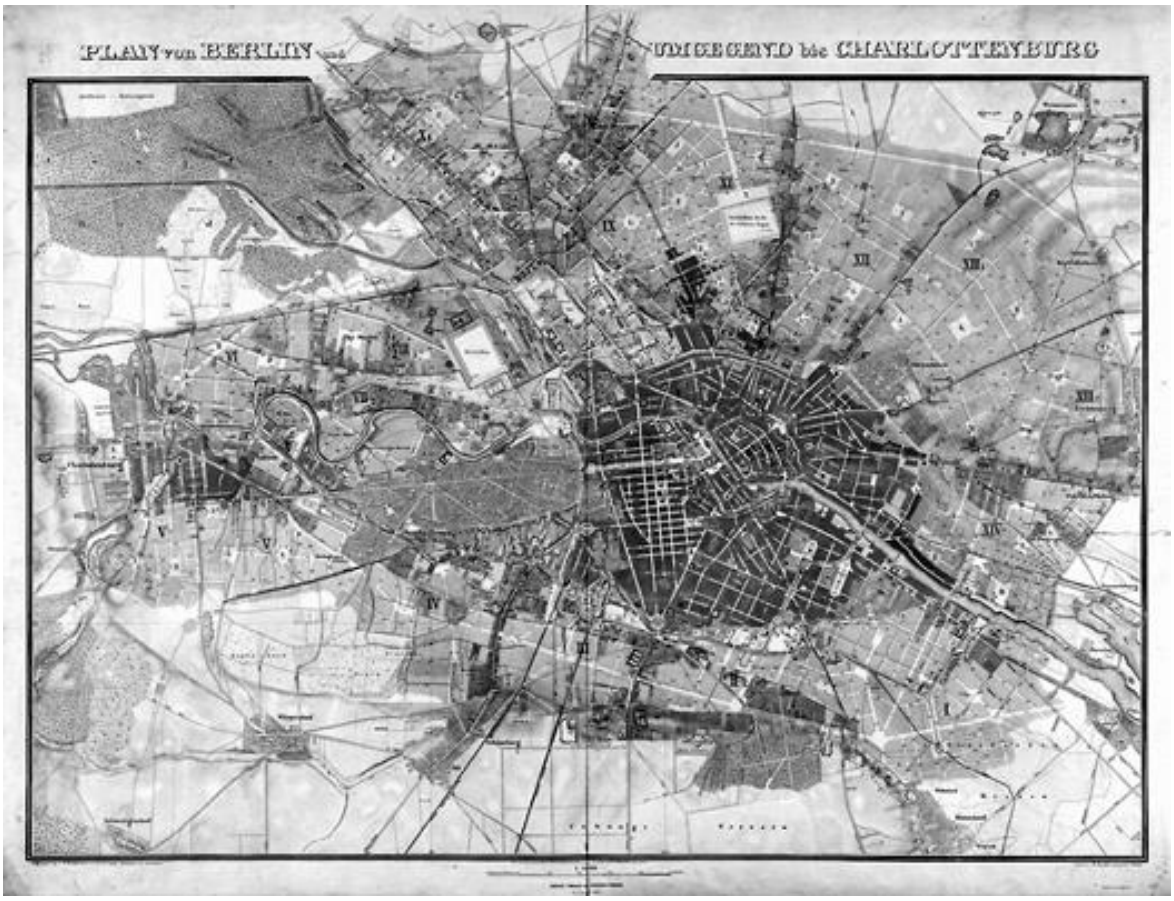


Fig. 2.5 The scope of the 1862 'concentric' extension; Ref: Matzerath, 1980: 194.

To regulate the practical issues of everyday life like traffic flow, Hobrecht designed the network of thoroughfares and the orbital distributor roads. He further merged all new infrastructures with those already existing. The new organisation consequently connected and allocated the space across the whole fabric of the city (Borsi, 2009, Bentlin, 2017). The diagrammatic overlay below (Fig. 2.6) demonstrates Berlin as an interlinked and all-encompassing *urban framework* that echoes theoretical objectives of Cerdà's planning.

The plan's generosity, comprehensives and openness aimed at the fluid performance of the whole Berlin in years to come. Thus also the large generic quarters of land drafted by Hobrecht, projected further development. This shows that from the beginning the plan was promoted as 'developmental' (Bernet, 2004: 419), indicating the possibility of further fluctuations. [16]

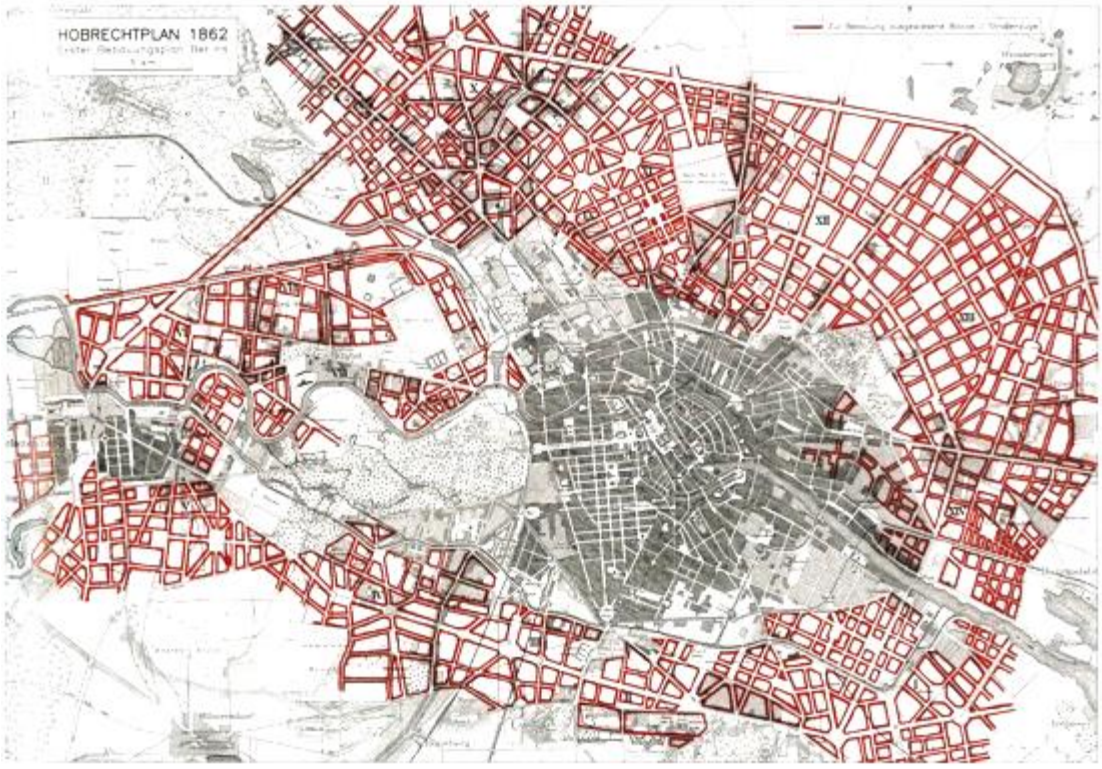


Fig.2.6 Berlin Plan of 1862 illustrating in red the extent of the planned area, surrounding the old fabric; Ref: Cramer, 2007

The schematic representation of the 1862 plan seen on Fig. 2.7 depicts very well the interlinked network of streets, squares and large spaces for future development of the

[16] Mazerath (1984) noted that Hobrecht projected Berlin for accommodation of 4millions future urban migrants, despite that in 1861 Berlin had only 550, 000 inhabitants (Mazerath, 1984)

blocks. By connecting all forms from the overall city surface down to the urban block, Hobrecht ensured fluid functionality of Berlin's structure, which in further analogy with Cerdá's city, was set to continuously perform as 'one whole'.

As a result, in 1874 - twelve years after implementation of the plan - the undifferentiated, interlinked, and relatively autonomous urban framework of Berlin allowed Hobrecht to establish within its structure a modern sewage system (Suttliffe, 1981) (or in Cerdá's terms - the 'underground channels of the city' (Choay, 1969: 242)).

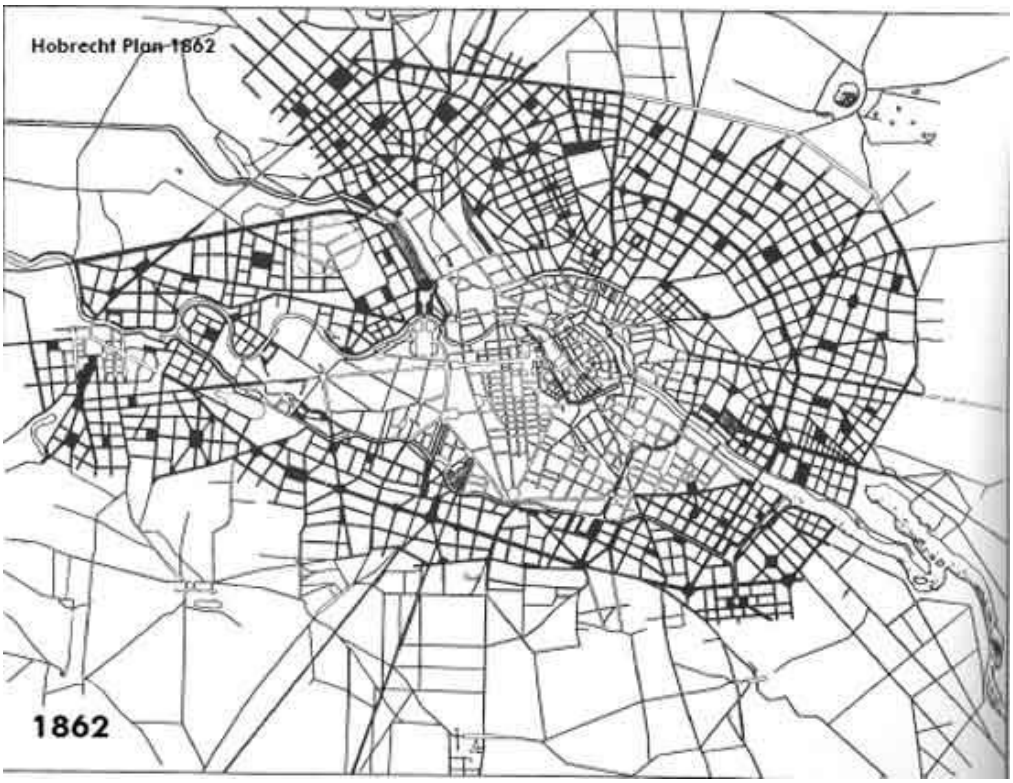


Fig. 2.7 Comprehensive planning system of the fluidly interlinked spaces; Ref: Bodenschatz, 1987:54

Furthermore, Hobrecht's comprehensive planning solution was not only reserved for the inclusion of the already developed areas of Berlin's peripheries in his plan. Comparing Figure 2.8 - the Situation Map of 1856 with Figure 2.5 - the 1862 plan, we may note the striking 'line for line' trace in the north-east fragment of Berlin. This shows that Hobrecht inscribed within his proposal all architectural developments, achievements and also the previous knowledge, further demonstrating his highly empathetic approach to form.



Fig. 2.8 Situation Plan of north–eastern Berlin 1856, by Schropp&Comp.The map layout was adopted by Hobrecht in the line for line mode; Ref: Situationsplan der Haupt-und Residenzstadt Berlin, mit nachster Umgebung –Bebauungsplan der Ugebungen von Berlin –Genehmigt durch Cabinets-Odre, Verlag von Simon Schropp&Comp Berlin 1856 Lith v. C. Birk

With nuances, the same spatial logic was adopted as in Berlin (1862), as it was for instance in Barcelona (1859), Madrid (1861) Paris (1853), or Stettin (1871). The new comprehensive method resulted in the undifferentiated, interconnected and fluidly performing cities.
Thus also the Berlin's far-sighted 1862 plan, set out as a skeleton framework and a 'foundation' open to update until today provides the city with a robust structure on which any further phase can be developed. This perspective is important and will become crucial to the analysis of the post 1970s planning approach that I describe in PART II of the thesis.

Soon after the plan proposal on July 26th 1862, the generously subdivided quarters of land stimulated rapid development. The plan was seen as the literal outline for the street-block development and provision of housing stock for the growing numbers of migrants from the rural areas. To deliver more affordable rental apartments, the majority of the new block construction focused on the development of one-roomed flats (Bullock, Read, 1985).
Yet, the rapidly built blocks prompted a vast critique. Photographs below illustrate the densely-constructed fabric of the nineteenth century blocks, and the squalid and cramped life in a flat as still recorded at the beginning of the twentieth century.
This takes us to the description of the formal and spatial properties of the Berlin blocks, which I demonstrate in the next section.

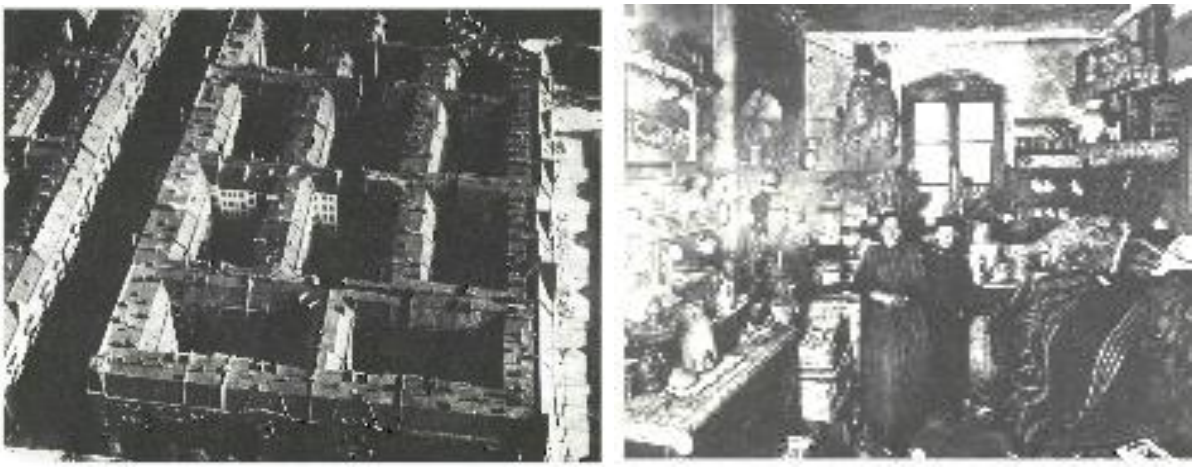


Fig. 2.9 Fabric of the nineteenth century blocks (L), and the apartment living (R);
Ref: Sutcliffe, 1981: 139 Whyte and Frisby, 2012: 155

2.4. THE TYPOLOGY OF THE BERLIN BLOCK

2.4.1. CRITIQUE OF THE NINETEENTH CENTURY BERLIN BLOCK

After the approval of Hobrecht's plan, private land developers were still constructing the blocks in accordance to the pre-dating 1852 building legislation. These rules explained only the very basic requirements for arrangement of the building block, thus were often used to the advantage of the speculative builder. As seen on Figure 2.10, the solid black mass of the block in plan surrounds the small courtyard spaces. The façade of a typical block could measure up to 22m in height, and could further be built over seven floors at 3.5m high (Bullock and Read, 1985, Rossi, 1982).

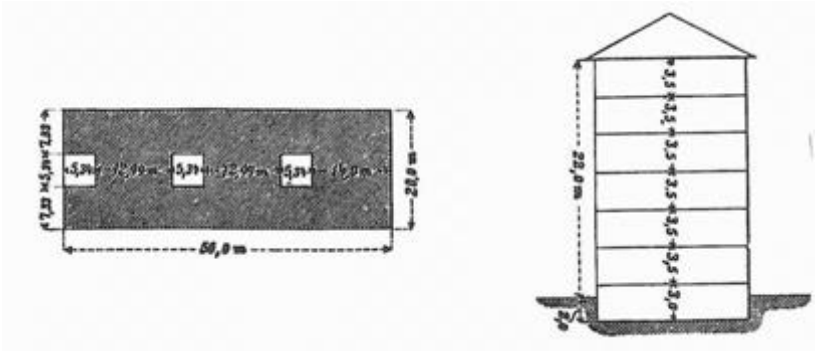


Fig. 2.10 1852 building regulations, plan and section of the block; The solid mass Ref: Rossi, 1982: 76

Conditioned by too little public restriction and guidance, a construction of the over-dense dwellings and narrow courtyards (5.3x5.3m, enough for the use of the fire engine) flourished in Berlin. Private and commercial developers constructed vast number of buildings on the area drafted by Hobrecht. This stretching of laws to the greatest possible extent resulted in poor living conditions in the blocks and the city overall, as it was often depicted in caricatures (Fig.2.11).

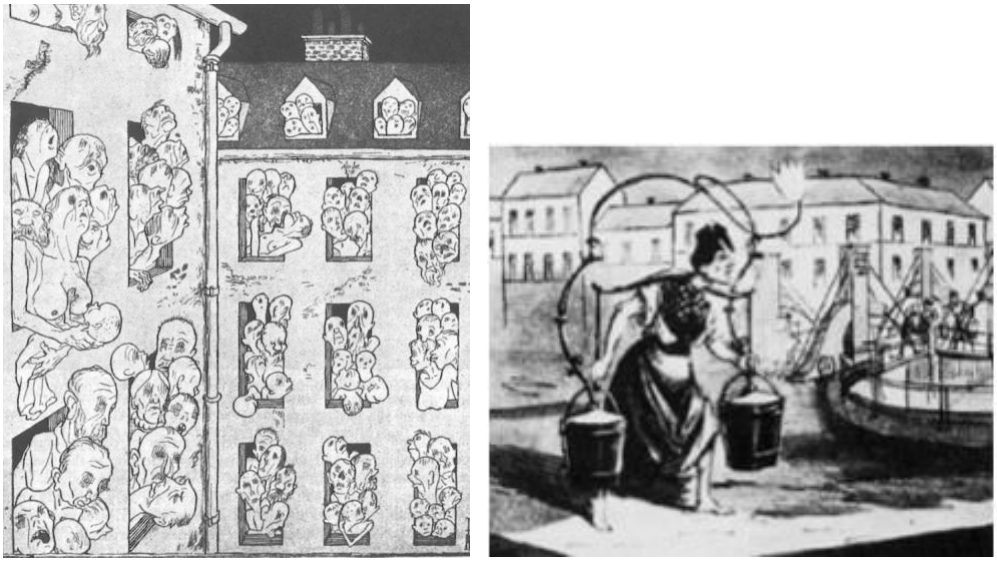


Fig. 2.11 Intense construction of the blocks and sanitary situation in Berlin depicted in caricatures; Ref: Sutcliffe, 1981: 139

The densely built up city obtained a hostile synonym of the 'largest *Mietskasernen*[17] city of the world' (Geist and Kürvers, 1980, Ladd, 1990, Sutcliffe, 1981, Rossi, 1982, Makala, 2011). The pejorative term was assumed by no other critic but the keen proponent of the Modern Movement, Werner Hegemann. In his 1930 work *Das Steinerne Berlin,* Hegemann 'placed the city of Berlin before the world court', and inaccurately portrayed James Hobrecht as 'the father' of the tenement block which he abhorred (Stimmann, 2009: 297). His campaign depicted a 'shockingly ghastly' history of Berlin, and lambasted the 1862 Berlin extension plan together with its blocks:

> The building department orders tenement houses for four million Berliners [...]. The green surfaces of the Berlin hinterland were officially readied for the construction of closely packed, large tenement houses, each with two to six badly-lit backyards and four million future Berliners were condemned to live in housing, which neither the dumbest devil nor the most diligent councilor or the ground speculator could have devised better (Hegemann 1930, in Stimmann, 2009: 297).

[17] German tr. Tenement army barracks – term used by Werner Hegemann as a title of his 1963 book (Hegemann, 1963).

Still, it can be argued that such uncompromising position seemed to focus more on what in Hegemann's opinion was the wrong designs based on the bad models, rather than the poverty typical of the time; more so, the critic overlooked the typological varieties of the blocks constructed in Berlin during the second half of the nineteenth century, which clearly provide counterevidence to his claims.[18] Underpinned with the avoidance of facts, Hegemann's attitude was simply recognized by Aldo Rossi as 'deeply romantic' (Rossi, 1982: 116).

It is noteworthy that the critic's attitude closely followed the highly critical and virulent readings of the typology by the late nineteenth century economists: Ernst Bruch, Rudolf Eberstadt and Reihnard Baumeister (Matzerath, 1984, Bullock and Read, 1985, Ladd, 1990, Brunner, 1996, Bullock and Read, 1985). Looking at the city from the point of numbers and statistics, their understanding of the 'ghastly' situation suggested that the proliferation of the block typologies was a direct result of the Hobrecht's 'monumental planning' rather than economic push, poverty, and the need for housing quantities at the time. Like Hegemann, they too overlooked the fact that despite recommendations made by Hobrecht for further division and construction of secondary streets, the large blocks of land were not subdivided by the builder-speculator. As such, the plan was seen as an opportunity for the ubiquitous building trade - essentially focused on money on return and the 'maximum possible rent obtainable from the buildable volume' (Panerai, 2005: 156, Bernet, 2004, Stimmann, 2009, Lejeune, 2009) [19].

Yet, it is crucial to note that the virulent opinions of critics calling upon the end to the urban and architectural approach practiced at the time, were voiced when the 'aesthetics of urban design' have started to gain popularity. This also appears to be the reason for which, in 1930 Hegemann specifically criticised the 1862 plan as lacking in 'aesthetic unity' (Ladd, 1990: 137, 81). The new attitude, that placed focus on the aesthetics of design coincided with the

[18] I illustrate these typologies in the next Chapter 3.

[19] See critiques of Werner Hegemann's (1930, 1963) , Ernst Bruch's (1872), and Rudolf Eberstadt's (1909) and defense of the plan by James Hobrecht and Gustav Assmann in J. Geist (1984) *Das Berliner Mietskahaus,* vol. II : 158; also the reassessment of the plan in 2004 by Claus Bernet, in 2009 - by Katharina Borsi, and in 2017 - by Felix Bentley

transformation of the block, and indeed reflected in the improved 1887 building regulations and also the upgraded building law of 1897. I further discuss this in Chapter 3 of PART I.

In late 1870s, in response to the critiques at the time, James Hobrecht and the Berlin architect Gustav Assmann countered all accusations with the public defense of their methods of planning and design (Geist and Kürvers, 1984). The engineer pointed for instance that it was not his task as a planner to work with the aesthetics as that role was simply left to the individual architect (Bernet, 2004). Moreover, he once again stressed that the 1862 plan ought to be looked at as the *proposal plan* for further development rather that the set of rigid planning and building principles (Matzerath, 1984). Furthermore, although not responsible for the condition and the extent of the development, in his 1868 pamphlet *Gesundheitspflege* Hobrecht defended the 'ill-fated' typology of the Berlin block. Demonstrating his humanist stand, the engineer maintained that the mix of dwellings for poor and wealthy members of society would help to keep up the urban morale and the overall public health. The engineer deemed it obvious that the living together rather than separation of the wealthy groups from the working class was far more beneficial than the low heights terrace construction studied beforehand during his trip to England (Łopuch, 1999:43, Eberstadt, 1910: 240, Kuck, 2010).

Furthermore, the criticism of the block from the perspective of ghastly 'housing' must also be questioned here. At the time of construction of the 1860s blocks the spaces of habitation have not equated with 'housing' as such value has not yet been established. As the study of Schinkel's work illustrated, the build environment was instead founded on hierarchy between the 'background' structures and the public (i.e. royal) buildings[20]. The 'housing' concept was proposed later to distinguish building typologies from the public *space* of the city (Choay, 1997, Borsi, 2009).

Also, as illustrated earlier, we may see Hobrecht's 1860s city as distinguishing between two values: places of movement and places of habitation. The same values also determined the

[20] On the other hand, the latest review of Berlin block argues that Schinkel is the originator of the 'domestic' floor plan (Rousset, 2017).

development of the block seen as ‘a platform for evolution’ of the city (Choay, 1997: 237, 238). Such perspective underlines the mid nineteenth century mutual emphasis on the design of urban and architectural forms and the close relationship between the building and planning at the time.

Accordingly, we may see the account of the 1862 urban plan and the Berlin block given by the historiographies of the twentieth century, as dismissing the organizational values of the form, and virtually focused on social discomfort and poverty, which was common as in Berlin as it was elsewhere. The criticism refused to acknowledge the unique qualities of the block seen as an architectural and urban form, and might therefore be understood as underpinned with the highly arbitrary and judgmental overtones, rooted within later established (post 1880) aesthetics of the block design.

Still, the criticism of the building form also indirectly demonstrated the shift in understanding of the idea of the city: from the interconnected, ‘full’ and fluid city fabric of the mid-nineteenth century, to the new conception that allegedly was based on the contrasted (or ‘inverted’) position to the 1860s urban spatiality and the radical break with history. However, before I discuss the arrival of the new urban episode that inspired the formal and spatial changes in the city (Chapter 3), I propose the examination of the formal values of the blocks constructed in accordance to the same urban logic as contained within the 1862 Berlin plan. By tracing the history and the graphic accounts of the block typology from the same time, the next section will contribute towards the nuanced description of the ubiquitous form of the nineteenth century Berlin block. More importantly, along the block’s dynamic development, it will illustrate its permeability and interlinkage with the surrounding urban space.

2.4.2. THE EARLY NINETEENTH CENTURY BLOCK

After submission of the 1862 plan, the typology of the block proliferated across the urban fabric of Berlin. Yet as shown on Figure 2.12, the construction of the blocks emerged prior to 1862. The map below depicts densification of the urban space in a concentrating effect towards the ‘old’ Berlin. It illustrates particular increase in construction that took place after

1862 - marked in light-grey. It also demonstrates it was scattered around the old city clusters of the fabric built before 1862 - marked on the map in dark-grey.



Fig. 2.12 The extend of Berlin built form between 1862 and 1876; Ref: Sutcliffe, 1981: 292

As further seen on Figure 2.13 the form of the pre-1862 typology was conceived as the tight organisation of grouped blocks that lined the street. The early example of the block from around 1820 illustrates generic, spacious and regularly distributed plan interior and is shown on Figure 2.14.



Fig. 2.13 The early 1823 urban block in Berlin, structure lining the street; Ref: Chant, Goodman, 1999: 232

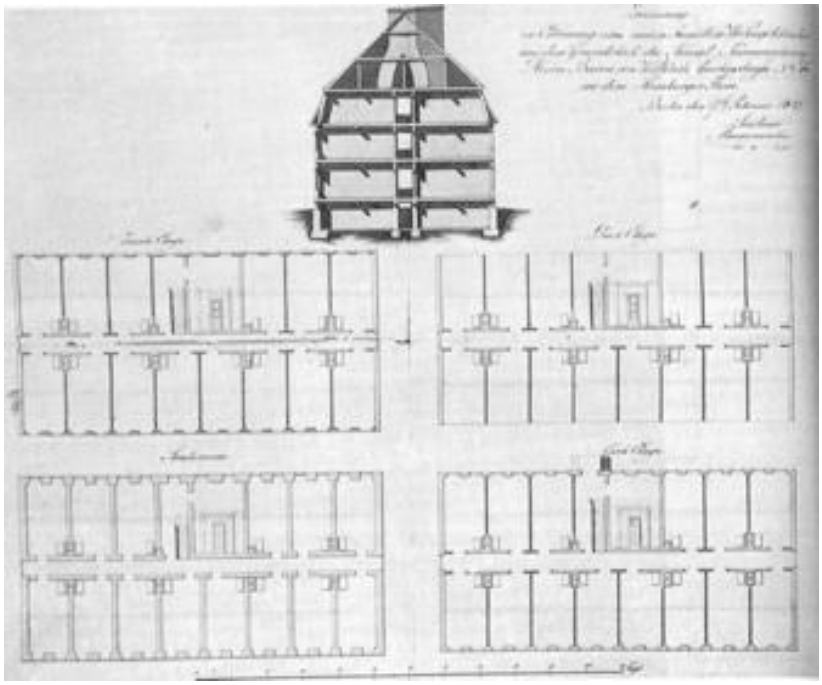


Fig. 2.14 The 'Familien Haus', depicting the series of homogeneous spaces in section and plan; Ref: Geist, and Kürvers, 1980: 84, Borsi, 2009: 140

Yet, another example of the Berlin block planned around 1825 (thus prior to increase in migrant populace) illustrates the same generic fabric, however we may note difference in size of individual rooms (Fig. 2.15). The block designed by Schinkel also includes a side-wing house and another courtyard building, which stands parallel to the front block. The drawing also suggests the overall interior connectivity and permeability of the apartment. The movement is linked via long corridors running along the blind party wall, and also via the *Berliner Zimmer* - the corner room situated at the junction of the front and the back premises.

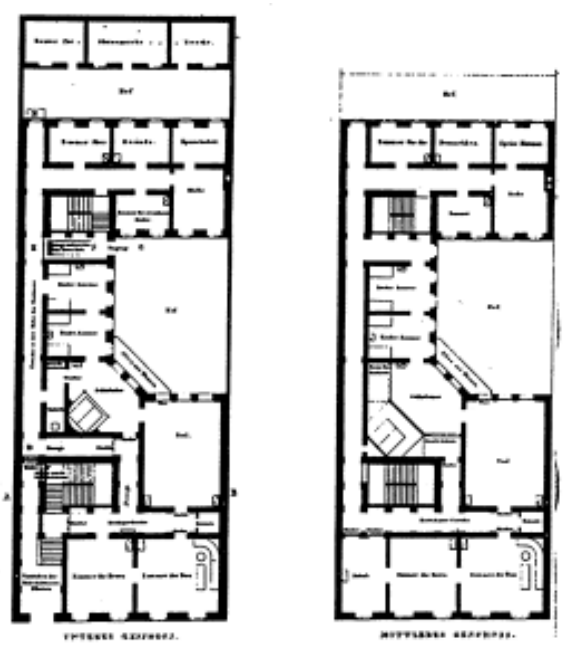


Fig. 2.15 1825 plans of the block by Schinkel; Ref: Testa, 1987: 55

This innovative solution of Schinkel was a 'convenient and well-functioning solution' that not only connected the space in the apartment, but which with its large right-angled windows, also allowed the light into this part of dwelling that would be otherwise dark (Łopuch, 1999: 48, Rousset, 2017).[22]

The blind wall that is marked on the plans in thick line, projects the construction of the adjoining block. It therefore depicts architect's anticipation of the future formation of larger network of buildings. Overall these early plans show formal and spatial potential of the spaces in the block but also mirror the laisses fair model of development which was practiced prior to 1862 (Bullock and Read, 1985).[23] Such model of growth led to the gradual transformation of the block and is exemplified below. The plans of the block constructed between 1859 and 1870 in Luisenstadt (today Kreuzberg) differentiate between the generic and the more progressed layouts. Figure 2.16 illustrates the evolution of the

[22] Schinkel's innovative block plans firstly appeared after architect's travels to England and France (Łopuch, 1999)

[23] The term is recognised as the '*let them do it* 'market approach began in France in the second half of the eighteen-century. The framework was characterised by the lack of (or little) interference from the government and permitted the free market economy. Whilst the framework was active at the time in industry and agriculture, it also was exercised by the Building Police responsible for the development of building codes and the drawing of urban thoroughfares. The framework illustrated that also in the planning and building sphere the state believed that 'the ideas of freedom might work themselves out' (Knowles, 1932: 109). Yet, as history has shown, it rather allowed for the construction of buildings to the most possible extent.

undifferentiated form from around 1859 and its subsequent 'progressed' layouts. Whilst we may note that the side-wing buildings becoming exceedingly larger, in the block on the right, from circa 1870, the drawing illustrates the emergence of the courtyard building located in the depth of the plot.

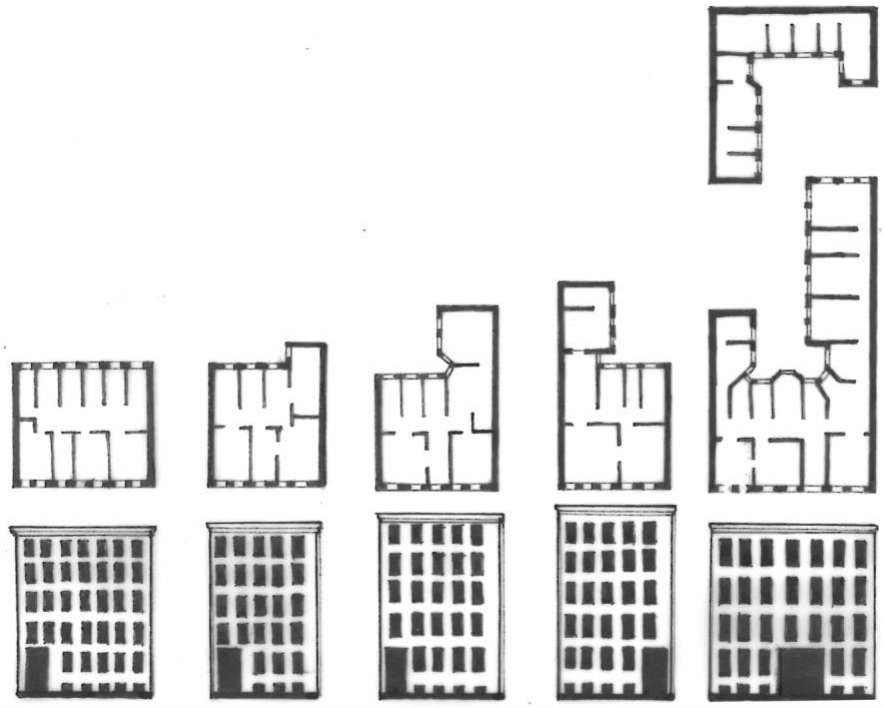


Fig. 2.16 Plans and Elevations of the blocks at Skalitzer Strasse, built in Kreuzberg between 1859 and 1870; Ref: Redrawn by Author, 2014 from S.T.E.R.N Archive

Furthermore, as seen on the plans of the block (Fig. 2.15 and Fig. 2.16), the front buildings feature the inclusion of the *Berliner Zimmer* as a solution for the linking of the rear block with the building fronting the street. What can further be noted, the spaces of habitation in the block have single orientation, facing either the courtyard or the street. This orientation is unlike the value incepted within the post 1970s block, which I will present in PART II.

Whilst Figure 2.16 illustrates the development of the fabric exemplified by different blocks, it is crucial to note that the same transformation happened within a 1860 block. From non-specific and generic, the block's layout was reorganized to became more differentiated in its interior. Such upgrade however ought to be seen as a testimony to the generous and practical arrangement of the early block circa 1860.

Ultimately, the plans seen on the Figure 2.16 serve only to briefly demonstrate the urban logic that permitted the ongoing formal, spatial and programmatic 'update' of the block[24] as a spatial unit, which through 'working and reworking of the architecture material' (Oeschlin, 1986: 36) could be applied across the whole city. This ultimately demonstrates the form of the block as a 'collection of spatial possibilities' (Borsi, 2009: 138), which I will demonstrate in more detail in Chapter 3. Katharina Borsi (2009) observed accordingly:

> The Berlin block began as a building that lined the street and developed into a spatial system that extended upwards and backwards and meandered around the increasingly closely prescribed size of courtyards. By the 1860, the building had evolved into a system that could build up the entire city (ibid).

After 1862, the construction of the blocks reached its peak. At the time, the design and method of the building closely followed descriptions found in the technical handbooks and building atlases. These guide books gave specific tools to the building officers at the local boards, and also targeted the construction trade. The most renown example by the French engineer Jean Nicolas Luis Durand, was published in 1802-05 and printed worldwide (Moneo, 1978, Benevolo, 1999)[25]. In Germany, coinciding with Hobrecht's submission of the 1862 plan, Berlin municipal officer and architect Gustav Assmann, published his recommendations for the construction of the blocks.

[24] The detailed account of change in the nineteenth century block precisely depicts the form's evolution ever since its entry to the urban fabric, and will be discussed in Chapter 3 of PART I (sections 3.2 and 3.3).
[25] In Chapter 5, PART II, I describe Durand's building atlases in more details

2.4.3. THE 1862 BUILDING PLANS OF THE BLOCK

In his 1862 building catalogues titled *Plans for Urban Dwellings* (1862) Assmann demonstrated the line of analogy between urban planning and the design of the blocks. The book features comprehensive take on the building form and depicts the block as adaptable series of internal spaces with formal and spatial potential. This is evidenced on the Figure 2.17 and Figure 2.18 showing a potential of variety of apartment layouts and thus the great efficiency of circulation space in the block. As illustrated below, a deep depth of the block allows for the different number of apartments – from two to four flats on the floor (marked in light grey on Fig. 2.17) accessed from both sides of the corridor; as seen on Figure 2.18 such variety could only be a consequence of the overall high density, generosity of spaces and generic layouts of the residential units in the early block.

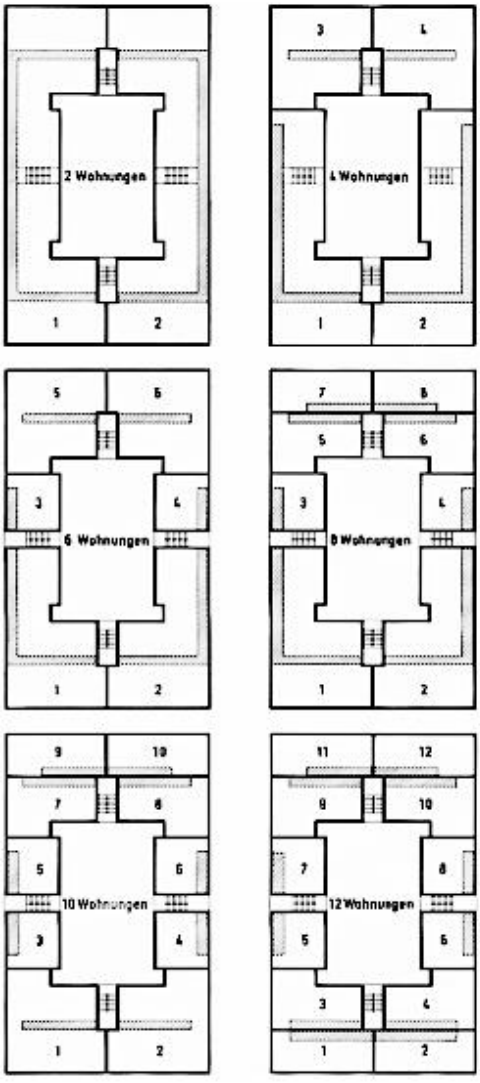


Fig. 2.17. Different apartment division and circulation in the block; Ref: Geist 1984

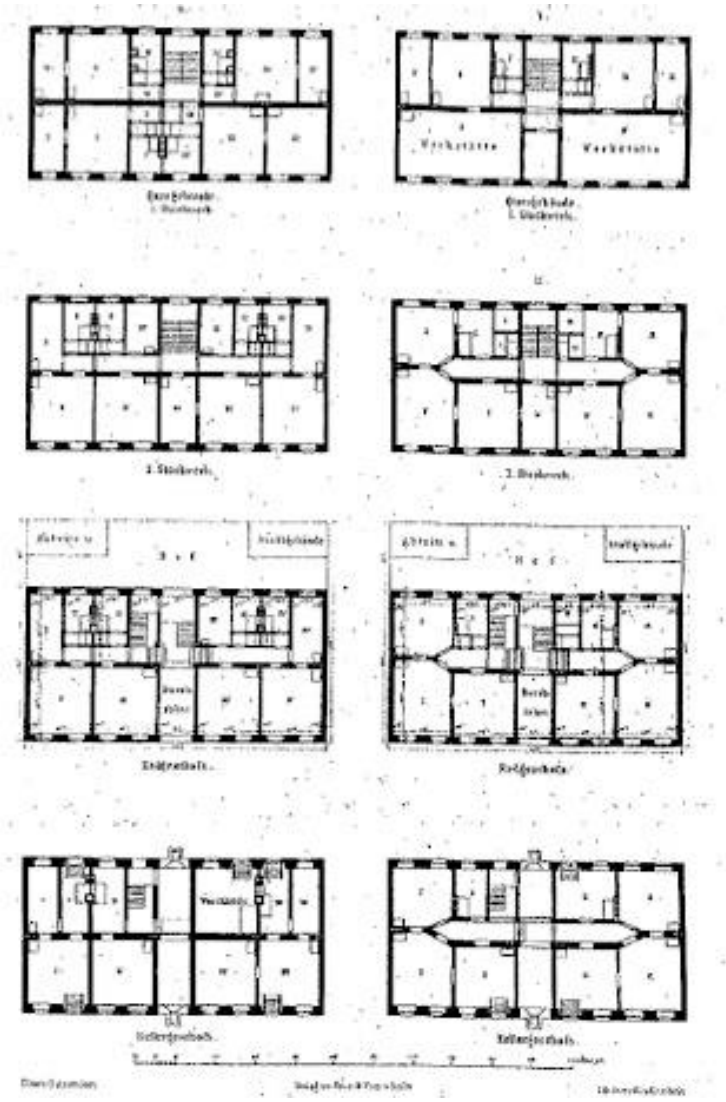


Fig. 2.18 Gustav Assmann's plans for the early 1860s urban dwellings; Ref: Assmann, 1862:11 (@ The British Library Board, Shelf 1731.b.8).

Besides the series of different apartment layouts Assmann's catalogues emphasized also the possibility of future changes in the block. Methods of construction recommended for instance the use of simple modular elements and steel parts that would give the block a robust and flexible structure, thus allowing it to be easily adapted, merged or subtracted. Still, this promotion of flexibility as implicit in the design of generous and generic spaces was not reserved to the form of the block only, but its structural integrity or construction techniques too. Concerned with the possibility of fluctuation in population or mode of occupation (Borsi, 2009) Assmann also included in his books several examples of the convenient and adaptable furnishing in the apartment (Rousset, 2017).

Similar to Hobrecht's all-inclusive planning, Assmann also included previous design solutions in his catalogues. As seen on Figure 2.19, the floor layout of the block features the *Berliner Zimmer* - a design solution already known from Schinkel. The inclusion of this corner room with its walk-through properties illustrates Assmann's emphasis on the flexibility and fluidity of the overall space in the apartment. The architect recommended accordingly: 'if [the Berliner room] did not need to serve as a bedroom or children's room, a table could be placed in a corner and it would thus serve as a comfortable niche for dining' (Rousset, 2017).

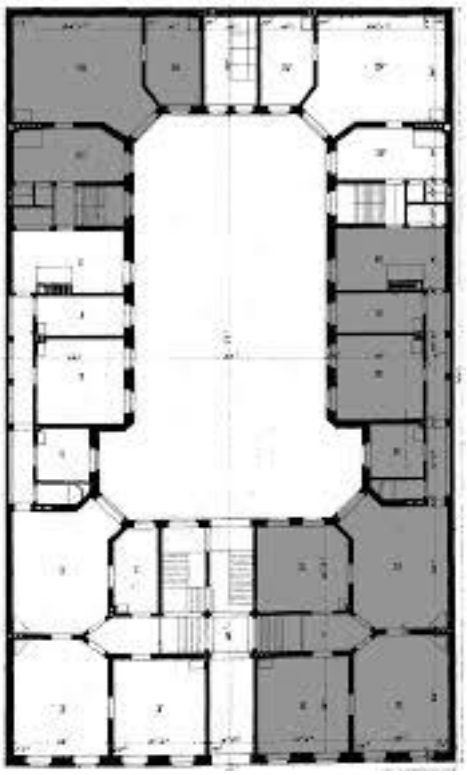


Fig. 2.19 Assmann's apartment layout (shading indicates individual apartments);
Ref: Rousset, 2017

The breadth of potentials of the block depicts the mid-nineteenth century form as permeable and flexible. As such, from the outset the block meant to respond with ease to the various formal or structural changes, and fluctuations in habitation and programmes. As described, these qualities regarded not only the block's interior but also the form's engagement with the surrounding urban space.

As seen on the fragment of the 1862 urban plan (Fig. 2.20), the illustration of the Berlin block from around the Oranienstrasse in Luisenstadt (today Kreuzberg), the single buildings are sketched in such way that they perform as a part of a larger system. They blur any differences between spaces of movement and habitation. The plan instead clearly depicts the undifferentiated and regularly distributed urban framework, which formed a relatively fluid arrangement, as postulated in Cerdá's *Teoría*.



Fig. 2.20 Interlinking of the urban space at the ground level; Ref: redrawn by the author from Geist and Kürvers, 1980-89: 279 (@ Landesarchiv Berlin F Rep. 270. Nr. A. 2999)

As an integral part of an urban framework, the early block meant to 'underline the flexible nature of boundaries from the space of the street all the way to the single room'. It featured an 'interlinked and permeable organisation promoting penetration instead separation' (Borsi, 2009: 135). As seen on the above drawing, the early Berlin block created a network allowing repetition, connectivity, and distribution across the whole surface of the city (Borsi, 2009). It seems also that through 'working and reworking of architecture's material' (Oeschlin, 1986), its typology generated spatiality of the whole city and thus contributed to the evolution of the entire Berlin. This perspective gives testimony to the mid nineteenth century spatial logic, which treated the form as both the method (the 'instrument') for

organising and ordering of the urban space, and the formal object (or the 'container') that accommodates the tenants and the required programme.
Choay (1969) argued that this specific attitude to the urban space around the mid nineteenth century was based on the possibility of the 'contiguous' development, founded on the proximity of forms and 'continuity of solids'. Borsi (2009) noted accordingly, that the city was understood as a 'full' space of the city where the 'building fabric appears as a solid, a ground of stone out of which the spaces for movement – for air, drainage and people – are carved' (Borsi, 2009: 135). In a similar vain Lejeune (2009) perceived this equal importance of the urban and architectural spaces as 'the reciprocal articulation and contra-position of volumes' (Lejeune, 2009: 74).

These values that were encrypted within the structure of the Berlin block almost 150 years ago, are still evident in Kreuzberg today. They give testimony to the city of the mid nineteenth century set out as the 'foundation' space. I describe them in Chapter 3 (section 3.4.3)

2.5. CHAPTER CONCLUSION

In Chapter 2 I argued that 1840s Cerdà's conception of the city as an interlinked 'urban framework' that connects the city all the way from its overall surface to the urban block and down to the single room, is similar to the Berlin extension plan of 1862 by James Hobrecht, and the concurrent drawings of the block as a fabric of interlinked spaces by Gustav Assmann. I illustrated that in result of the mid nineteenth century urban spatiality, the city was conceived as the unified system of interrelated spaces. Accordingly, the spatially and programmatically undifferentiated spaces of the early block, provided a typological component for the overall urban organisation and the strategy for building of the entire urban structure.

I have shown that in contrast to the criticism of the 1862 plan and the blocks, Hobrecht's planning and Assmann's building recommendations offer grounds for understanding of the nineteenth century urban spatiality that sought to provide a well performing and fluid

organisation. As I illustrated, this structure, or in Cerdà's terms an 'urban body', was set to embrace any unforeseeable changes that would be initiated by different choices or needs. This illustration demonstrated that the pejorative accounts of the 1860s' typology simply overshadowed many positive formal and organizational factors of the block.

Consequently, Chapter 2 enabled me to establish the modus operandi for the close study of the block in Berlin that I illustrate in the next chapter. Looking at the form from the perspective of the spatial performance in Chapter 3 I study the 'workability' of the nineteenth century typology, closely examining the spatial and programmatic connectivity across all scales of the block. By drawing upon Chapter 2, I will illustrate the nuanced picture of the early nineteenth century form, demonstrating its spatial and typological values that enabled its fluid evolution. Consequently, rather than the illustration of the mid nineteenth century form as a representation of history, the next chapter will demonstrate a detailed account of changes in the block as they occurred at the time and at the local level, illustrating dynamic relationship between the Berlin block and the surrounding urban space. Such minute illustration of the transformation of the block's spaces so far has not been presented by architectural theory, and will thus contribute to the 'gap review'.

Accordingly, this fresh typological study will offer a concrete alternative to the early twentieth century accounts of the historiographies commonly implying that the poor quality of life in the blocks – i.e. social discomfort, insalubrious conditions and crime – were a direct consequence of the form. In contrast to these readings portraying the form through the economic and social conditions typical at time, the next section illustrates the development of the nineteenth century block that accurately renders contribution of the block in the evolution of the city.

Such reading will demonstrate the unique role of the early block and the catalytic influence its typology had on the urban and social structure of Berlin since its inception. It will further illustrate that the city conceived in the nineteenth century as one with its blocks, provided until present day a resilient and dynamic skeleton structure, continuously open to change.

This account is crucial to my thesis and presents the original contribution to knowledge. It offers a different reading of the block based on the idea of the form's spatial performance, giving testimony to the strategic and organisational potentials of typology as thought and practiced around the mid nineteenth century. This illustration is unlike the method practiced during 1970s described in PART 2, and which, as I will argue, overshadowed and impoverished the unique organisational properties of the typological approach practiced around the mid nineteenth century.

Consequently, in conjunction with Chapter 3, Chapter 2 foregrounds the contribution this research makes to understanding of typology as a changing way of conceptualising and understanding architecture. It also laid out the grounds for the comparative reading of the post-1970s block illustrated in PART 2 of this thesis.

Chapter 3

TRANSFORMATION OF THE NINETEENTH CENTURY BERLIN BLOCK

3.1. CHAPTER INTRODUCTION

Drawing upon theory and practice of planning and architecture around the mid-nineteenth century Berlin, this section examines spatial pattern of Berlin established around 1862. It will demonstrate that in consequence of the mid nineteenth century spatial reasoning, the structure of the urban plan and the plans of the block, were founded upon spatial and programmatic connectivity, and thus set as flexible and adaptable series of spaces, into which the potential of further adaptation was inscribed. The block built according to the recommendations outlined in the 1862 building catalogues, manifested its main function of transformation, permeability and flexibility, as a response to any newly arising socio-cultural needs; thus its generous and generic spaces could be easily linked or subtracted from each other and used to organise the urban area through adaptable, reproducible typology that offered the continuous possibility of different uses and changing tenants. This section draws on the research by Katharina Borsi (2009), yet it also expands it by looking at the minute formal and spatial analysis of the fragment of Berlin.

Firstly, through a series of archive investigations based on the account of Christine Bascòn – Borgelt (1983) of the 1860s urban area of Luisenstadt (today Kreuzberg) it will demonstrate the detailed picture of the typology of the nineteenth century block and interpret the changes in the block as they occur and reoccur. This nuanced sketch of the nineteenth century form from around the Oranienstrasse, (in Kreuzberg) aims to show the dynamic and fluid transformation of the block, and also permeability of the urban environment.

Consequently, by demonstrating the values of flexibility incepted within the urban form at the time of its inception to the fabric of Berlin, this section will demonstrate a different picture of the nineteenth century block. Rather than seeing it as a ‘failure’ and an obsolete,

'tied to the past' remnant, as addressed by the modernist historiographies, it will demonstrate that the urban plan has not been carelessly drafted by Hobrecht with a 'child-like insouciance' (Bohl and Leujene, 2009, Lejeune, 2015); and instead provided a dynamic structure underpinned by notion of connectivity across all its scales, as described by Cerdá. Consequently, such reading will provide a testimony to typology of the block as an active and dynamic form, and also as an integrative strategy for building the city, seen at once as the object and the instrument of planning.

Secondly, by tracing and interpreting the evolution of the urban and architectural plans of the nineteenth century structure from around the Oranienstrasse Area (Fig. 3.0 – marked in red), together with the building police reports describing the broad questions discussed at the time regarding the block from the same location area, this chapter will demonstrate another vital objective of this thesis and another original contribution to knowledge; namely that the structure of the nineteenth century block itself helped to establish the classification of the city into formally and functionally distinct quarters. The new forms of the block that appeared around the third quarter of the nineteenth century offered an 'upgrade' to the 1860 block, yet also catalysed a different concept of urban space than the idea practiced around the mid nineteenth century. This perspective shows that the block itself is a transition and evolution of earlier forms, thus also opposes the dominant historical narrative suggesting that the twentieth century planning and architecture marked a 'radical break' with history.

Accordingly, I will illustrate that from around 1870 the new urban logic was founded on the dichotomy between spaces of the city and architecture, seeing them as separate qualities. As such, I argue that after 1880, the transformed places of the block unlike those interlinked with the city typology of the 1860s structure, ceased to perform as a platform for the formal and spatial evolution of the city. Whilst this argument will become more pronounced in the PART 2 of my thesis describing the post -1970s block, it is the study set out in this section that allows for the realisation that the dichotomous urban spatiality emerged around the third quarter of the nineteenth century and that it also resonates with the present-day logic behind the spatial organisation of our cities.

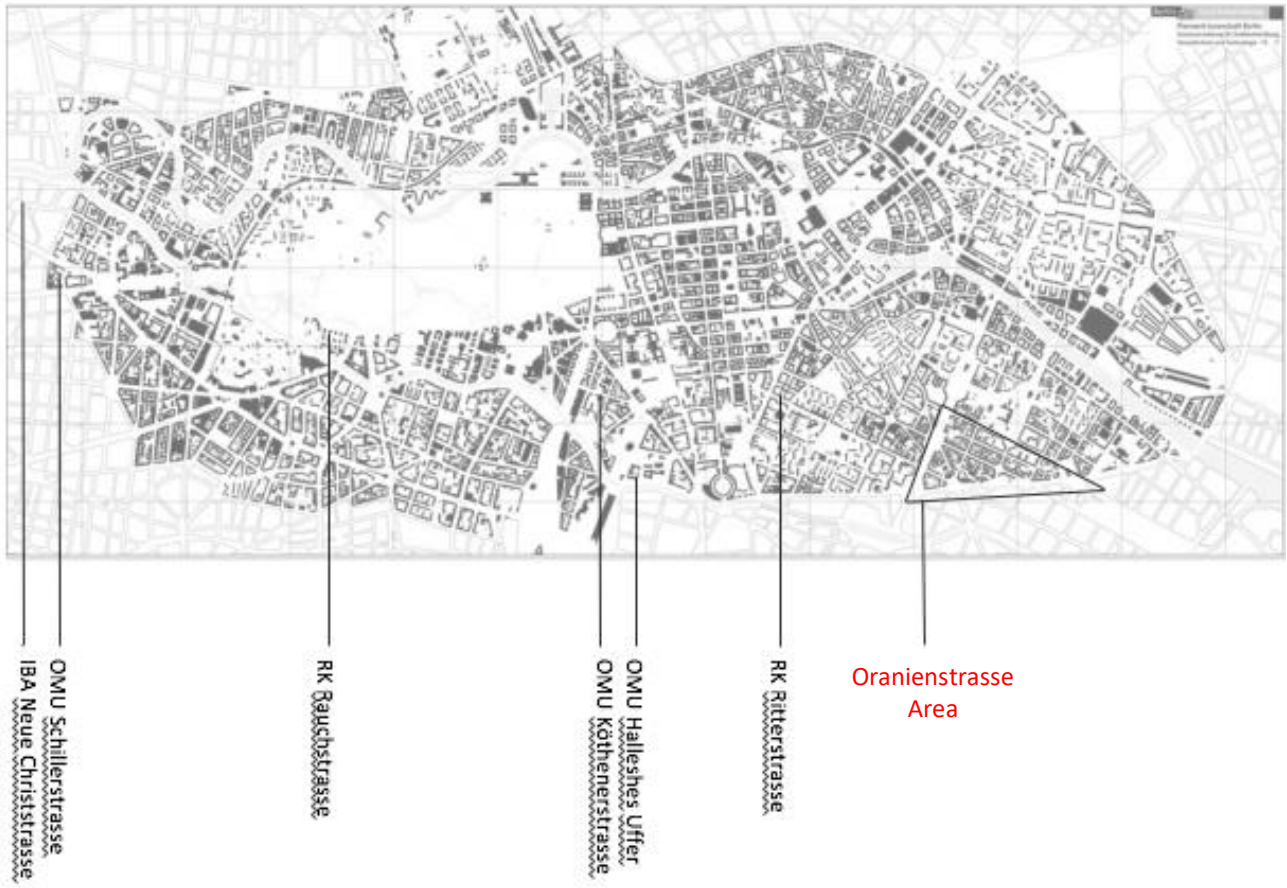


Fig. 3.0 Study location of the mid nineteenth century block- the Oranienstrasse Area (in red); Ref: Ref: Senatsverwaltung für Stadtentwicklung und Umwelt, 2014, marked by the Author, 2018

3.2. PRACTICE OF THE CITY AFTERMATH OF THE 1862 PLAN

As I illustrated previously the 1862 urban plan and the plans of the building blocks were based on the rational arrangement of spaces characterised by the overall connectivity. As I also have shown, clarity, feasibility and economy rather than aesthetic considerations stood at the core of the planning and building around mid-nineteenth century Europe. It was also then, when, in an attempt to deal with the 'outdated' city and its unregulated development relying on district planning and fragmented Situation maps, Hobrecht's solution guided the development of the city by the means of comprehensive and large scale planning. The plan

combined various tasks; on one hand, it guided the increasing city sprawl[1] and regulated the necessary objectives of hygiene by establishing the properly working sewage systems[2], and on the other, it addressed the issue of the already unregulated building activity outside the city.

Whilst the urban plan was set to distribute the efficient infrastructure (sewage, water and effective air movement), Assmann's building atlases, equally recommended the flexibility and re-adaptation. Given that at the time, the development was guided by the outdated 1853 legislations, challenged by the active at the time speculative land development companies - *Baugesellschaften,* the building activity followed the much undesired *lasses-fair* model of development (Bullock and Read, 1985). Rapidly formed construction firms acquired large blocks of land located on the outskirts of an old Berlin, thus the land envisaged for the extension of the old city. After subdivision to plots, they sold off parcel by parcel to laymen i.e. the 'civil servants, artists and businessmen' (Geist and Kürvers, 1980: 484) for block development. The same speculative venture took place on the land acquired by the city and planned by Hobrecht (ibid).

In 1862, leading the municipal commission for one comprehensive plan of Berlin, Hobrecht outlined an extended street system with the ring roads tracing the historic walls of the city. He also introduced the radial roads to connect the rapidly and chaotically developing suburbs and envisaged the large urban spaces on his plan for further division by network of secondary roads. Still, in light of the weak economic situation, to lessen the costs of street development, the municipality sold off the large quarters to building developers. The construction trade, however made no provision for breaking the land into smaller quarters

[1] During his lifetime Hobrecht, like his contemporaries have witnessed a rapid growth of population around the time of the planning for a new Berlin, which almost doubled within only a decade: in 1800 population of Berlin was 172. 000, in 1858 - 458.637, in 1861 – 524.900, in 1864 - 637.700, in 1867 – 702. 400, and in 1871 – 826.000, whilst in 1890, it almost doubled to 1.6 million (Mazerath, 1984)

[2] In 1860 James Hobrecht travelled to London and Paris to learn the canalization techniques; on his return in 1861 he designed a new sewage system in the city neighbouring Berlin, Stettin; after completion of the project in Stettin, he returned to Berlin to undertake the task of comprehensive planning 1862 (Pawlak, 2010, Łopuch, 1999).

or further streets construction, and instead built up the blocks to the maximum possible building density. Read and Bullock (1985) noted accordingly:

> [t]he wide streets and deep plots of Hobrecht's new plan offered unparalleled opportunities for the construction of blocks of tenements five, sometimes even six, storeys high. Those who could buy land at agricultural prices could count on a massive profit from the sale of property whose value would reflect the expected rents from the maximum number of tenements that could be packed on to these large sites (ibid: 157).

The speculative planning and building reality was one of the objectives faced by Hobrecht, another however was the unruly development according to the pre-1862 zoning plan for Berlin's surroundings - the *Bebauungsplan für die Umgebungen Berlin*. The zoning plan divided Berlin into five parts, with each locality holding its own separate team that would work on surveying and forecasting by means of the map drawn for this area only. In 1857, the police department proposed a new division of the outskirts into 14 parts instead of the previous five, which officially came to the force in 1858. The urban area inside Berlin's cordon has not featured in these plans (Kuck, 2010, Sutcliffe, 1981). This fragmentary approach, as I have shown in the previous section, describes Berlin as a collection of variously planned districts, each with a different pattern. Yet, it also gives testimony to Hobrecht's comprehensive planning and the totally different area of the plan, as more significant.

Granting that, one of these parts - the area of Luisenstadt designed in 1844 by Peter Joseph Lenné (today part of the Kreuzberg - the Oranienstrasse Area, previously seen on Figure. 3.0) was skillfully incorporated by Hobrecht within his all-inclusive plan. The next subsection illustrates the graphic accounts of the nineteenth century transformation, and demonstrates Luisenstadt's urban structure with its building blocks as gradually densifying and developing since the initial plan of Lenné. The interpretative reading is based on the German text of Christiane Bascón-Borgelt, and aims to demonstrate the fluid typological change of Luisenstadt's urban section. Unlike this strictly historic text, I adopt the lens of

spatial performance of the block to demonstrate the proximity, permeability, and interlinkage of spaces and programmes in the block and on local level (in one study area).

This illustration will show that the specific rationality incepted within the block around 1860, enabled the ongoing formal, spatial and programmatic variety and transformation. Furthermore, the next section will demonstrate how these factors, representative of Hobrecht's and Assmann's works, manifested themselves in the built structure of the nineteenth century Luisenstadt, and which until today bound the blocks with the formal and structural resiliency.

3.3. FORMAL AND GRAPHIC INTERPRETATION OF THE MID NINETEENTH CENTURY URBAN RATIONALITY

3.3.1. TRACING CHANGE IN LUISENSTADT

The Situation map of 1840 by Lennè shows the arrival of the block typology as a consequence of subdivision of the large blocks of urban land into a new plot structure (Fig. 3.1). On the 1856 plan (Fig. 3.1 on the right) the already developed urban quarters (or their parts) are marked in dark grey, whilst the plots marked in white - indicate the unbuilt areas.

The fragment of Luisenstadt seen on the maps of 1865 and 1867, features regular organisation of the urban land and the division into plots laid out perpendicular with the street. The plans show the beginning of the interlinked network of blocks lining up the streets of Berlin, which gradually have densified towards the 1867 (Fig. 3.2).

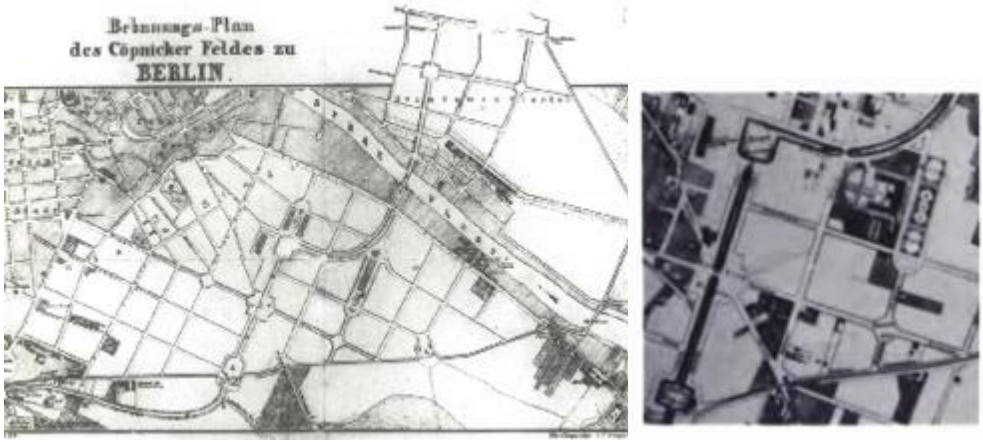


Fig. 3.1 Network of streets and urban blocks in Luisenstadt c.1840(L) and 1856 (R); Ref: Sutcliffe, 1981:32, Bascón- Borgelt, 1983: 11

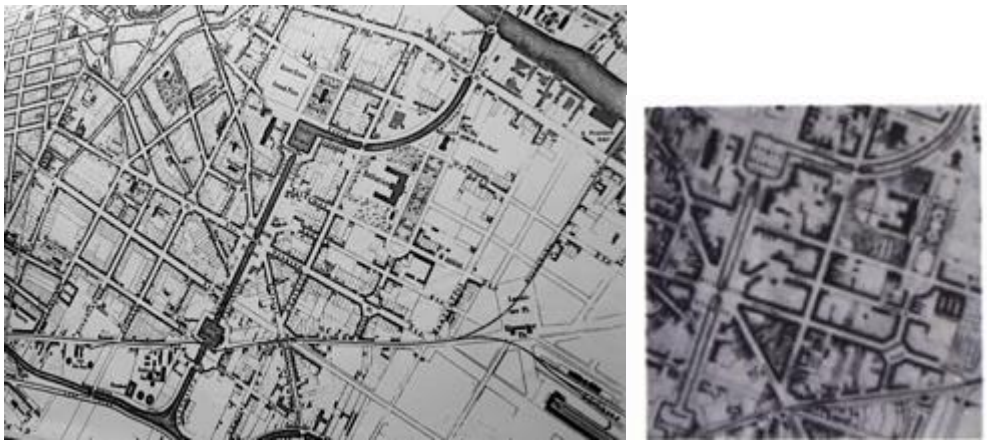


Fig. 3.2 Gradual building development; plan of 1865 (L) and changes recorded in 1867 (R); Ref: Krüger,2014 (L), Bascón- Borgelt, 1983: 11 (R)

Figure 3.3 on the left demonstrates continuous stretches of grouped houses in Luisenstadt from around 1888. This illustration is compared with the densified fabric for the entirety of Berlin from around 1900. The map of 1900 clearly demonstrates the extent of the speculative development in the city and spatial evolution of the block towards the depth of the plot. This figure indeed represents the urban ground of the city as 'contiguous development' founded on 'continuity of solids' as observed by Choay (1969) and Borsi (2009) in their texts. Yet it also demonstrates that towards the new century the area provided a space for a large concentration of industry and manufacture recognised in the blocks' structures with the black interiors (Fig. 3.3 on the right).

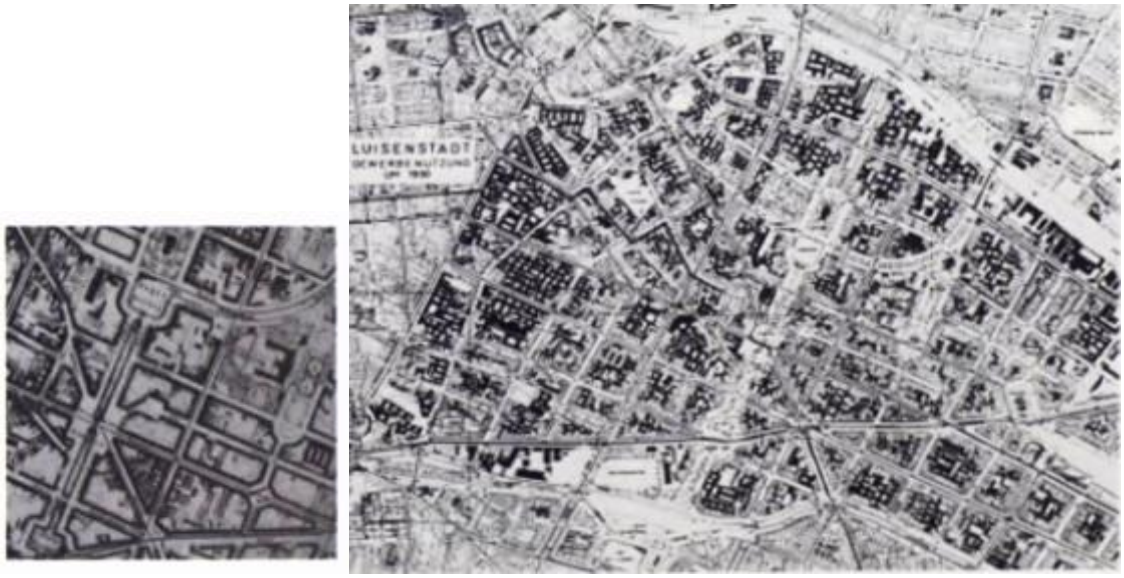


Fig. 3.3 Densification of the urban fabric of Luisenstadt in 1888 (L) and the extent of block development in Berlin circa 1900 (R); Ref: Bascón- Borgelt, 1983: 13

Furthermore, as clearly seen on the 1910 fragment of Berlin from the Oranienstrasse Area (Fig. 3.4) the large urban spaces distributed in Luisenstadt by Lenné (and then across the entire Berlin by Hobrecht) were accomplished in a way to ensure the continuity of the whole urban structure. The block filling the space from the street to the depth if the plot, was capable of building up the entire city (Fig. 3.4).



Fig. 3.4 Kreuzberg in 1910; Ref: Syrkus, 1984: 81

The above graphic illustrations (Fig. 3.1- Fig. 3.4) precisely demonstrated that from circa 1860 onwards the urban map of Berlin unravels the specific reasoning about urban spatiality. It shows the block inscribed with the notion of flexibility, reproducibility and adaptation used as 'a convenient, and a well-functioning solution' (Łopuch, 1999: 48) for the development of the entirety of Berlin. It demonstrates that the different layouts of the blocks depended on the location of the plot (i.e. corner or lining the street), consequently drawing the form as a highly pliable structure. We note that the plans of the city together with the drawings of the individual plans of the block, (which I will demonstrate in the next section), allow understanding Berlin's urban framework as the series of spaces into which the possibility of future modification was inscribed – a highly resilient structure.

Whilst the plans of the urban ground floor initially illustrated the continuous change in the development of the urban fabric, the bird's eye view photographs of the Kreuzberg area from around 1920 and 1960, further show the extent of Berlin's block development (Fig. 3.5). Together, the maps and the photographs illustrate the qualities of the ubiquitous typology seen as a collection of independent buildings 'planned and constructed [by various developers] one at the time' (Panerai et al 2005). Accordingly, Brian Ladd (1997) argued that such uncoordinated and individual construction allowed for the demolition and replacement and could be noted across the whole mid nineteenth century city: 'their blank fire walls usually abutted each other on the property lines. When one building was demolished its neighbours were suddenly exposed' (Ladd, 1997: 106). Ironically, the same picture of the individually standing blocks damaged by the war and neglected by the modernist planners, will be noted some one hundred years later (discussed in PART II of this thesis).

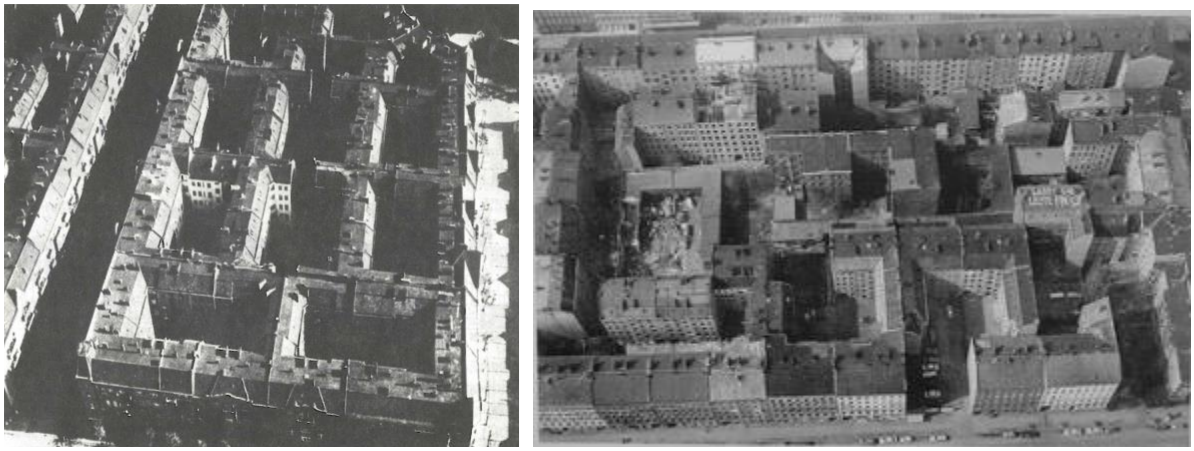


Fig. 3.5 Kreuzberg quarters circa 1920 (L), 1960 (R); Ref: Sutcliffe, 1980: 139, White Frisby, 2012: 155

More recently however, looking at the structure from the pedestrian point of view (Fig. 3.6), the individual arrangement of building blocks can be easily overlooked. At face value the block lines the street and does not provide anything particularly exciting or ambitious to the architecture. This almost anonymous structure is not grandeur or in any way exceptional; it simply fits into everyday background of the city and as in the past also today allows for a clear reading of the urban space (Fig. 3.6).



Fig. 3.6 Block structure; Ecke Manteuffelstrasse circa 1910 (L), and Naunynstrasse 2014 (R); Ref: Bascón- Borgelt, 1983: 7(L), Author 2018 (R)

Accordingly, Alan Colquhoun (1989) argued about the account of the changes in the cities across time that illustrated pre-industrial rationality, as based on the hierarchy of the buildings. This hierarchy, earlier discussed with regards to the 1817 Schinkel's plan, distinguished between the 'background' blocks and the public buildings of importance.

Colquhoun further explained the anonymity of the structure of the nineteenth century blocks, pointing to the formal fabric of these blocks:

> [They] used a common language of building – in other words their constituent parts (windows, cornices, stringcourses etc.) referred to the parts of architecture itself rather than to imagery of the particular type. In this way they receded into the background, indicating by default a private world which did not wish to flaunt itself in the public realm (Colquhoun, 1989: 89)

Whereas Colquhoun rightly argued the 'common' language of the building block, achieved in accordance with the recommendations for the generic, generous structure using uncomplicated architectural elements to accommodate the future 'update', his reading, differentiating between the 'private' and 'public' realm of the block raises a question.
As I have shown earlier, the closer inspection of the mid nineteenth century theory illustrated that the urban space was formed in order to function as one interlinked whole. I illustrated that the spaces of the city and spaces of architecture were considered together, and were mutually dependant on each other. Accordingly, the city designed as an integrated and interlinked framework treated all forms of architecture and urban design as equally performing on each level. It therefore did not distinguished between the private and public realm.

The primary research drawn from the archival sources, which I present below, traces graphic evolution of the individual block and soundly pronounces the above relation of the block to the space that it resides in. The picture reveals that the structure formed as one with the city, became a foundation for the whole range of forms and programmes across its space. It also shows that Colquhoun's reading of the block as series of private and public spaces sees its typology from perspectives set outside the time during which the block was developed. Thereby, rather than the undifferentiated fabric, his reading refers to the early block in positivist and dichotomous terms that around 1860s have not been established. Instead, the urban rationality implemented around the mid nineteenth century city articulated the whole fabric as permeable - spatially, formally and programmatically

adaptable. As I illustrated, the mid-nineteenth century city was interlinked and porous rather than marked by a threshold between the 'private' and the 'public' worlds - as per Colquhoun's suggestion. This was graphically illustrated on the Figure 2.20 (Chapter 2, page 82) demonstrating permeable and interlinked ground floor plan around the Oranienstrasse Area.

The next section will demonstrate this account in more detail.

3.3.2. FORMAL AND PROGRAMMATIC VARIETY AND RECURRENCE – NAUNYNSTRASSE, LUISENSTADT

This section illustrates chronologically assembled drawings of the urban fragment of Luisenstadt from the upper left corner of the Oranienstrasse Area - around the Naunynstrasse (Fig. 3.7, highlighted in yellow).



Fig. 3.7 Location map of the Naunynstrasse Block (highlighted in yellow) within the Oranienstrasse Area; Ref: http://www.histomapberlin.de/Oranienstrasse, marked by the Author, 2018

This section sketches the spatial and formal performance of the block: the form's variety, fluid and effortless transformation and ongoing development across it's scales and different time periods. Such reading will demonstrate the 'flexible nature of boundaries from the space of the street all the way to the single room', depicting the block as series of fluid spaces, which 'can be used in different ways and what occupants make of them' (Borsi, 2009: 135, 134). This is precisely the structure whose programmatic performance Panerai et als (2005) see in substitution terms.

Figure 3.8 illustrates a group of maps of the Naunynstrasse Block arranged according to these five periods. The overlay diagram (Fig. 3.8 on the left) notes the changes in the formal fabric of the block according to five periods: the first, before 1865, the second 1865-1875, the third 1875-1885, the fourth 1885-1895, and the fifth 1895-1914. Each of this period will be studied individually. The diagram illustrates the gradual densification of the fabric in the depth of the block, profoundly showing the diminishing of the unbuilt space in the block (hatched in black).

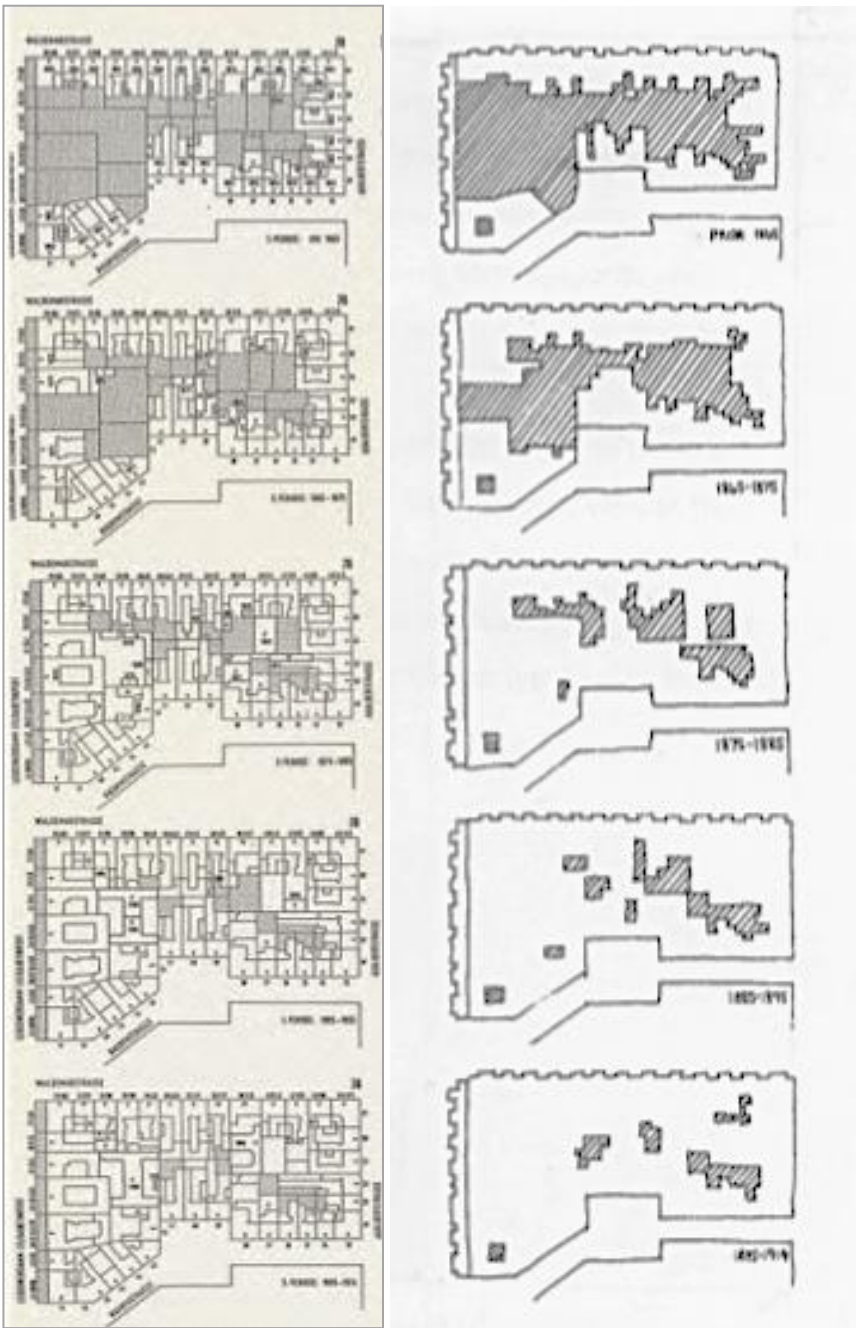
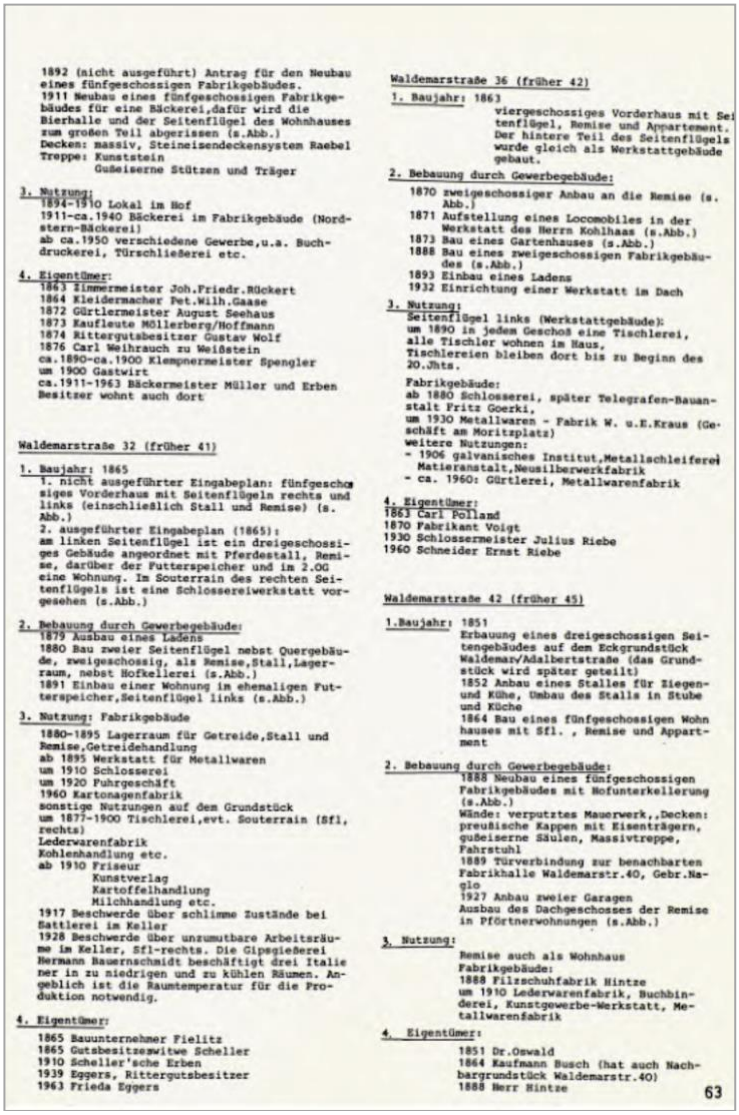


Fig. 3.8 Gradual evolution of the urban ground floor plan from around the Naunynstrasse; Plan (L), and Diagram of changes in the block (R). From the top: the development of the block during First Period prior to 1865, Second Period between 1865-1875, Third Period between 1875-1885, Fourth Period between 1885-1895, and Fifth Period between 1895 -1914;
Ref: Bascón-Borgelt, 1983: 58 (L), Author, 2018 (R)

The remarkable formal and programmatic evolution of the undifferentiated spaces of the block was further documented during the second half of the nineteenth century by the Building Police. The example of such records is seen on Figure 3.9; the records evidence the block as a form that continuously adapted and readapted to the new programmes and

tenures. Supported by the maps from the same period, these annual documents give the nuanced picture of the gradual changes. Interpreted together with the plans, they scrupulously detail the year of construction, the dates of any formal, spatial and structural transformation in the block, and changes in use - from primarily residential to the mix of uses. Remarkably, the broad details regard every plot of land and each block in the city.[4] Figure 3.9 seen below, exemplifies the records that are kept for the blocks at number 32, 34, and 36 Waldemarstrasse, also within the Oranienstrasse Area.



1892 (nicht ausgeführt) Antrag für den Neubau eines fünfgeschossigen Fabrikgebäudes.
1911 Neubau eines fünfgeschossigen Fabrikgebäudes für eine Bäckerei,dafür wird die Bierhalle und der Seitenflügel des Wohnhauses zum großen Teil abgerissen (s.Abb.)
Decken: massiv, Steineisendeckensystem Raebel
Treppe: Kunststein
Gußeiserne Stützen und Träger

3. Nutzung:
1894-1910 Lokal im Hof
1911-ca.1940 Bäckerei im Fabrikgebäude (Nordstern-Bäckerei)
ab ca.1950 verschiedene Gewerbe,u.a. Buchdruckerei, Türschließerei etc.

4. Eigentümer:
1863 Zimmermeister Joh.Friedr.Rückert
1864 Kleidermacher Pet.Wilh.Gaase
1872 Gürtlermeister August Seehaus
1873 Kaufleute Möllerberg/Hoffmann
1874 Rittergutsbesitzer Gustav Wolf
1876 Carl Weihrauch zu Weißstein
ca.1890-ca.1900 Klempnermeister Spengler
um 1900 Gastwirt
ca.1911-1963 Bäckermeister Müller und Erben
Besitzer wohnt auch dort

Waldemarstraße 32 (früher 41)

1. Baujahr: 1865
1. nicht ausgeführter Eingabeplan: fünfgeschossiges Vorderhaus mit Seitenflügeln rechts und links (einschließlich Stall und Remise) (s. Abb.)
2. ausgeführter Eingabeplan (1865):
am linken Seitenflügel ist ein dreigeschossiges Gebäude angeordnet mit Pferdestall, Remise, darüber der Futterspeicher und im 2.OG eine Wohnung. Im Souterrain des rechten Seitenflügels ist eine Schlossereiwerkstatt vorgesehen (s.Abb.)

2. Bebauung durch Gewerbegebäude:
1879 Ausbau eines Ladens
1880 Bau zweier Seitenflügel nebst Quergebäude, zweigeschossig, als Remise,Stall,Lagerraum, nebst Hofkellerei (s.Abb.)
1891 Einbau einer Wohnung im ehemaligen Futterspeicher,Seitenflügel links (s.Abb.)

3. Nutzung: Fabrikgebäude
1880-1895 Lagerraum für Getreide,Stall und Remise,Getreidehandlung
ab 1895 Werkstatt für Metallwaren
um 1910 Schlosserei
um 1920 Fuhrgeschäft
1960 Kartonagenfabrik
sonstige Nutzungen auf dem Grundstück
um 1877-1900 Tischlerei,evt. Souterrain (Sfl, rechts)
Lederwarenfabrik
Kohlenhandlung etc.
ab 1910 Friseur
Kunstverlag
Kartoffelhandlung
Milchhandlung etc.
1917 Beschwerde über schlimme Zustände bei Sattlerei im Keller
1928 Beschwerde über unzumutbare Arbeitsräume in Keller, Sfl-rechts. Die Gipsgießerei Hermann Bauernschmidt beschäftigt drei Italiener in zu niedrigen und zu kühlen Räumen. Angeblich ist die Raumtemperatur für die Produktion notwendig.

4. Eigentümer:
1865 Bauunternehmer Fielitz
1865 Gutsbesitzerwitwe Scheller
1910 Scheller'sche Erben
1939 Eggers, Rittergutsbesitzer
1963 Frieda Eggers

Waldemarstraße 36 (früher 42)

1. Baujahr: 1863
viergeschossiges Vorderhaus mit Seitenflügel, Remise und Appartement. Der hintere Teil des Seitenflügels wurde gleich als Werkstattgebäude gebaut.

2. Bebauung durch Gewerbegebäude:
1870 zweigeschossiger Anbau an die Remise (s. Abb.)
1871 Aufstellung eines Locomobiles in der Werkstatt des Herrn Kohlhaas (s.Abb.)
1873 Bau eines Gartenhauses (s.Abb.)
1888 Bau eines zweigeschossigen Fabrikgebäudes (s.Abb.)
1893 Einbau eines Ladens
1932 Einrichtung einer Werkstatt im Dach

3. Nutzung:
Seitenflügel links (Werkstattgebäude):
um 1890 in jedem Geschoß eine Tischlerei, alle Tischler wohnen im Haus, Tischlereien bleiben dort bis zu Beginn des 20.Jhts.

Fabrikgebäude:
ab 1880 Schlosserei, später Telegrafen-Bauanstalt Fritz Goerki,
um 1930 Metallwaren - Fabrik W. u.E.Kraus (Geschäft am Moritzplatz)
weitere Nutzungen:
- 1906 galvanisches Institut,Metallschleiferei Matieranstalt,Neusilberwerkfabrik
- ca. 1960: Gürtlerei, Metallwarenfabrik

4. Eigentümer:
1863 Carl Polland
1870 Fabrikant Voigt
1930 Schlossermeister Julius Riebe
1960 Schneider Ernst Riebe

Waldemarstraße 42 (früher 45)

1.Baujahr: 1851
Erbauung eines dreigeschossigen Seitengebäudes auf dem Eckgrundstück Waldemar/Adalbertstraße (das Grundstück wird später geteilt)
1852 Anbau eines Stalles für Ziegen- und Kühe, Umbau des Stalls in Stube und Küche
1864 Bau eines fünfgeschossigen Wohnhauses mit Sfl. , Remise und Appartment

2. Bebauung durch Gewerbegebäude:
1888 Neubau eines fünfgeschossigen Fabrikgebäudes mit Hofunterkellerung (s.Abb.)
Wände: verputztes Mauerwerk,,Decken: preußische Kappen mit Eisenträgern, gußeiserne Säulen, Massivtreppe, Fahrstuhl
1889 Türverbindung zur benachbarten Fabrikhalle Waldemarstr.40, Gebr.Naglo
1927 Anbau zweier Garagen
Ausbau des Dachgeschosses der Remise in Pförtnerwohnungen (s.Abb.)

3. Nutzung:
Remise auch als Wohnhaus
Fabrikgebäude:
1888 Filzschuhfabrik Hintze
um 1910 Lederwarenfabrik, Buchbinderei, Kunstgewerbe-Werkstatt, Metallwarenfabrik

4. Eigentümer:
1851 Dr.Oswald
1864 Kaufmann Busch (hat auch Nachbargrundstück Waldemarstr.40)
1888 Herr Hintze

63

Fig. 3.9 Building Police reports for the blocks at 32 Waldemarstrasse (built in 1865), 36 Waldemarstrasse (1863), 42 Waldemarstrasse (1851); Ref: Bascón- Borgelt, 1983: 63

[4] As previously noted this data is grouped in accordance to different epochs, and available for public view at the Berlin Federal Archives, and online at: http://www.bundesarchiv.de. In conjunction with the 1983 account of Bascón-Borgelt, it provided invaluable source for this study.

In the following section I illustrate a detailed account of formal and spatial changes in the block as they occurred at the time. The plans are arranged in accordance to the five periods introduced earlier, and are examined and interpreted individually to demonstrate the nuanced account of fluctuations and the relationship of the form to the urban space surrounding it.

3.3.3. SPATIAL ORGANISATION OF THE NINETEENTH CENTURY BLOCK

3.3.3.1. THE FIRST PERIOD, PRIOR 1865

As seen on Figure 3.10, the fragment of the urban fabric from 1865 illustrates rational subdivision of the block into variously shaped plots. We note that whilst the plots to the north, east and south depict a development of the blocks, the large plots of land to the west are empty. The area marked by the red arrow illustrates the L-shaped plot at 31 Leuschnerdamm, the evolution of which I follow in the later periods. Drawing upon the archive documents, I also refer to and interpret the changes in blocks at 22, 32, 38 Waldemarstrasse – as marked by blue arrows.

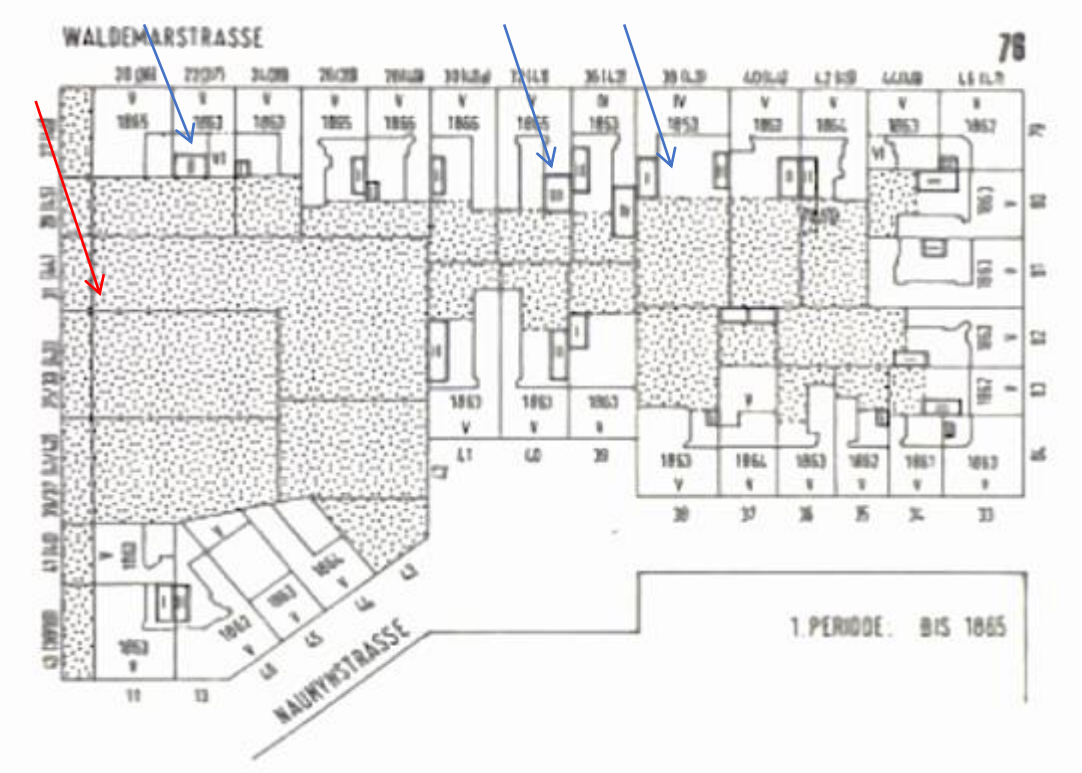


Fig. 3.10 Spaces of the block around 1865; Ref: Bascón- Borgelt, 1983: 17.

The map evidences individual buildings constructed along the streets that surround the large urban block. As further seen on the drawing from the 1863 (Fig. 3.11), the plans and sections feature generous and generic spaces in the building interior. In lieu with Assmann's building recommendations, the 5-story block outlines regularity in its structural design, notable at the point of façade. As earlier commended by Colquhoun (1989), this external regularity corresponds with the position of the load bearing elements in plans and section form, validating the potential of further vertical and horizontal transformation in the building. In the depth of the plot, the plan depicts two story lavatory outbuildings (Fig. 3.11).

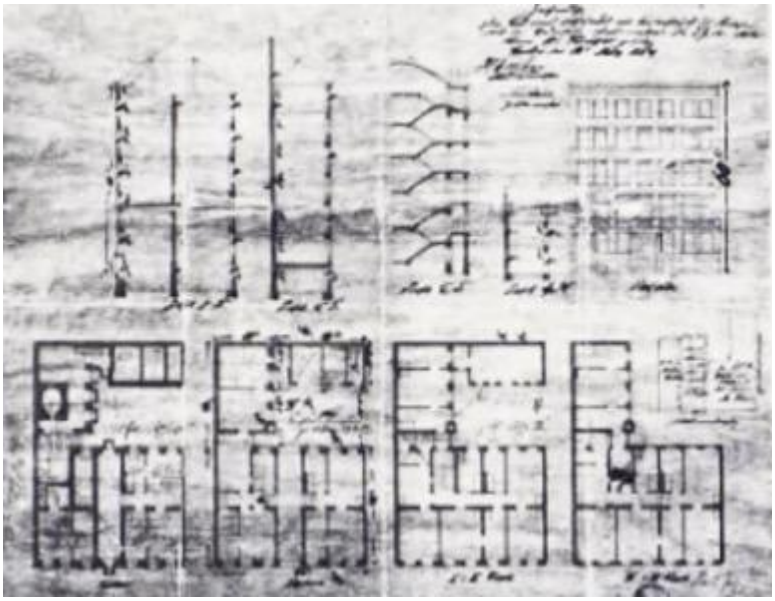


Fig. 3.11 1863 block's repetitive unit spaces at 22 Waldemarstrasse; Ref: ibid: 16

Internally, the block contains five floors and a sub terrain cellar level, a space characteristic for the nineteenth century Berlin block. Example of this half-story-ground floor and a half-basement space is seen on Figure 3.12; despite its low access to the natural light and air the space was known to accommodate tenants (Bullock and Read, 1985). As featured on 1910 photographs (Fig. 3.13), the cellars were used by the female occupants offering services such as laundry or embroidery.



Fig. 3.12 Cellars of Kreuzberg, Photograph of 1983: Ref: FHXB Museum, 2016



Fig. 3.13 Launderette located in the cellar; Photographs of 1910; Bascón-Borgelt, 1983: 15

In Building Police reports and the photographic evidence of the courtyard of the block at No 22, we note the series of wooden outbuildings used at the time as a shelter for the cattle, chickens or pigs (Fig. 3.14) (Giest and Kürvers 1984, Makala, 2011, Kozinska, 2002, Nottingham, 2013). This clearly shows the proximity of places of work and habitation, enabling tenants to purchase fresh milk, eggs or diary. Figure 3.15 depicts an advertisement of such courtyard-based services.

This further provides testimony to the block that can now be seen as a form providing benefits to the tenants across its whole structure.



Fig. 3.14 Two story blocks located in the interior of the block at 22 Waldemarstrasse as seen in 1983; Photograph, Bascón- Borgelt, 1983: 16,17



Fig. 3.15 Signage on the front house suggests that courtyard space was used to keep cattle, providing tenants with the fresh dairy; Ref: ibid: 15

With the arrival of the Industrial Revolution, the plans from the First Period of study begin to illustrate the gradual spatial expansion of the block. In addition, from 1870 onwards, the space of the block is seen to embark on the path of formal and programmatic evolution. The block features gradual densification of its spaces both internally and externally, and illustrates the emergence of other than residential programmes. In the courtyard at 22 Waldemarstrasse - at first providing a space for a simple wooden lavatory shed (Fig. 3.11) - the 1877 plans demonstrate vertical expansion of the lavatory buildings to three storeys (Fig. 3.16). The Building Police reports from the same year recorded the use of newly built workshops by the small manufactureres: an artist, a carpenter and a locksmith; In 1878, as also seen on the Figure 3.16, two out of three of these outbuildings were further converted to residential use. In 1891, the blocks once again have changed programme and for nearly ten years provided space for the manufacture of pianos. In 1900, Building Police recorded the new tenants - an artist and a joiner moving into the premises (Bascón-Borgelt, 1983).

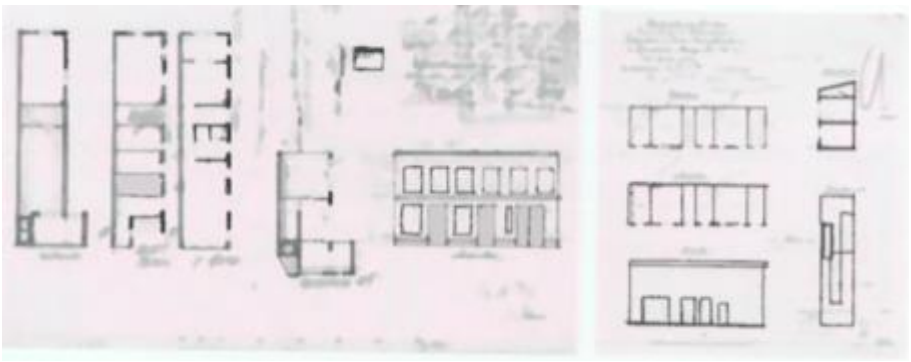


Fig. 3.16 22 Waldemarstrasse, 1878, conversion of the courtyard workshops for residential use; Ref: ibid:16, rendered by the Author, 2018

Similar change is recorded in the other blocks at 32 and 38 Waldemarstrasse. The 1865 plans seen on Figure 3.17 demonstrate an example of horizontal expansion towards the depth of the plot. In addition, the spaces at 38 Waldemarstrasse seen on the right of the Figure 3.17, and also Figure 3. 18 illustrate structural changes made to the plan of the buildings; the drawings demonstrate the addition of a staircase and new internal partitions, suggesting the change of use from cattle shed to a small manufacture workshop (Fig. 3.18).

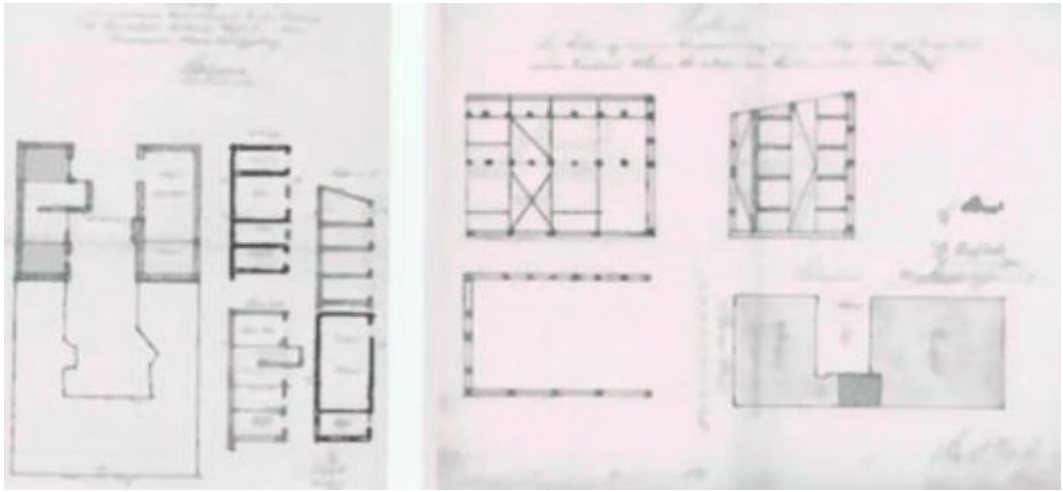


Fig. 3.17 1865, Spatial expansion at the 32 Waldemarstrasse (L), and at 38 Waldemarstrasse(R); Ref: ibid, 17 rendered by the Author, 2018

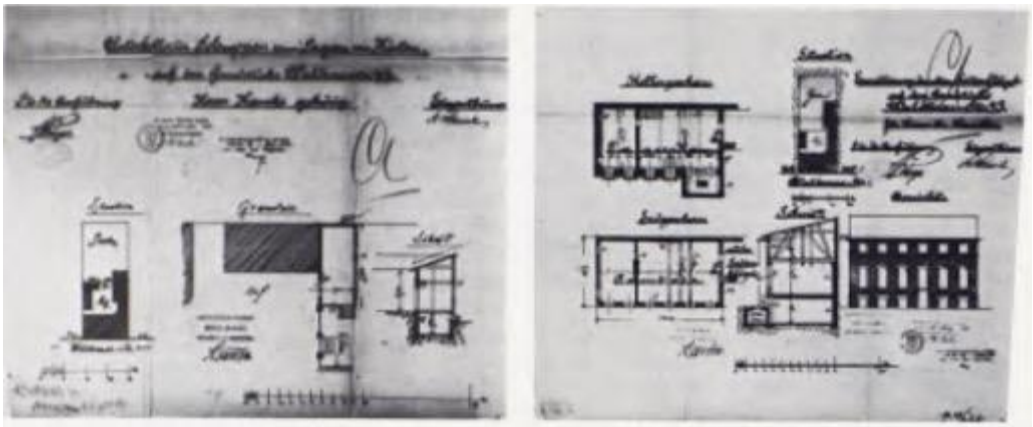


Fig. 3.18 Changes made to the structure of the block at Waldemarstrasse 38. Reformation of workshops and their cellars(L); reorganization of structural elements marked on plans (R); Ref: Bascón- Borgelt, 1983:22

3.3.3.2. THE SECOND PERIOD, 1865-1875

Figure 3.19 demonstrates further densification of the urban quarter space during the decade 1865-1875. The buildings marked with the bold black outlines illustrate the construction in the depth of the plot. It can also be noted that the property lines on the plots along the west side of the block were set away from the street to accommodate front gardens. This gesture indicates the grand character of the boulevard (Leuschnerdamm) facing the blocks (Turek-Kwiatkowska, 2012).

The plot at 31 Leuschnerdamm which development I follow (marked with the red arrow), features the arrival of the C-shaped typology and one outbuilding in the courtyard.

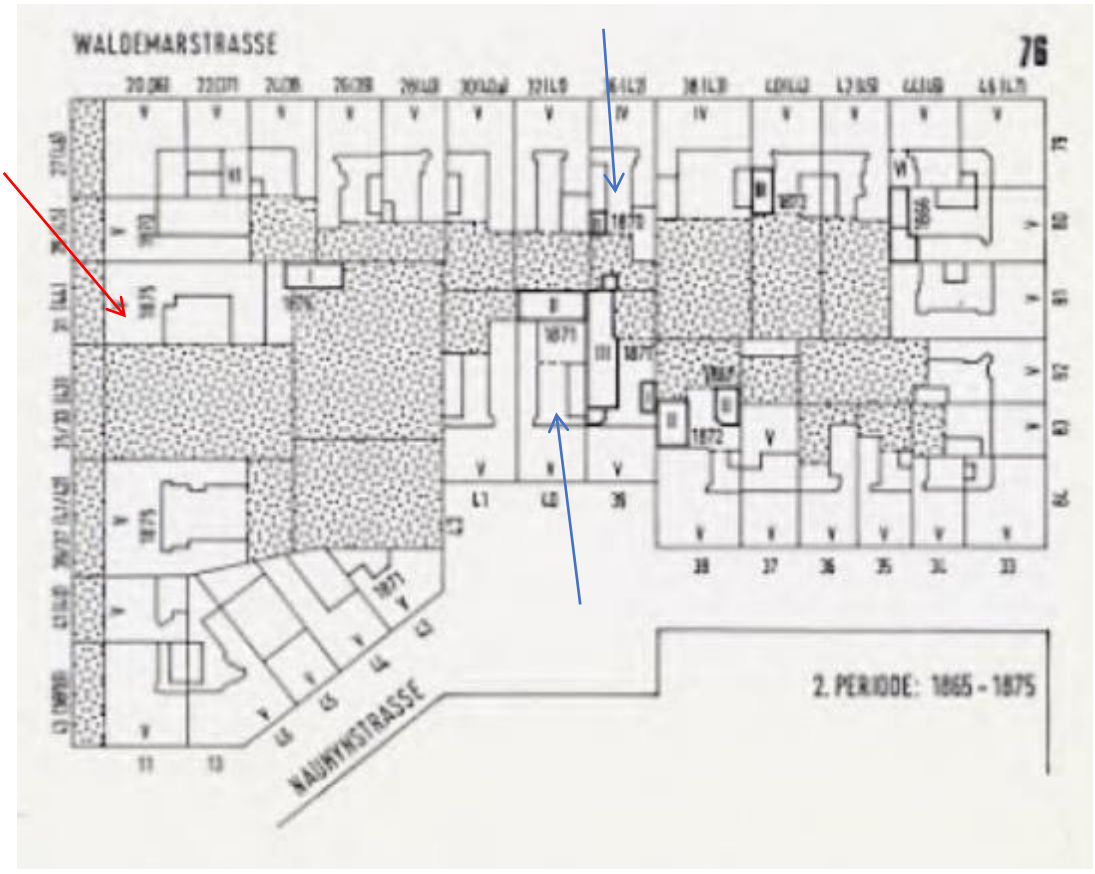


Fig. 3.19 Space of the block, further densified between 1865-1875; red arrow points the plot at Leuschnerdamm 31; Ref: ibid: 18

The 1871 records reveal the arrival of a small shop in the block at 38 (today 40) Naunynstrasse (Fig. 3.20); the plan and a Building Police Record illustrate a construction of a small two-story workshop in the depth of the plot by a jeweler - J.Klein. The following year

(in 1872), along with jewelry making Klein adapted his workshop to cater for the production and sale of the gift paper bags. Also that year, the cellars of the workshop were converted into a billiard club, providing tenants with the new leisure activity (Fig. 3.21) (ibid: 19). It is noteworthy that the set of drawings depict together the plans of the block and the plot, sections and the façade illustration along with details of all structural elements of the block.



Fig.3.20 Block densification at 38 (today 40) 1867 Naunynstrasse (L), and 1983 photograph (R); Ref: Bascón - Borgelt, 1983: 19.

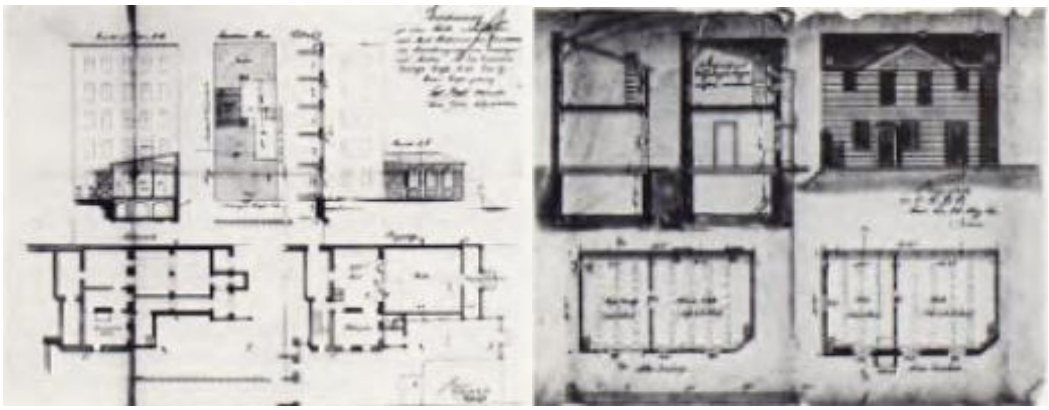


Fig. 3.21 38 Naunynstrasse, 1872 Conversion of the cellars into a Billiard club provided locals with new leisure activities; Ref: ibid

Similar programmatic changes are described at 36 Waldemarstrasse. The plans show the design of 1870 side wing block, and conversion of the courtyard stables to the toilets. Building Police records from 1873 report further change and a conversion of the toilet building to a small timber workshop (Fig.3.22).

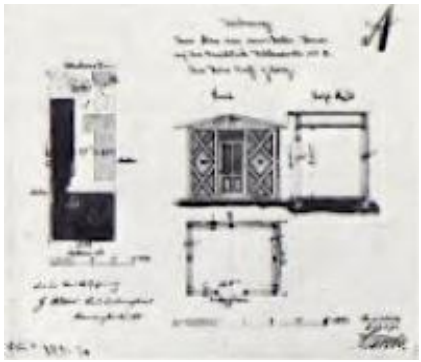


Fig. 3.22 Conversion of toilets in 1873; Ref: Bascón- Borgelt, 1983: 19

Whilst the plans of the blocks and the Building Police records certainly illustrate the ongoing formal, spatial and programmatic evolution, the conversion of the outdoor toilets for another use suggests that after 1870 these facilities were incorporated within the interior spaces of the blocks. Once again, this clearly illustrates the dynamic organizational potential of the nineteenth century typology, enabling accommodation and distribution of the services and different uses across its whole space, as per Assmann's recommendations. By extension it also proves the resilience of the 1862 plan which allowed for accommodation of the sewage network.

Still, the reorganization of the inner spaces of the block also suggests that after 1875, the Berlin block began to differentiate the interior hierarchy of its spaces; from the undifferentiated and unspecified pre-1870 drawings of generic rooms, to the post 1870s plans differentiating between ie: kitchens, toilets and bathrooms, and spaces with or without the stove. This shows that the block began to feature an 'upgraded' and differentiated interior. This progress is more pronounced on the drawings of the block during the next decade of spatial transformation of the block. The new organisation noted in the plans certainly also reflects the arrival of the stricter building laws (i.e. specifying the requirements for provision of toilet facilities within the block as described later in section 3.5 of this chapter).

3.3.3.3. THE THIRD PERIOD, 1875-1885

The plans of the block during the next decade illustrate further densification of the blocks. They indicate the arrival of industry to the full depth of the blocks: the solid shell factories and workshops as seen on Figure 3.23.

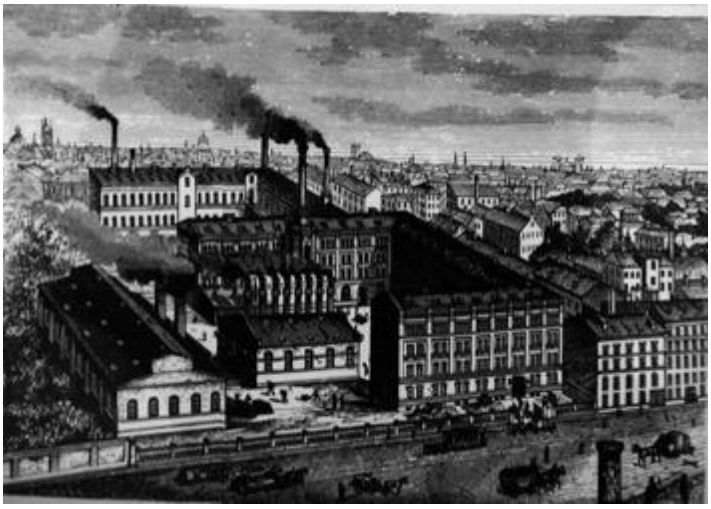


Fig. 3.23 Kreuzberg blocks circa 1875 occupied by the factories; Ref: S.T.E.R.N Archive, 2014

Urban quarter seen on Figure 3.24 demonstrates this programmatic and spatial reorganisation, most notably in the blocks at 32, 40 Waldemarstrasse, 38 Naunynstrasse (marked by the blue arrows) and 31 Leuscherdamm (red arrow) where we note construction of workshops. In the block at 31 Leuschnerdamm the Building Police plans from 1875 and account of Bascón-Borgelt illustrate the arrival of yet another outbuilding, used for production of glue.

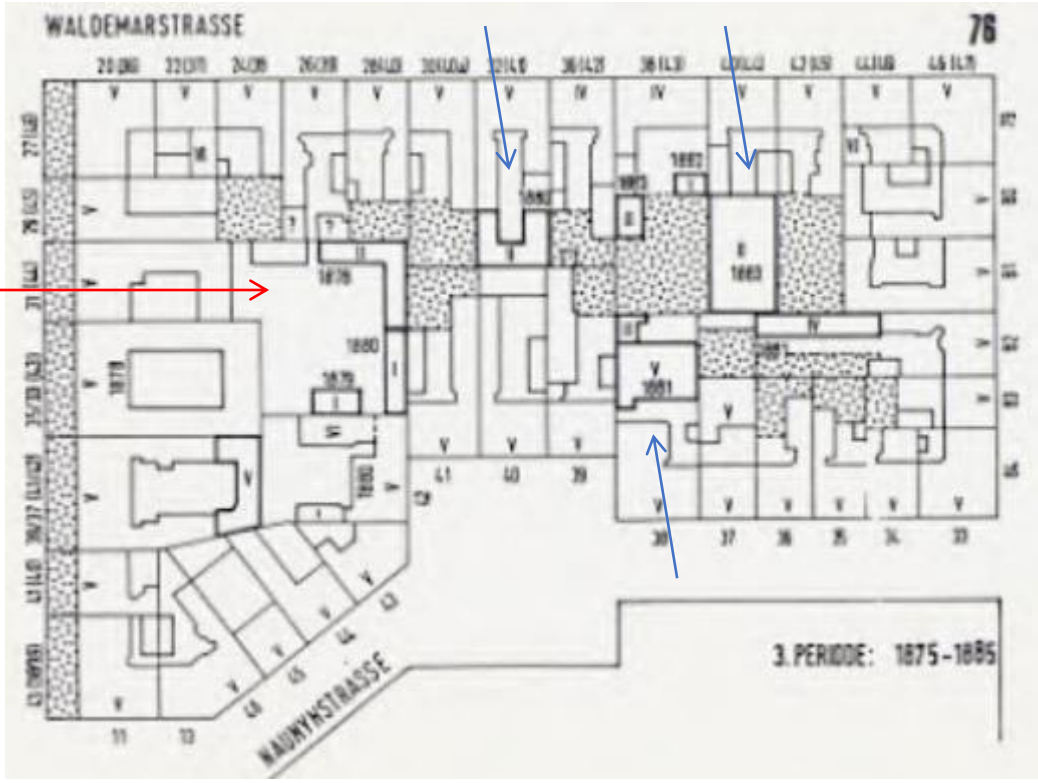


Fig. 3.24 Space of the block between 1875 -1885; Large internal space of the block at 32, 40 Waldemarstrasse, 31 Leuscherdamm (red arrow) and 38 Naunynstrasse

As seen on Figure 3.25 (on the left and in the middle), the 1875 plans of the same block illustrate construction of the corner canopy linking both courtyard sheds. The plans further show the development of two and three story buildings used as the metal workshops (Fig. 3.18) (ibid). The 1878 building plans seen on the right of the Figure 3.25, explicitly focus on the structural details of these blocks; they represent regular and generous interior spaces, and also a solid shell, a core and movable partitions.

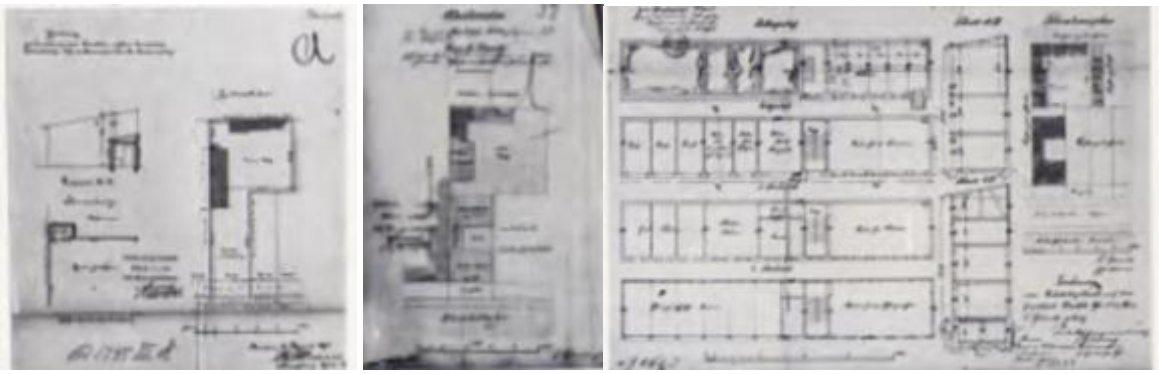


Fig.3.25 31Leuschnerdamm, development of 1875, 1878, and the construction detail of two workshops; Ref: ibid: 22

At the plot adjacent with the 31 Leuschnerdamm, the plan of the block at 32 Waldemarstrasse illustrates the construction of a small factory building (Fig. 3.26).

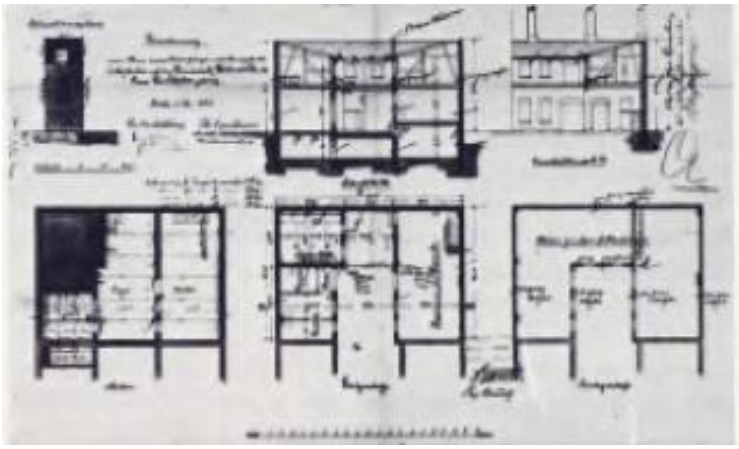


Fig. 3.26 1878 Factory building at 32 Waldemarstrasse; Ref: ibid: 21

Between 1875-1885, construction in Luisenstadt (Kreuzberg today) further increased illustrating emergence of large factories. Looking at the plans seen on Figure 3.27 and Figure 3.28, we note striking focus on the construction detail. The plans depict a vast spectrum of objectives raised at the time of the planning. Thus the record for the block located at 40 Waldemarstrasse describes details of a façade, suggesting the use of a harder clinker brick. The design also promotes the use of a natural lighting in the factory – namely the light-catching scoops in the roof of the factory (Fig. 3.27). Records of the block at 38 Naunynstrasse further show the construction plans for a printing factory, and yet again depict scrupulous details of the loadbearing steel construction (Fig. 3.28).

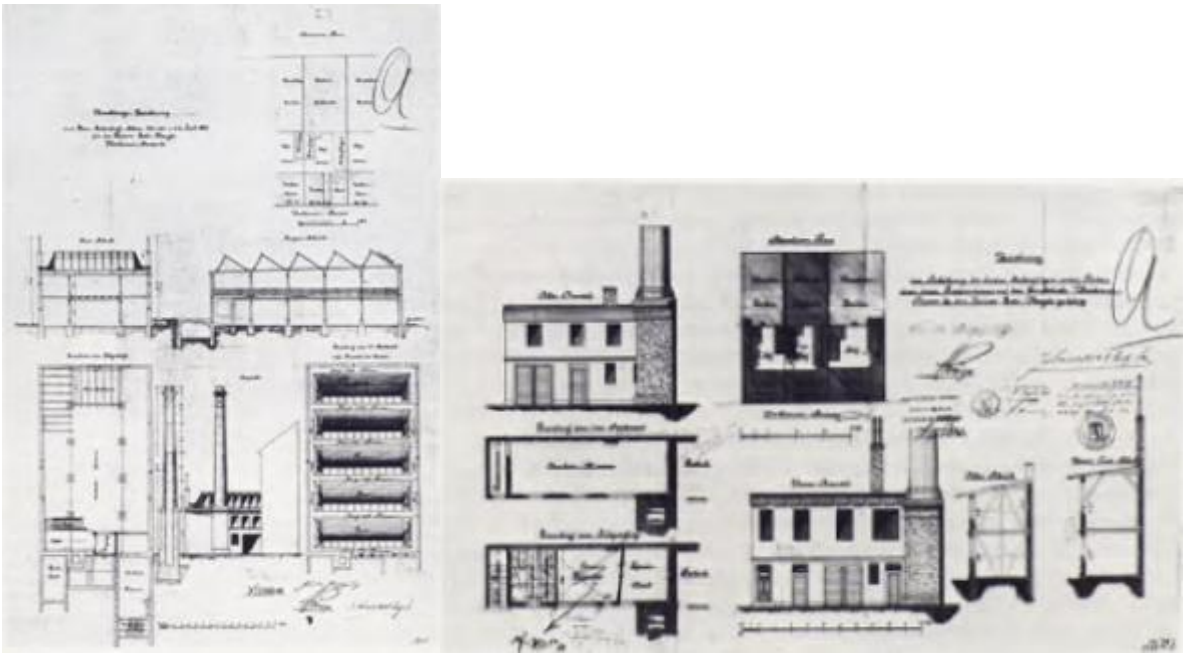


Fig. 3.27 1883 construction of the *Telegraphen bau Anstalt* factory at the 40 Waldemarstrasse; Ref: Bascón- Borgelt, 1983: 25, 26

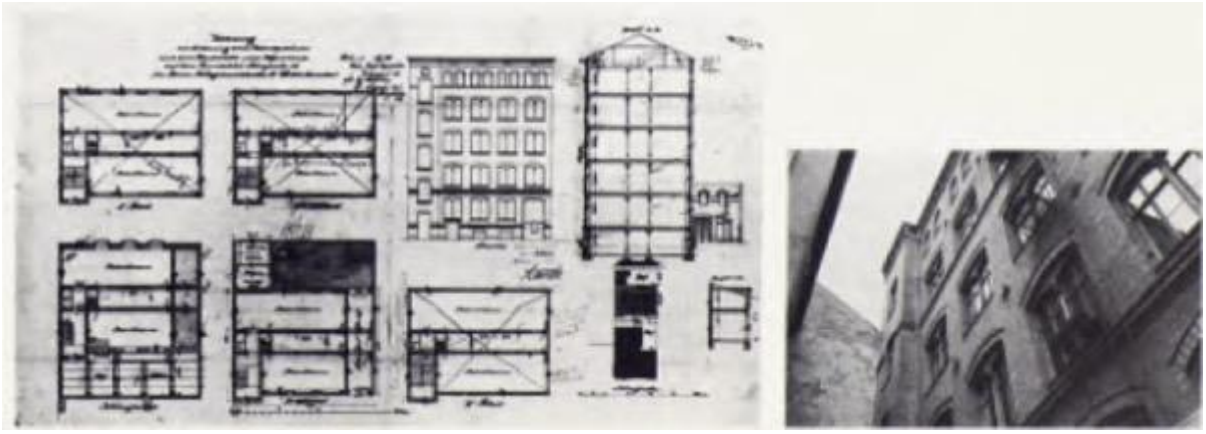


Fig. 3.28 Plan, section, and elevation view of the printing factory at 38 Naunynstrasse; Ref: ibid: 23

Moreover, floor plans and sections of the factory building seen on Figure 3.28, illustrate the same rationale according to which the early 1860 block was constructed. The blocks therefore feature the precise measured drawings of the façades, the design of interiors with generic and undifferentiated statuses, and regular spatial organisation of the construction elements that corresponds with the location of the architectural elements (fenestration, stringcourses) (Fig. 3.28). Overall, the Third Period illustrated the arrival of different programmes within the area, most notably the entry of 'chimneys of Kreuzberg' to the depth of the block (Frisby and Whyte, 2012). The transformation of the block however did

not stop there and was followed by even more intense densification of its structure during the next decade.

3.3.3.4. THE FOURTH PERIOD, 1885-1895

During this period, the examined block appears fully built up at its edges (Fig. 3.29). On the plot at 31 Leuschnerdamm (red arrow) we now note the arrival of a large factory structure, that fills up the entire depth of the plot.

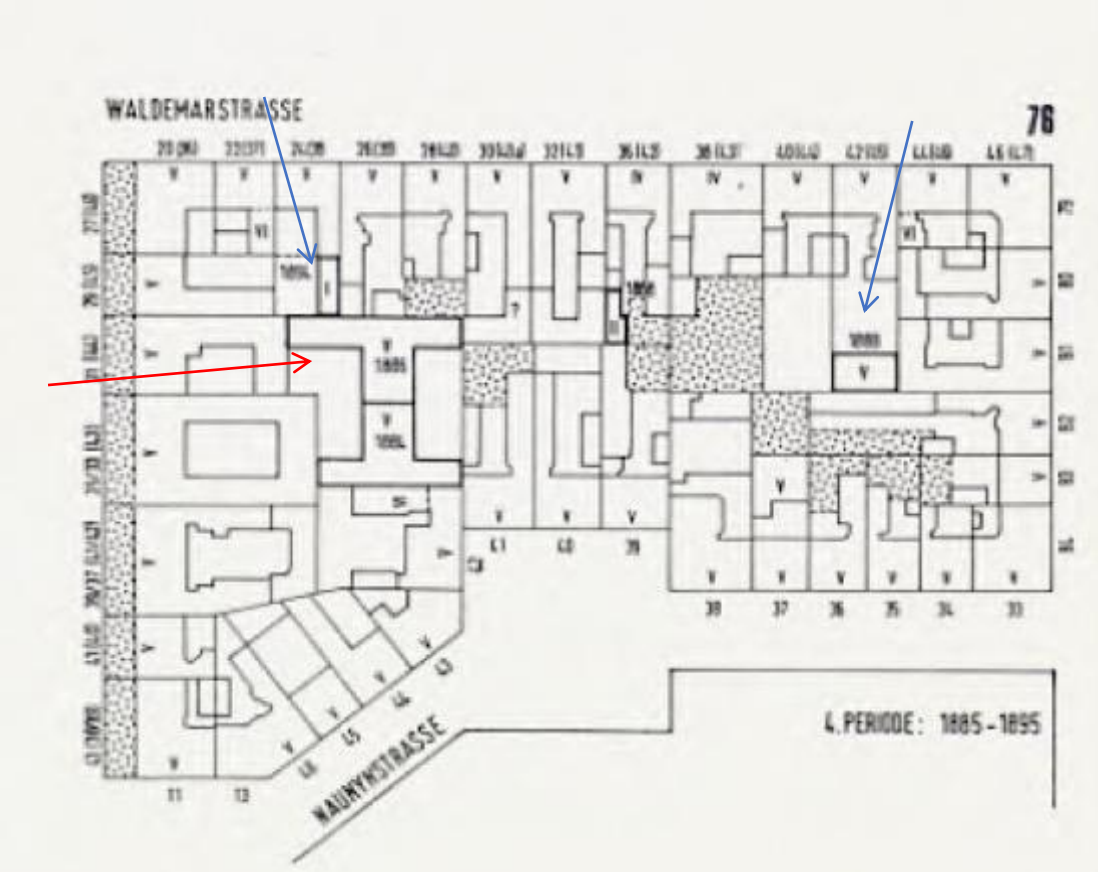


Fig. 3.29 Changes in the block during 1885-1895; Ref: Bascón- Borgelt, 1983: 28

Further plans for that plot (Fig. 3.30 and Fig. 3.31) specify the development of the five-story factory building. A specific attention to the details (i.e. drawings of the foundation footings and the loadbearing elements) strongly suggests the designer's focus on the solidity of structure. Furthermore, the generously conceived interior of the factory block clearly indicates the ease of potential spatial reorganization of the building, and also possibility of a changing programme; these values, inscribed within the design of the shoe factory at

Waldemarstrasse 42, more recently (1983) allowed the conversion of the block to residential use (Fig. 3.32).

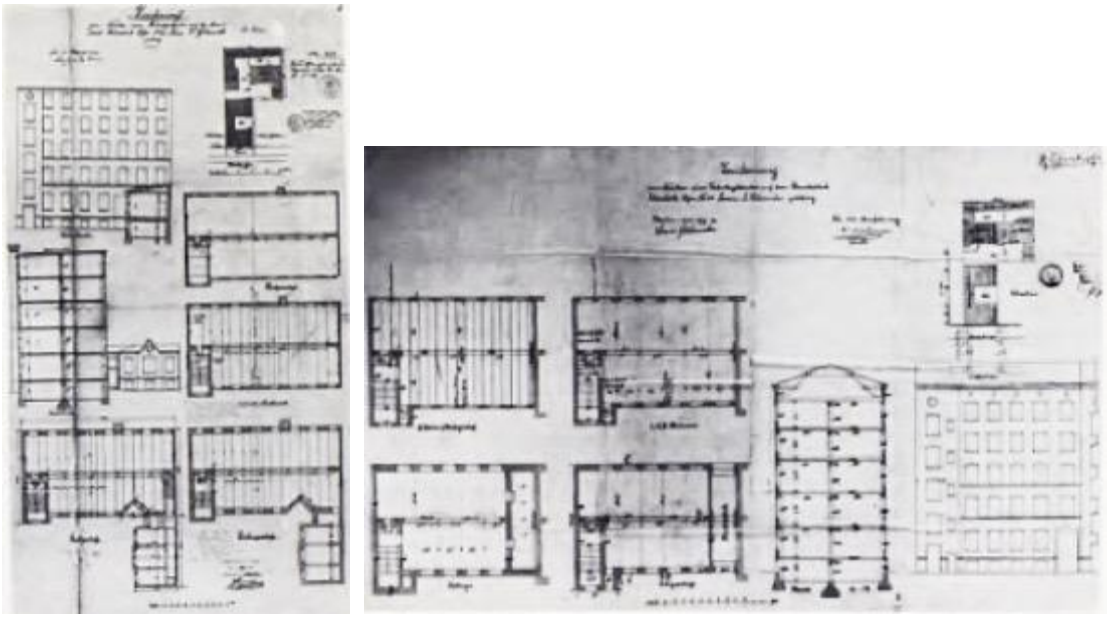


Fig. 3.30 Factory building at 31 Leuschnerdamm (today Elisabethufer 44); 1885 and expansion of the factory in 1886; Ref: Bascón-Borgelt, 1983: 29

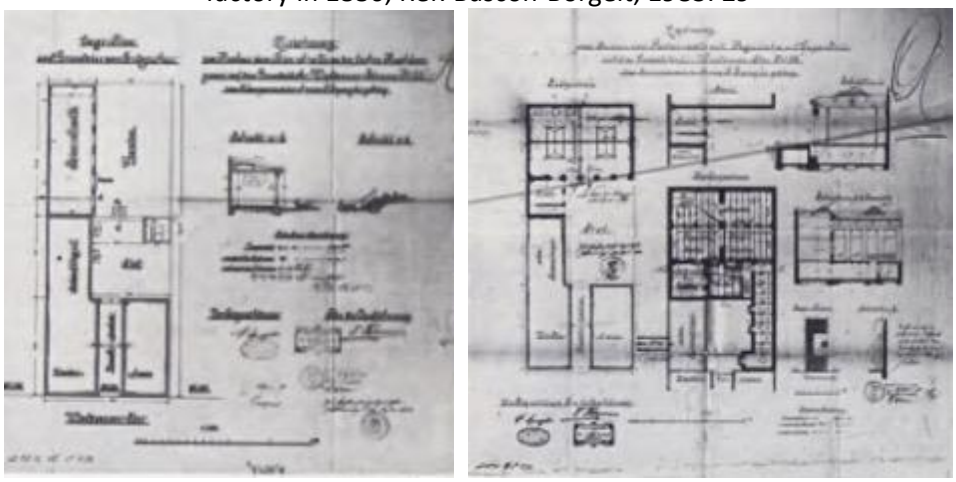


Fig. 3.31 Waldemarstrasse 24, Focus on construction detail 1893 (L), and 1894 (R); Ref: Bascón-Borgelt, 1983: 30

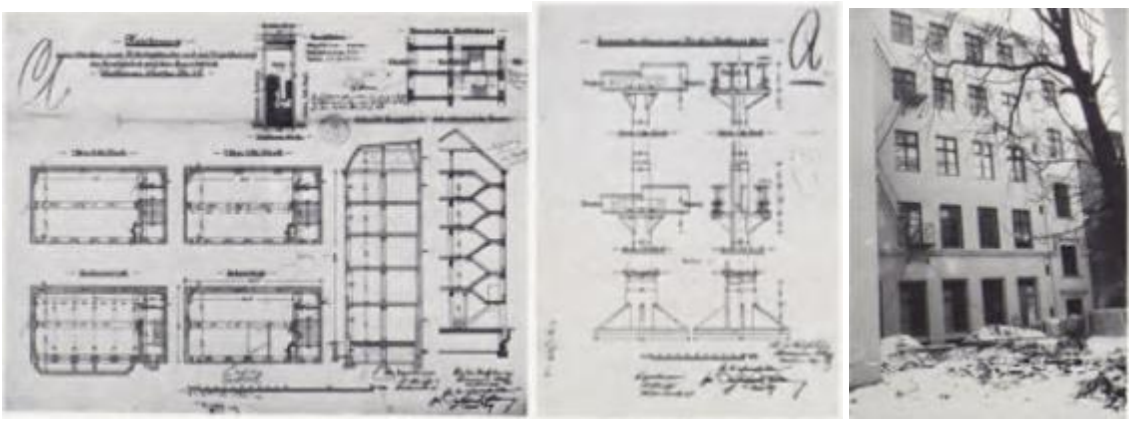


Fig. 3.32 Waldemarstrasse 42; Construction detail and plan of the felt shoe factory 1888 (L, M); the 1983 conversion of the factory residential use (R); Ref: Bascón- Borgelt, 1983: 30

3.3.3.5. THE FIFTH PERIOD, 1895-1914

During the last period before WW1 the examined urban quarter illustrates further densification of the block (Fig. 3.33). The large plot at the 31 Leuschnerdamm (red arrow) includes now a small individual building. The plan further illustrates a large extension to the residential block at 24 Waldemarstrasse (left blue arrow), however the most striking transformation can be observed in the depth of the plot at 38 Waldemarstrasse (right blue arrow) which until that point was empty.

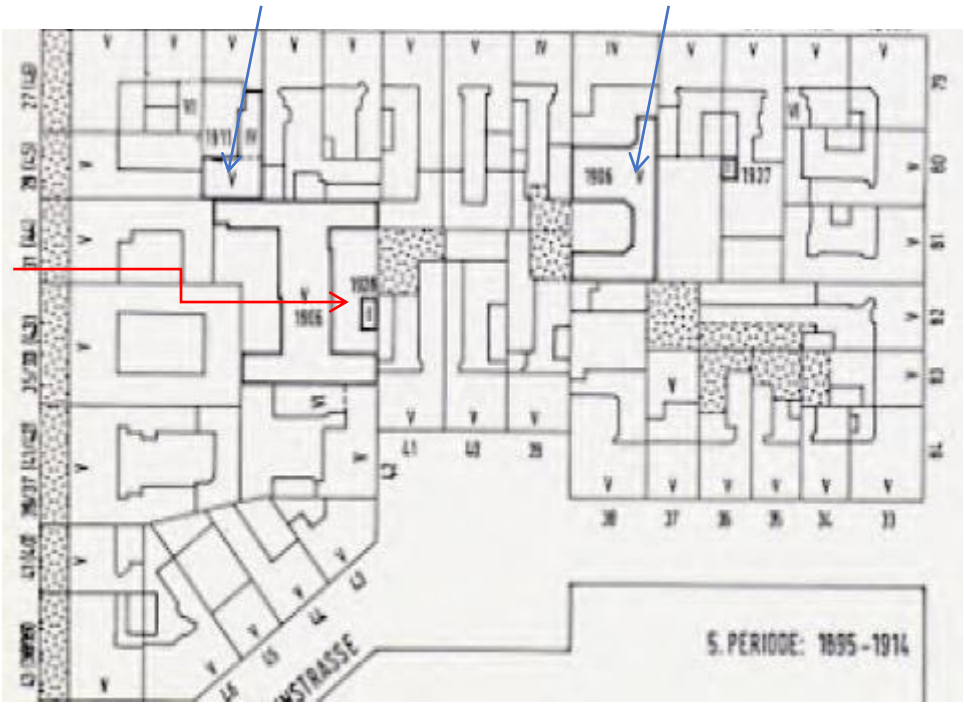


Fig. 3.33 Further densification in the block between 1895-1914; The additional construction of the factory buildings at 24-28, and 38 Waldemarstrasse: Ref: Bascón- Borgelt, 1983

The 1906 plans of the plot at 38 Waldemarstrasse, (Fig. 3.34) feature the construction of a large factory complex producing toiletries, soaps and perfumes; with a change of the owner in 1915, the factory converted its programme to manufacture of luxurious embossed stationary, and also production of steel goods. The Building Police records and the plans of the block from that year illustrate the building as set at five story high and covered with the striking white ceramic tiles; Bascón-Borgelt pointed that the strong cladding was included in design in order to ensure the fire safety to the block in face of the war - in particular to

'prevent the damage of production goods in case of the artillery or grenade shelling' (Bascón-Borgelt, 1983:37) (Fig. 3.34).

Furthermore, the plans of the factory from 1918 illustrate the reorganization of the space in the interior of the block with the view to accommodate the production of ammunition and much heavier war machinery (Fig. 3.35) (ibid).

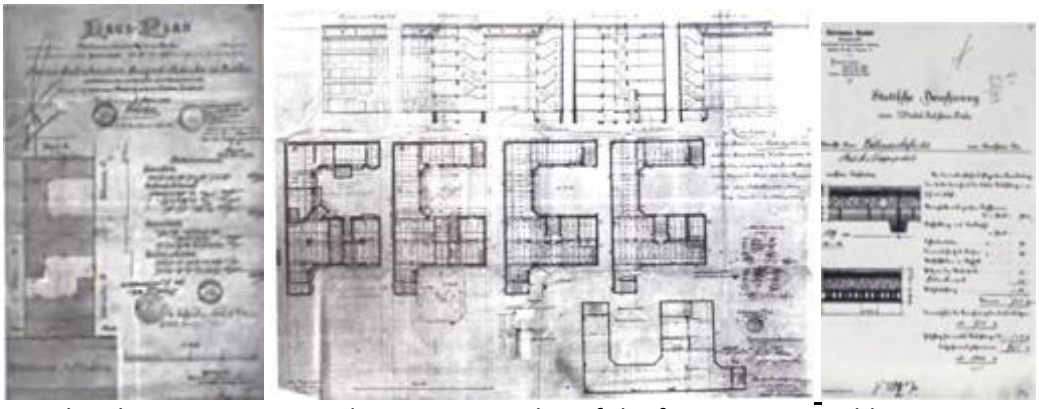


Fig. 3.34 The plot organization and construction plan of the factory at 38 Waldemarstrasse 1906; On the Left – the application for façade covering; Ref: Bascón-Borgelt, 1983:37



Fig. 3.35 1918 reorganization of partitions to accommodate production of heavier war goods; factory building in 1983; ibid: 38

The above graphic illustration provides a testimony to the 1862 comprehensive plan of Hobrecht, which delegated a distinctive role to the block. The development of the urban segment of Berlin, the Oranienstrasse Area in Luisenstadt (today Kreuzberg) illustrated the block as an integral part of a larger urban structure with potential of spatial and programmatic changes. As the above illustration of gradual changes has shown, the block from inception was set out as a highly permeable and inclusive type of habitation, thus also with ease it integrated varied programmes within its structure. Furthermore, the details included in the drawings of the Berlin block, and concerning varied questions posed at the

time of the block development, give testimony to the block as a 'multi – functional take on what happens between the streets' (Newman, 2011: 127) .

In the following section, I describe more detailed picture of the transformation that occurred at the level of the individual block; such account will further demonstrate how the nineteenth century typology was explicitly designed to be easily transformed and engaged with context and purpose.

3.4. TRANSFORMATION OF THE INDIVIDUAL BLOCK TYPOLOGY

As illustrated earlier the block provided a method of urban design; its close and fluid relationship between spaces of the city and architecture was depicted in plans and sections. The form of the block was also envisaged to respond to the future needs of the changing urban reality. To show these changes more closely, in this section I examine three individual blocks: 34 Oranienstrasse, 40-41 Oranienstrasse, and 51 Leuschnerdamm located in the studied Oranienstrasse Area (Fig. 3.36). With regards, this section discusses in detail the spatial rearrangement of the block. The fragment of map marked in blue and seen on Figure 3.36 locates these three typologies in context. The same fragment is zoomed in on Figure 3.37.



Fig. 3.36 Kreuzberg quarter – the Oranienstrasse Area, 1880; Ref: http://www.histomapberlin.de/Oranienstrasse



Fig. 3.37 Location of the blocks at 34 Oranienstrasse (C-shaped typology, bottom right arrow), 40-41 Oranienstrasse (corner typology, bottom left), and 51 Leuschnerdamm (upper middle); Ref: ibid: 59

3.4.1. TYPOLOGY OF THE BLOCK AT 34 ORANIENSTRASSE

The plans of the block from 1861 (Fig. 3.38) feature it as a typical six story residential construction fronting the street; the ground floor level is raised 1.5m above the street level, enabling the space for the cellar. On the drawings, the regularly and generously subdivided internal spaces have no closely prescribed function. The regular arrangement of typological elements is further seen at the plans, sections, and drawings of the facade suggesting generous and symmetrical organization of the block's interior. Thus this regularity is consistent across the building and derives from the logic of use, i.e. the facade is clearly subordinate to the structure of the block and distributes an ordered and indistinguishable fenestration.

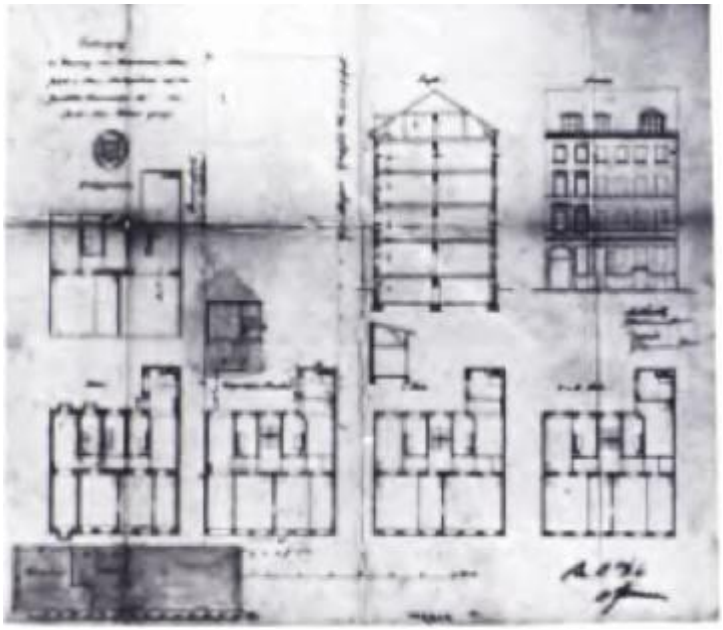


Fig. 3.38 Architect J. Boettcher's 1861 design of the undifferentiated and generic spaces in the block fronting the street; Ref: Debold-Kritter in Bascón- Borgelt, 1983: 42

The plans of the block from next year demonstrate two story extension built at the back (Fig. 3.39), used by the manufacturer of the leather goods (belts), and the locksmith. In 1865, the additional floor was constructed providing a workspace for a dress maker (Debold-Kritter, 1983).

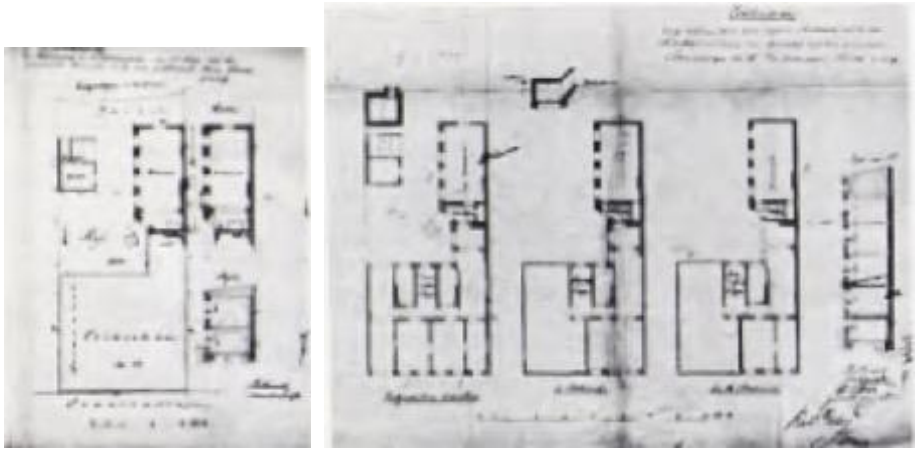


Fig. 3.39 1862 extension of the block; plans of the Locksmith workshop and belt maker (cellar) (L); and 1865 addition of further level occupied by the dress maker (R); Ref: ibid

In 1875, the plot was further densified, to include two wooden sheds; set at one and two story high, the small buildings were adjoined at the back with the opposite plot at 54 Naununstrasse (Fig. 3.40). With the installation of sewage in Berlin in 1874, (Pawlak, 2010), the plans of the block from 1875 demonstrate the rearrangement of the inner spaces to accommodate the toilets' shaft (Fig.3.41).

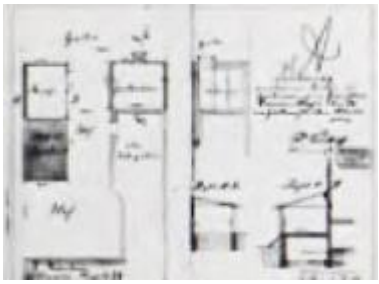


Fig. 3.40 1875 addition of two wooden sheds, at the back of the plot; Ref: ibid

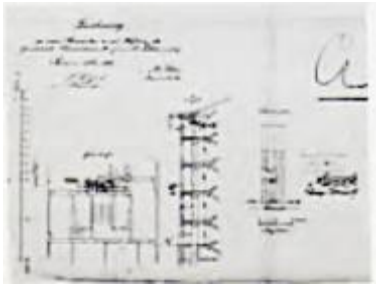


Fig. 3.41 1879 installation of the toilet shaft in the block fronting the street; Ref: ibid

In 1883, the wooden sheds were pulled down and in their place a new owner and manufacturer of furniture constructed a five-story factory block (Fig. 3.42). It included an independent rented workspace for a joiner and a cabinet maker (Fig.3.42 on the right).

At this point, the plot was built up to create on the plan a C-shaped typology; the drawings of the factory feature scrupulous structural details with regularly distributed steel elements that permitted the open space at the ground floor of the block - 'free' of any structure.
The 1884 plans of the building fronting the Oranienstrasse (Fig. 3.43) illustrate façade renovation, and prescribe differentiated spaces to accommodate new programmes. and also the new spaces in building's interior: kitchens, toilets and rooms with stoves. As seen on the section, these spaces are all positioned in one line vertically in order to unify their service shafts. The drawing further depicts rearrangement of the ground floor of the block facing the street to allow space for retail.

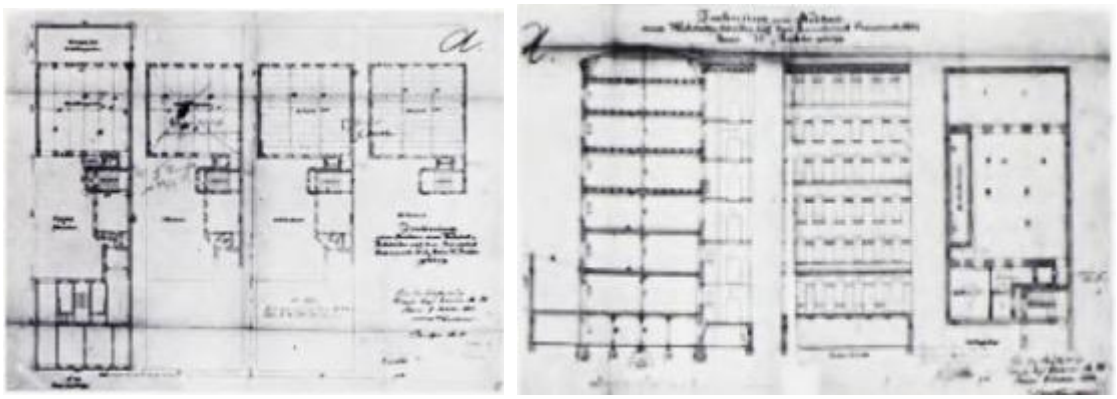


Fig. 3.42 Further changes made on the plot in 1883; construction of the furniture factory, in place of lavatories; Ref: ibid: 43

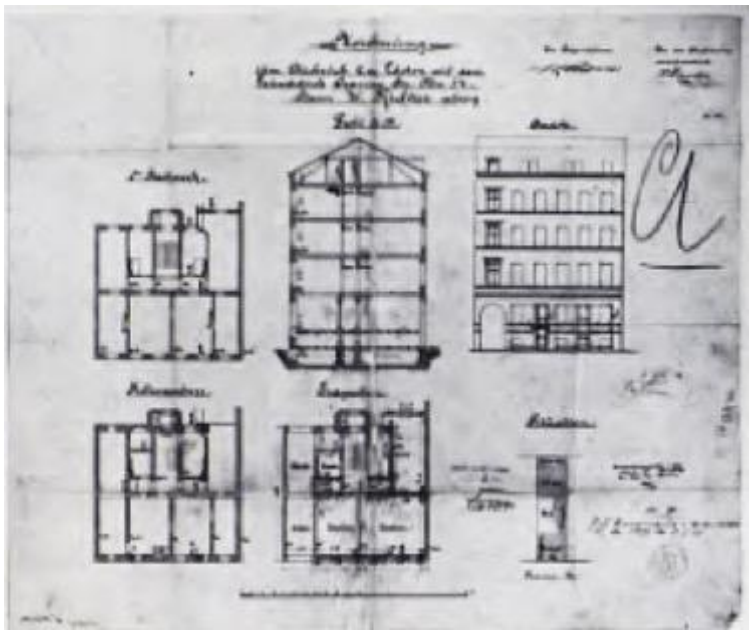


Fig. 3.43 1884 renewal of the façade and inauguration of differentiated spaces to accommodate a new programme; Ref: ibid: 44

In 1900, the factory changed hands; the new owner (and a lighting company owner elsewhere in Berlin), installed a gas engine in his factory, commencing manufacture of pianos.
In 1895, the locksmith, leather merchant and dress maker's workshops located in the three story side-wing block, were sold. The block was converted to a small factory producing slippers and children boots; the Building Police document from 1933, reports an installation of large carousel conveyor belt that rapidly increased production of goods, totaling to 3mln pairs of shoes in one year (ibid).

Unquestionably, the block at 34 Oranienstrasse illustrated a formal, spatial and programmatic potential. Yet, as the Figure 3.44 demonstrates the rearrangement of the block's volumes was not reserved to a single plot only. Interestingly, the drawing from 1928, illustrates a horizontal connection made with the adjacent property (35A Oranienstrasse) linking two blocks through the fire wall and via a staircase. This move allowed the factory owner to connect his shoe business (at 34 Oranienstrasse) with the first floor flat located in the courtyard of the block at 35A Oranienstrasse (Fig. 3.44).



Fig. 3. 44 1928 plan demonstrating the link across the plots; Ref: ibid

Furthermore, the plan of the block from 1928, depicts another horizontal rearrangement of volumes in the block facing the street. As seen on Figure 3.45, the drawing demonstrates transformation of the front elevation and design of a fully glazed shop window (Fig.3.45). Photograph of 1983, illustrates the same style of the facade.



Fig. 3.45 1928 alteration of the façade; and block in the 1983

Overall, the graphic account of changes illustrates a very precise idea about the spatial reasoning that took place around the mid nineteenth century. With advances in technology, new construction laws and changes in living conditions, the block at 34 Oranisenstrasse provides a testimony to the formal and spatial adaptations that were achieved with ease and at a gradual pace.

In the next two sections I introduce two other examples of the block that in my opinion are worth examining. The new accounts aim to show the dynamism of a different block typology, to give fuller picture of the formal, spatial and programmatic fluctuations. Seen on the example of the corner block at 40/41 Oranienstrasse, and the large factory block at 51 Leuschendamm. the illustration depicts the full transformative potential of the block typology, its specific spatial and formal qualities and resilience.

3.4.2. TYPOLOGY OF THE BLOCK AT 40/41 ORANIENSTRASSE

Located at 40 Oraneienstrasse, the corner typology was designed in 1860 as a place of residential habitation (Fig. 3.46 on the left). During the same year, the property's owner purchased the adjacent block at No 41 (Fig. 3.46 on the right). In 1880, the two buildings were sold and embarked on their path of formal and spatial transformation.

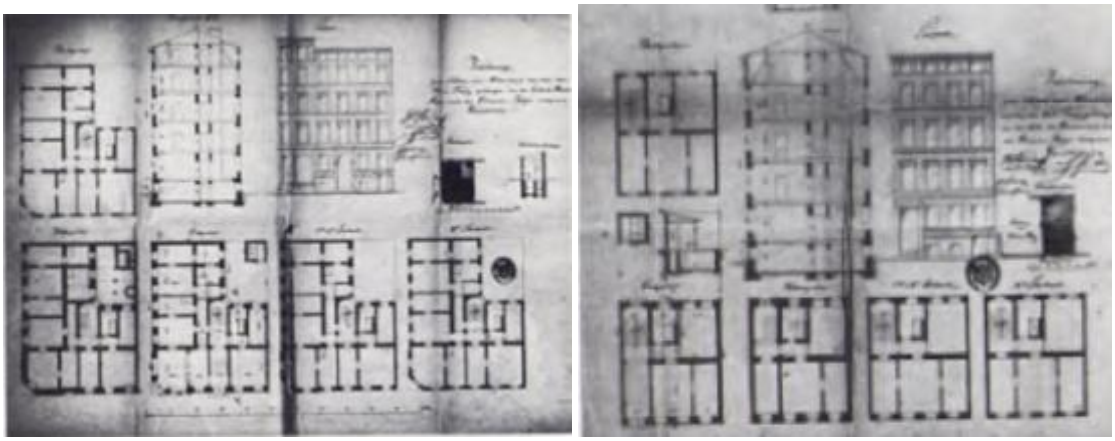


Fig. 3.46 1860 plans of the blocks at no 40 (L) and No 41(R); Ref: ibid: 50

Located in the most lucrative position overlooking Oranienplatz, the corner typology provided perfect location for the commercial use (Fig. 3.47). The 1884 drawing depicts the two blocks that began to function as one, i.e. the changes were made to the façade that now allows a direct access from the street to the new retail spaces. It appears that the regularity of design, permitted a minimum structural intervention in the blocks and therefore an easy reorganization of the block's interior. It is noteworthy that this formal rearrangement was not reserved for the Berlin block only, and was exercised elsewhere in buildings around nineteenth century Europe. A similar change is depicted on two drawings to the right (Fig. 3.47), and illustrate reorganisation of the block in Stettin.

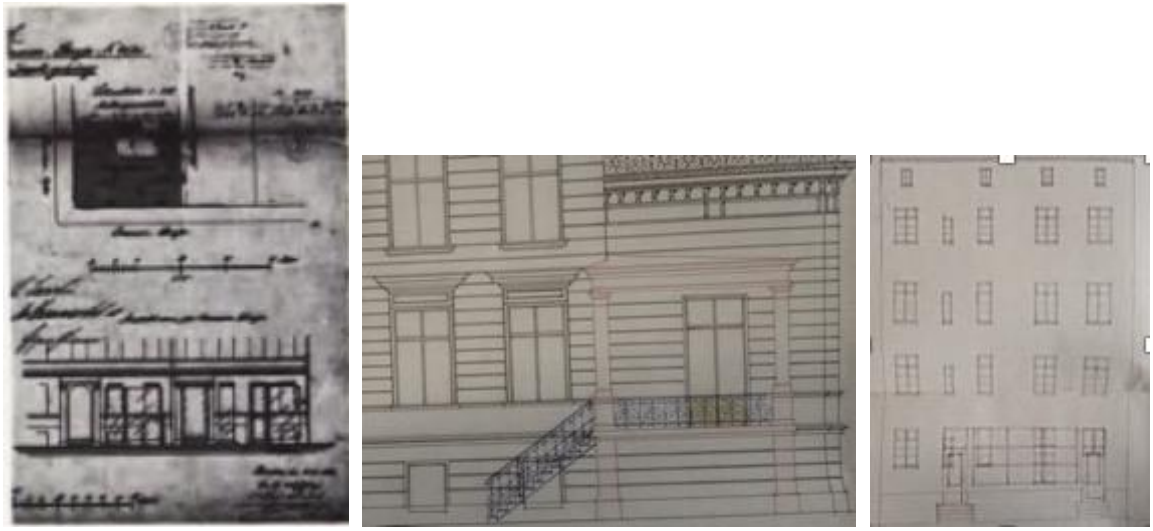


Fig. 3.47 Corner plot at 40/41 Oranienstrasse; Plan of 1884 (L); On the two drawings to the right- the examples of similar façade reorganization, showing conversion of the ground floor of the block to allow commercial use and access from the street; Ref: ibid, Stettin Archives, ABN (525), (7256)

In 1884, the owner of the blocks ordered an installation of the toilets within the premises. As seen on the 1891 and 1901 plans, the drawing illustrate further rearrangement of the partitions on the ground floor, and further change in street elevation (Fig. 3.48)

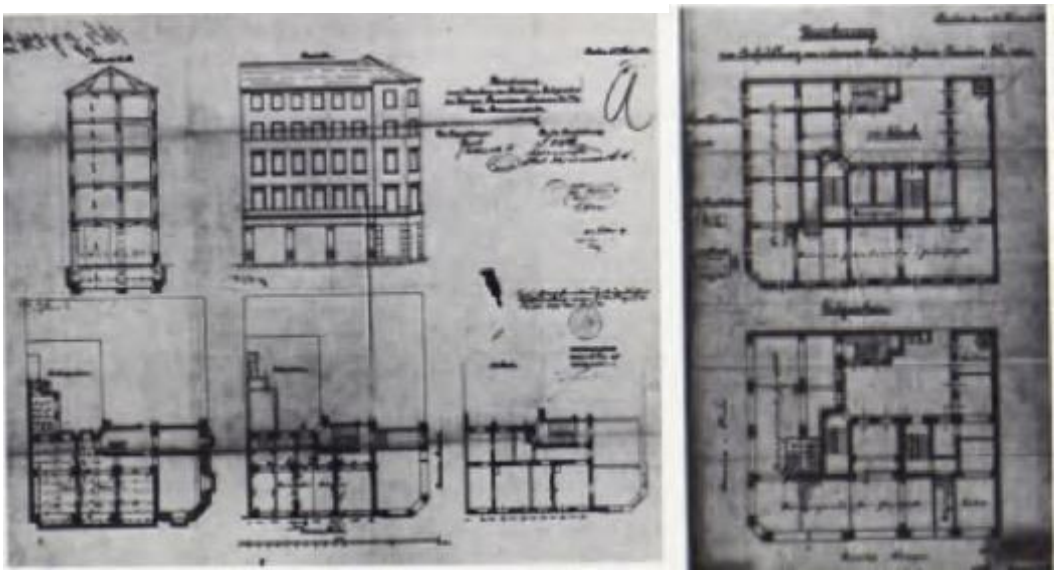


Fig. 3.48 Plan of 1891; notable change at the ground floor level enabling commercial use, 1901; Ref: Bascón- Borgelt, 1983: 50

In 1912, the block's structural integrity once again allowed it to accommodate more changes, and redesign of its interior to become a department store (Fig. 3.49). The architectural firm (Cremer & Wolffenstein) distributed the block's loadbearing elements to result in the open plan across the whole retail floor. To preserve the open floor plan, the architects located two staircase shafts at the further ends of the building. As a result of this new arrangement within its ground floor the new department store located a luxurious café that overlooked 'passing life' of the Oranienplatz. In 1913, the block's elevation has been lavishly embellished to underline the luxury and splendor of its location, form and programme (Fig. 3.50). In result of these changes, the Café Oranienpalast for over a century *'*brings joy to both Berlin residents and visitors alike' (Bascón- Borgelt, 1983) (Fig.3.51).

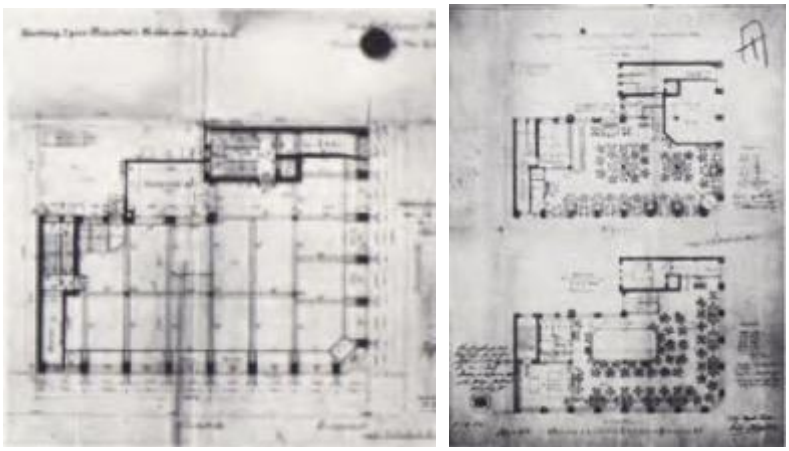


Fig. 3.49 Structural projection of the block for adaptation to new programme; 1912; Ref: ibid



Fig.3.50 Café Oranienpalast 1913, elevation view; Ref: ibid



Fig. 3.51 Bird's eye view of the Oranienplatz,1920(L), Oranienpalast in 1983 (M), and in 2018; Ref: Bascón- Borgelt, 1983(L), (M) Author, 2016 (R)

3.4.3. TYPOLOGY OF THE BLOCK AT 13 LEUSCHERDAMM (53 ELISABETHUFER)

In 1859, the Building Police recorded construction of a residential building at 13 Leuscherdamm – one of many Berlin's grandeur boulevard. The structure was set back from the line of the street and included a large garden fronting the block. In 1860 two side-wings

blocks were built at the back. In 1864, the land owner made a building application for a construction of the horse stables in the courtyard. the 1903 records reveal the construction of a large factory building. As seen on Figure 3.52, a striking in shape spatiality spills to the depth of the plot, fully occupying its larger part.

The steel structure depicted on the plan underlines the regularity of construction, therefore also the block's potential for reordering of its typological elements. It can be noted for instance that the tight and regular organization of the load bearing elements distribute four shafts for an easy vertical movement.

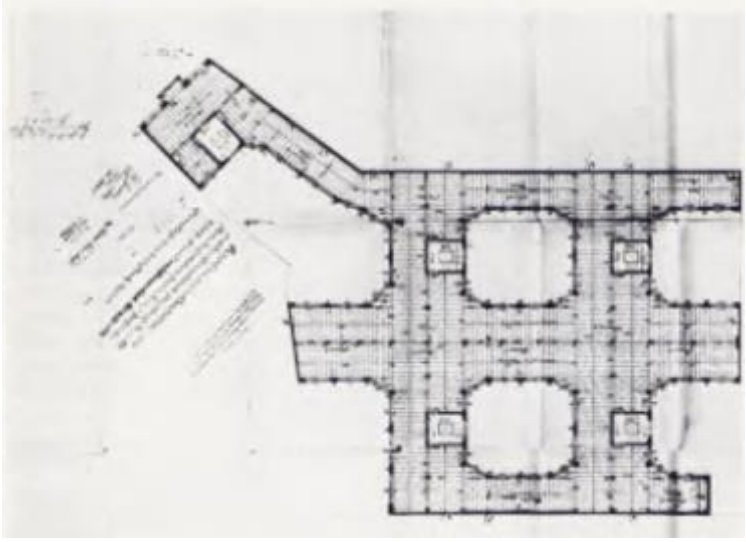


Fig. 3.52 Plan of the factory 1903; Ref: Bascón- Borgelt, 1983: 53

As seen on the plan, the factory's buildings fill the entire space of the plot and are built up off the plot's boundary. They look inward - focused on the space of four courtyards. The series of photographs from 2017, demonstrate two large entry gates, which provide access to the back premises exposing the first of the large courtyards (Fig. 3.53); the movement line leads to the further three courtyards fluidly linking all four of them with the urban space of the street (Fig. 3.54).



Fig. 3.53 Front Residential Block in 2017, (today Elizabethufer 53); and the entry gates

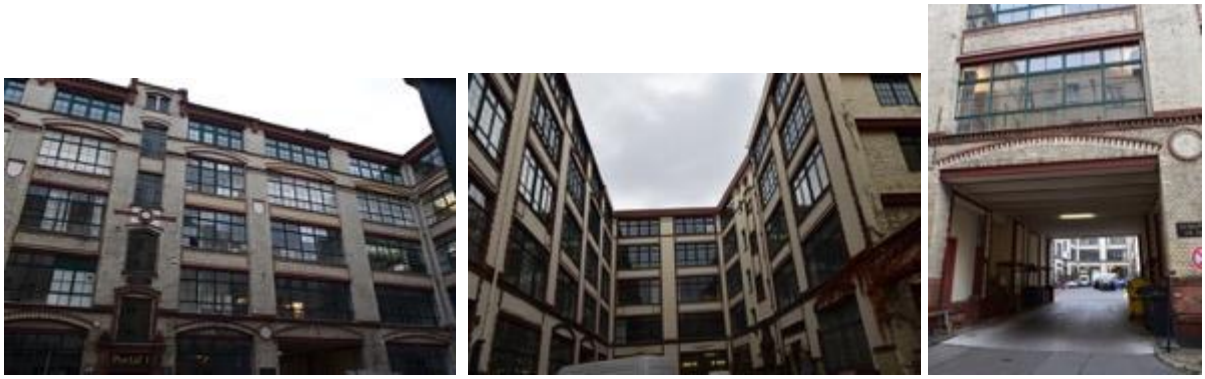


Fig. 3.54 Series of industrial spaces of the block located around the four courtyards

Today, as demonstrated below, the block is dilapidated in places and exposes its 150 years old structure; yet as seen on the photographs, even these spaces, are creatively used by the block's tenants for storage facilities, motorbike parking or children play area, and also the display of a 'Modulor Man'- inspired art (Fig. 3.55).



Fig. 3.55 Unraveled load bearing steel structure providing the space for a wooden storage and parking (L), also Le Corbusier's inspired art the 'Modulor Man' - (R)

It therefore seems that as in the past, also today the block continues to be used in a variety of ways. In the courtyard buildings, the structure locates graphic, design, architectural and planning industries, outlets and workshops (Fig. 3.56). Similarly, the block facing the

boulevard (today 53 Elisabethufer) continues to provide the sought-after spacious dwellings, fronted by elegant gardens, used for the enjoyment of residents (Fig. 3.57).



Fig. 3.56 Varied programmes occupying courtyard blocks (L), and the front garden (R)



Fig. 3.57 Garden fronting the block

The above illustration certainly shows that since the block's inception to the urban grain of Berlin, the mid nineteenth century typology continues to outline the close and dynamic

relation to the urban space that it resides in. This account further demonstrates that after almost 150 years, the block persists, standing for its unmeasured formal and programmatic potentials.

As illustrated in Part I, the changes made to the early block were the result of the public health concerns and the intense discussions among various professions (Sutcliffe, 1981). After 1870 health experts, building police and municipal councilors continued to discuss a variety questions posed by the 1862 plan (Borsi, 2009). Supported by the government and reinforced by the Labour Socialist party, the new group of thinkers that gathered around three health and public associations, [5] had a direct impact on the German Policy (Bullock and Read, 1985). The rising experience and advice of these organisations brought together specialists across disciplines of economy, medicine, architecture, and engineering. Together they had great influence on the administrative control and urban development. Their discussions on matters of public health, environment and sanitary objectives further illustrated the breadth of questions raised with regards to the single block.

The close observation of the spaces of the blocks, and in particular their unprecedented development and construction according to the outdated 1853 laws, provided government with the new statistical data and knowledge that carried potential solutions (Borsi, 2009). Profoundly, after 1875, the new resolutions foregrounded new typologies – seen as an 'upgrade' to the early block's structure, spatiality, and programme.

[5] The three public associations supported by the German government were:

1. *Verein für Socialpolitik (Social Policy Association or VfSP)* – founded in 1872 included within its structure upper and middle members of social class, often university professors; concerned about the social situation, they discussed the need for inclusion of the public in the social and economic debate on the overcoming of problems linked with industralisation;
2. *Deutsche Verein für Öffentliches Gesundheitswesen (German Association for the Promotion of Public Health, or DVfoG)* – founded in 1973 focused their debates on matters of environmental hygiene; provision of sewers, water supply to dwellings and the need of wide and airy streets. It included within its structure a variety of professions: politicians, social reformers and municipal administrators whose role was to instruct the municipal powers about new approach to the city
3. *Verband deutcher Architekten und Ingenieurrvereine (Confederation of German Architects and Engineers, or VdAI)* - founded in 1871, to debate matters of urban environment, industrial design, infrastructure and the objectives of city planning (Sutcliffe, 1981).

3.5. THE REFORMED BERLIN BLOCK

3.5.1. THE NEW BUILDING REGULATIONS

In result of the intense governmental debates and in response to the outdated 1853 building laws, German Policy established two new building guidelines: the 1874 *Enteingnungsgesetz*, and the 1875 *Fluchtliniengezet.* The first regarded the lower heights and density of the building blocks, whilst the latter outlined the codes on the street and building block lines. These laws further promoted the necessity of provision of sewage and water supply in the block, as seen earlier in the accounts of the early block from 1875-1895 (Sections 3.3.3.3 and 3.3.3.4, pages 100-105). Consequently also the new legislations prohibited the erection of buildings on any land without completed street and sewage layout. This weakened the widespread *laissez faire* attitude to construction and clarified the authority of the city over the land and also over the building owner. Furthermore, the 1876 supplement to the 1875 *Fluchtliniengesetz* codes, maintained that even the smaller, secondary streets were to be built before any development could take place (Ladd, 1990, Bullock and Read, 1985, Hofmann, 1974, Sutcliffe, 1981).

In 1887, the government issued new building ordinances – the *Bauordnungen* that established more detailed and stricter rules of construction. These laws focused on a specific use of the dwelling – which for the first time was described as 'housing'.
To address the density of in the courtyard block its surface almost doubled in size, from 31m2 to 60m2, whilst the building's height was limited to five story. Furthermore, the laws regulated the matters of subletting, in particular the sharing of rooms by tenants of the opposite sex. They also advised the separation of the subtenant from the family to prevent crime. The laws further ordained a certain amount of light and air per household, calculated at 10m2 per adult, and 5m2 for a child (Ladd, 1990) (Fig. 3.58 on the left).
Ten years later, the 1897 supplement to *Bauordnungen,* set the courtyard area at 80m2, and fundamentally shifted the focus the the block design and aesthetics. Rudolf Baumeister (and a vivid critic of Hobrecht), praised the 1897 regulations as 'hygiene and aesthetic

minded', and alleged that in result of them 'the worst of Hobrecht's errors were avoided in growing numbers' (Sutcliffe, 1981: 13, Ladd, 1990: 119)(Fig. 3.58 on the right). [7]

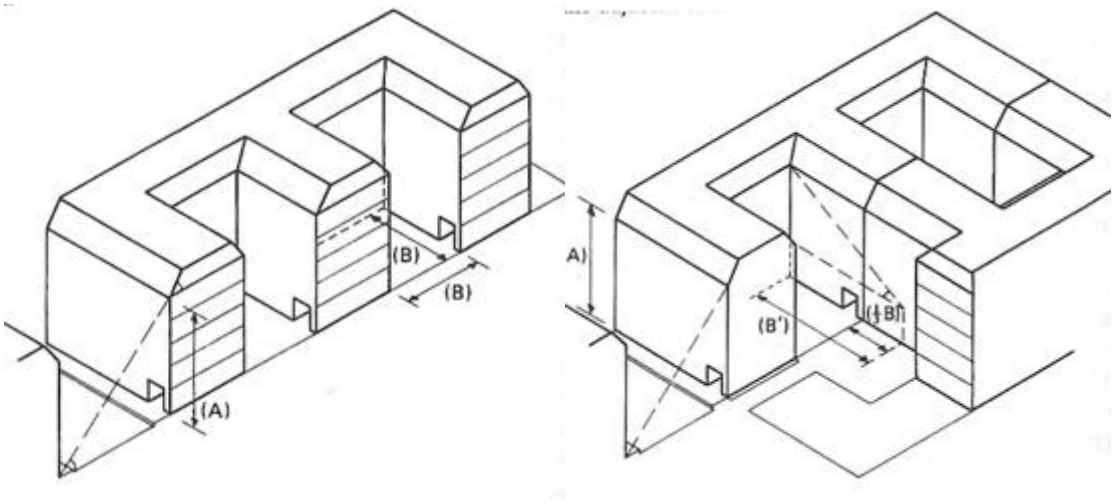


Fig. 3.58 The 1887 (L) and 1897 (R) regulations; A- maximum height of the building determined by the street width, B – minimum courtyard dimensions; Ref: Bullock and Read, 1985: 92

From 1880 onwards, planning decisions were vastly focused on the Maertens's formula that offered a convenient 'rule of thumb' to the building trade. Set at the 45-degree angle, the rule spoke about the maximum angle allowed at which the sunlight shining over the rooftops of the opposite houses, was required to reach the ground floor spaces in the block. The rule was easy to follow and helped the builders to ensure a correct ratio of height of the block to the width of the street (Ladd, 1990: 119).

With the growing concerns over importance of sunlight in the dwelling, further prompted by the studies of Adolf Vogt (Fig. 3.59), the new designs took into account the building's orientation and apartments' layouts. The orientation of the block became 'a question of cardinal importance' with planners everywhere stressing that any dwellings should be positioned to receive direct sunlight (Bullock and Read, 1985:148).

[7] Several commentators explained that the law issued in order to help maintain the moral order in the blocks was difficult to exercise; this in consequence has worsened the housing situation of the working family. Royal authorities measuring quantities and qualities subsequently penalized the worker families with evictions, seizure of possessions, financial penalties and the relocations. Ironically, the law which meant to better the worker's urban existence, in fact worsened it. As result of failure of this system, the role of the authorities has changed to the merely advisory (Schmoller, 1887, Dowson, 1914, Ladd, 1990, Bernet, 2004).

This perspective is important to my thesis, as it clearly shows that the foundation of the strict south-north orientation of the Modernist (twentieth century) planning was a consequence of the intense studies, reflections and projections about the typology of the block, and which initiated at the end of the nineteenth century.

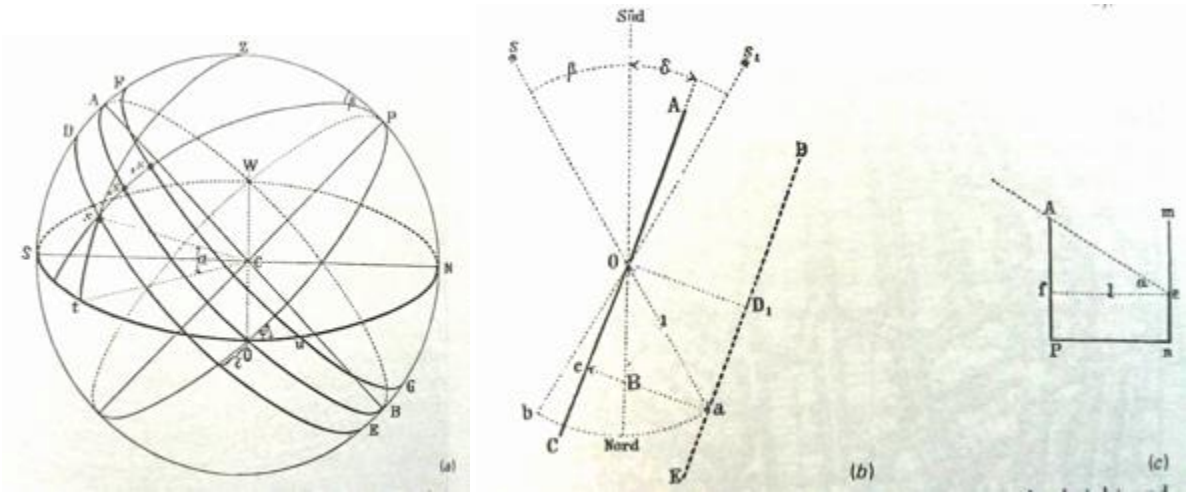


Fig. 3.59 Adolf Vogt's late 1880 studies of angle of sun rays in different times of year, using a descriptive power of geometry; Ref: Bullock and Read, 1985: 149

Overall, the post 1875 building laws regulated the construction of the new typologies in order for them to become healthier, more commodious, safer and brighter than the forms of their 1860 predecessors. However, as Choay (1997, 1969) argued, these more 'progressive' blocks have also announced the arrival of the 'triumph of aesthetics' in planning and architecture. Their reformed forms clearly illustrated that towards 1890, the transformation regarded not only the block's structure, but also the design of environmental and architectural detail, or the matters of pre-programmed uses (i.e. the 'housing' block and the 'residential 'street). [8]

[8] It is worth to note the break with the 'old order of things' in planning, which took place in the 1870s outside of the city. Choay, (1969) illustrated that in consequence of a growing dissatisfaction with the dense urban block, the new dwelling model for the urban workers, was developed in the suburbs. Its new form signified progress and exemplified possibility of a different dwelling. The model based on a building dispersal allowed air, light and greenery into development. The first of these developments, were built by the wealthy merchant J. Krupp in 1872 as seen on Figure 1 Footnote (L)). The new typology demonstrates a regularly dispersed identical houses aligning rectangular road pattern; the model placed on the edge of town, included a large English-style public park. In contrast, the second model built in 1894 features a picturesque Essen settlement that lacks the former regularity of the 1872 scheme; it demonstrates an influence with the 'romantic

Still, with further arguments made by social reformers and sanitarians, the block was continuously questioned as a model of 'housing' (Bullock and Read, 1985, Sonne, 2009). In response to the concerns about high-density, the new architects-urbanists' illustrated how 'to transform the tenement block from the airless and lightless *Mietskaserne* of the 1880 and earlier into an entirely new environment' (Bullock and Read, 1985: 136, Ladd, 1997). The next section elaborate on the block typology, which from now onwards will be characterised as 'housing'.

3.5.2. THE NEW TYPOLOGY OF THE BERLIN BLOCK – POST 1880

The pressing influence of public health organisations catalysed the emergence of the new forms of the block. Around 1880 in Berlin, the architects promoted the new spatial models, which were particularly illustrative of the break with the old formal and spatial order. By allowing more air, light and greenery into their spaces, these models meant to provide a response against the poverty, lack of hygiene, social segregation and the raise of crime in the spaces of the 1860 block. Thereby, they were also seen as a welcomed solution to the dense building stock of the mid-nineteenth century. Formed with regards to the contemporary urban attitudes, the new typologies demonstrated beginnings of a process of *reduction* and *dispersal* of urban tissue - considered at the time as symbol of 'progress' - essential to physical hygiene. In result, during the last quarter of the nineteenth century, the new forms of the housing block have been steadily entering the city (Choay, 1997, Bullock and Read, 1985, Panerai et al 2005).

aesthetics' or the garden city (Fig. 1 Footnote (M)). Yet, it is the third model that announced the greater differentiation of urban spatiality, marking the beginning of functional separation (between the spaces of rest, communal places and dwellings) and focus on the separate modes of traffic infrastructure (Fig. 1 Footnote (R)).



Fig. 1 Footnote 1872 workers' colony, Schederhof, Essen (L) the 1894 Altenhof model (M) and also 1894 Alfredshof scheme; Ref: Choay, 1969, plate 50, Plate 53, Plate 51

3.5.2.1. DESIGN OF THE HOUSING BLOCK BY THE 'ARCHITECTS-URBANISTS'

A leading role in the block reform was played by the three 'architects - urbanists' Theodor Goëcke, Alfred Messel and Paul Mebes (Ladd, 1990).
In his designs, the Berlin architect and the editor of the first journal of urban design, *Der Städtebau*, Theodor Goëcke (1850 – 1919) emphasised the mix of functions within the block. He rejected the arguments of the social reformers about workers 'preference of living in the suburbs, such as the Krupp settlements (see Footnote [8]) (Sonne, 2005, Sonne, 2009, Bullock and Read, 1985) and further refused the idea of social segregation - the 'specific design for a specific classes'. In contrast, Goëcke promoted the block as typology responsive to 'all strata of the population' clearly paralleling the earlier objectives of Hobrecht and his public defense of the early block.

Goëcke's new plans were illustrated on the pages of *Der Städtbau.* They featured varied standards of dwellings within one building - deemed by Goëcke as the a 'realistic approach towards making a change' (Sonne, 2009, Sonne, 2005).
As seen on the Figure 3.60, the new typology depicts the formal and spatial differentiation from the previous model of the block. It further shows an environmental awareness exemplified by the details of insulation within the cavity wall.

Conceived by Goëcke as an 'updated' model of the 1860s block, the plan pronounces the change in the block interior. It illustrates different floor layouts, which vary between the smallest to larger apartments, and further suggest different levels of affordability. Still, despite these changes, the spatiality of the courtyard is still conceived as a series of small spaces surrounded by the tightly grouped building blocks thus parallels the organization of the early block (Fig. 3.60).

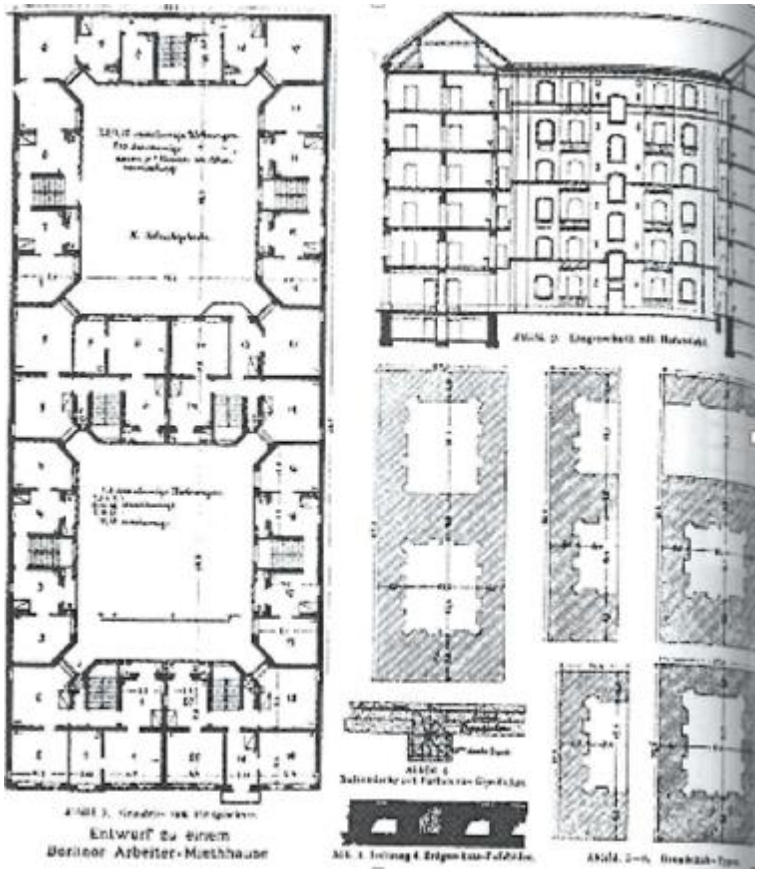


Fig. 3. 60 Reformed block by Goëcke, 1880, plans for wall insulation (Sonne, 2009); Ref: Bullock, Read, 1985: 130

Although transformed, this new typology became a subject of critique. Superstitiously labelled as merely 'unimprovable', the critic and economist Rudolf Eberstadt encouraged Goëcke to improve the design and base it on the mid nineteenth century Parisian model. The model, was opened towards the street and conceived as a 'hybrid block'. It contained higher buildings on the perimeter, and reduced in heights blocks that were located in the courtyard (Sonne, 2009: 67).

In 1890, Goëcke indeed proposed an improved design; the plans now featured even greater variety of apartments and contained different numbers of rooms. Some had balconies and projective bay windows, allowing more light into the interior. The block's internal organization illustrated an increased number of staircases, signifying better circulation. The building walls featured insulation, thus demonstrated environmental awareness; the most

pronounced change however could be seen in the external spaces of the block, depicting generous in size, green[9] and airy courtyards.

The courtyard space, amalgamated from the previous two separate small light-wells, allowed for establishment of the gardens and communal activities (Goëcke, 1890, Bullock and Read, 1985). With the new spatiality, also the block's status has changed: from undifferentiated with the city, to the form marking a distinction between the public and private spaces. In 1905, on the pages of *Der Städtebau*, Goëcke justified this new design:

> The means for a better or different layout consist of the arrangement of interior streets, be it *public* or *private* streets, and of dwelling courts in varied ways, of indenting the alignment and of the horseshoe – or meander-like design of the street front' (Goëcke, 1905: 147).

The similar spatial and formal transformation of the block is featured in the designs by two other architects, Alfred Messel and Paul Mebes. In 1890, Messel proposed plan of the block that was only built up at its perimeter. Influenced by his travels to England 'Messel set out to offer something akin to the London's residential 'square' as a model for urban living, rejecting the court of light-well proportions normally associated with the tenement block as wholly unsatisfactory' (Bullock and Read, 1985: 133). It therefore seems that the reform of the housing block 'was treated as a cultural question oscillating between the ideals of rural or urban life', and affected all social classes (Sonne, 2009: 258).

As seen below, the block at Kochhanstrasse featured the large interior - free of any buildings. The new typology also included other than residential programmes: recreation spaces within courtyard, a kindergarten, community hall and gardens (Fig. 3.61) (Bullock and Read, 1985, Sonne, 2005). This inclusion of different uses was a formal response to the

[9] The argument for the large perimeter block containing spaces for recreation was later publically set out by Camillo Sitte in his article the "Metropolitan Green' (1900). Speaking against the model of English square surrounded by streets, Sitte focused on the 'interior garden' for improving the quality of the public space in the city; there he argued '[t]he sanitary green should not be located within the dust and noise of the streets, but within the safe interior of large perimeter blocks' (Sitte, in Sonne, 2009: 76).

social questions raised by the public health associations concerned about the well-being of the workers' family (Sonne, ibid).

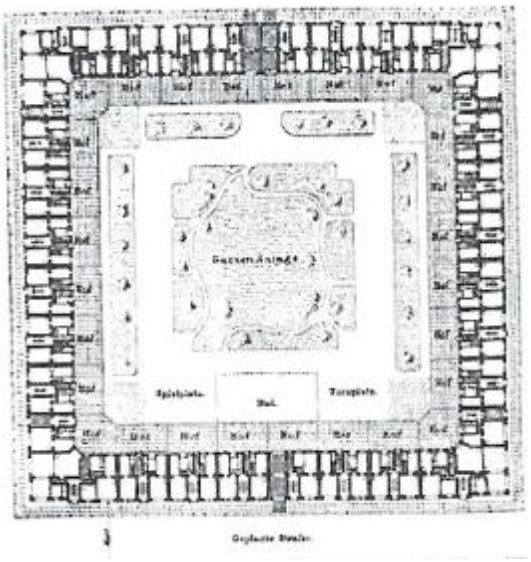


Fig. 3.61 Messel's 1890 design for the large perimeter block containing planting and gardens; Ref: Bullock and Read, 1985: 159

In 1897 Messel proposed a model of a half-block, combining courtyards of the adjacent developments. The new block featured an individual large courtyard (Fig. 3.62). The internal arrangement of the apartments carried on the tradition of Goëcke and illustrated varied in plans self-contained flats that unlike the undifferentiated spaces of the early block, assigned function to every room. Among variety of apartment layouts, the block also offered other uses: shops, a library, public baths, a kindergarden, community hall and a pub (Sonne, 2009, Bullock and Read, 1985).

More profoundly, the typology was highly differentiated at the point of the façade. The regularity of the form as known from the organization of the early block was replaced by the rich ornamentation of the façade, inclusion of projected fenestration and balconies. The block simply demonstrated a new design attitude that has shifted towards considerations with the aesthetics of design but also the dispersal of form, and life as a community.

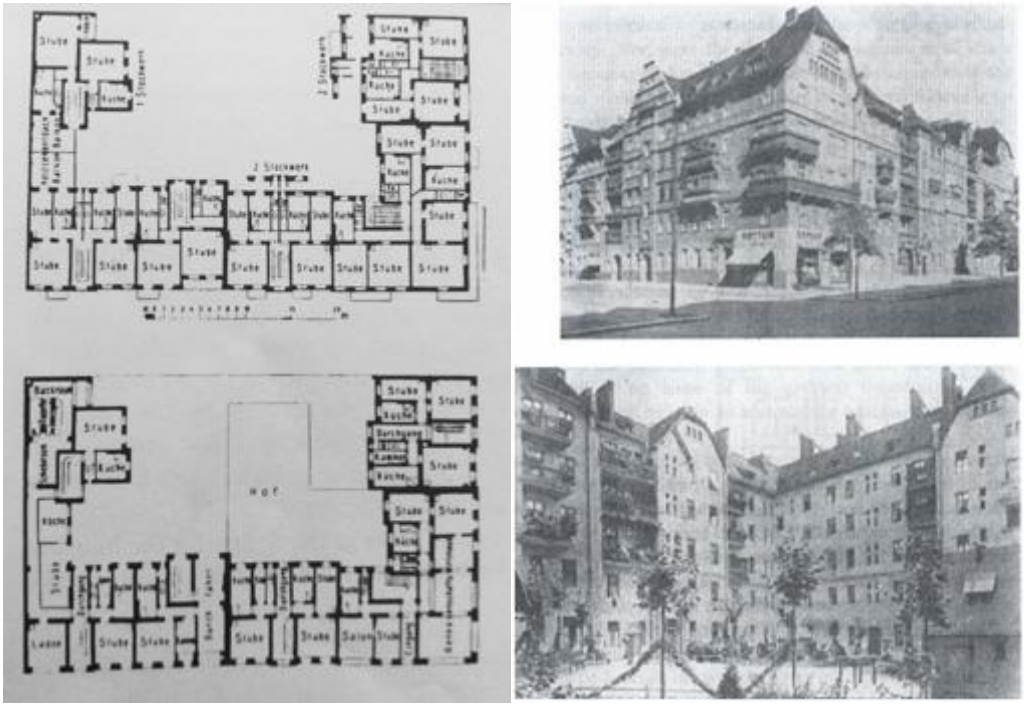


Fig. 3.62 1897 Messel's development at Proskauerstrasse; Ref: Bullock and Read, 1985: 131

During the first decades of the twentieth century, further models were developed in Berlin. In 1907, Paul Mebes adapted Parisian typology of the block in the manner of *cours d'honneur* (Fig. 3.63). almost in response to Eberstadt's objectives. The 'open towards the street' courts brought more light and air into the block, while the 'receded from the street' spaces provided quieter balcony places. The new design was praised for the sanitary improvements, mostly due to its enlarged, gallant street façade, commended as 'aesthetically pleasing to the eye' (Sonne, 2009).



Fig. 3.63 1907 housing block in Berlin Charlottenburg by Mebes; Ref: Sonne, 2009: 65

Yet, such spatiality lining the street in intervals was unknown from the 1860s block, and unquestionably contributed to the lack of urban definition of the street; as such it featured a different spatial performance. The clustered spaces of the Mebes' block instead of undifferentiated logic of the 1860 block, configured a specific spatial and functional organisation. These new qualities, along the self-contained units determined by the variety of standards in the apartments, marked the specific function of the reformed block that was strictly demarcated for 'housing'.

A similar reasoning was employed by Mebes in 1907. The block designed for Berlin Civil Servant Building Association featured internal streets and a large square (Fig. 3.64). Although the individual block plans relate to the 1862 plans of Assmann, the performance of its structure as one grouped organization is different. The plans show typology as clearly implemented according to two scales: spaces of interior that were separated from the spaces surrounding the building (Fig. 3.65) (Borsi, 2009).

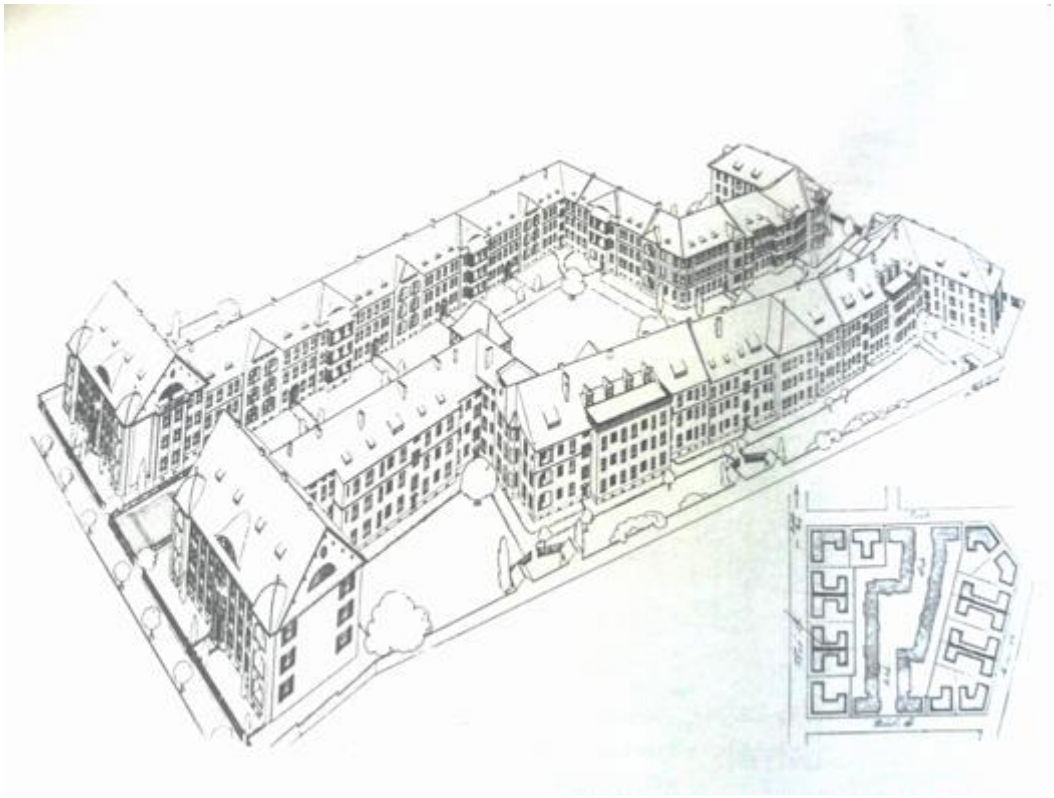


Fig. 3.64 Paul Mebes block with Interior housing street, Berlin Steglitz, 1907; Ref: Poesner, 1979



Fig. 3.65 Ground floor of the block for housing cooperation *Beamten-Wohnungs-Verein;* Ref: Digital Building Technologies Open Plans, 2016 @ https://plans.arch.ethz.ch/archives/building/wohnstrase-fur-den-beamten-wohnungs-verein; Borsi, 2009: 148, Posener, 1979: 354

As seen on the above drawings, the heights of houses fronting the public road are higher and feature more uniform facades than the facades of the blocks facing the interior streets; the blocks are further conducted in a picturesque, 'small town manner', and their heights were also lower. In 1910, Bruno Möhring and Rudolf Eberstadt designed a similar 'hybrid block', containing the entire village. The housing block was presented at the Universal Planning Competition of Greater Berlin[10], where it won the first price (Sonne, 2005, Sonne, 2009, Leujeune, 2015) (Fig. 3.66).

[10] The 1910 Berlin competition exemplifies the moment in architectural history, in which the set of planning objectives sees the city as a shared programme, differentiating between various functions (Sonne, 2005, Borsi, 2015). I will elaborate on the matter in the next Section: POSTCRIPT ON MODERNISM.

During the same year, Mebes' block at Schönberg demonstrated yet another spatial organization now grouping three large perimeter blocks, arranged around centrally located, smaller block (Fig. 3.67)

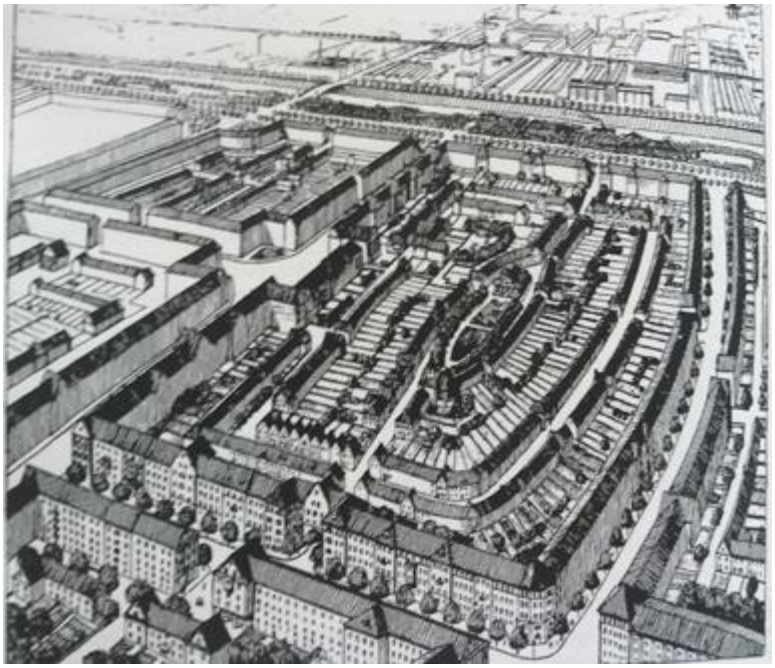


Fig. 3.66 Urban block for Greater Berlin competition, 1910; Ref: Sonne, 2009: 258

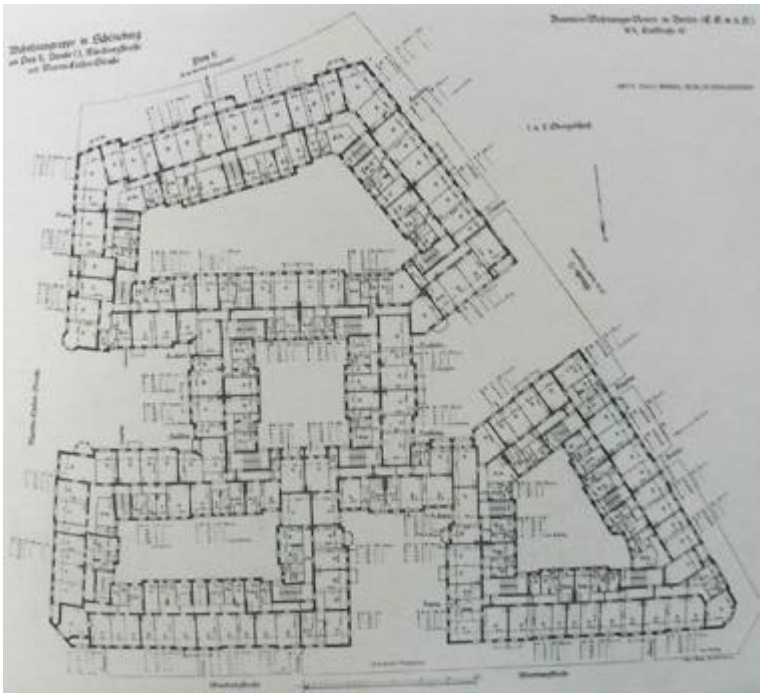


Fig. 3.67 Mebes' 1907 design for the Beamten-Wohnungs Verein in Berlin Schönberg, Mebes; Ref: Sonne, 2009: 259

It seemed that through different arrangements of individual blocks, the new housing schemes featured a self-contained and quiet neighbourhood. The new solutions gradually scheduled also the new schematic organization of the city into linked but specified zones that differentiated between functions and green zones. Thus as the city was changing its status and organization, so the reformed blocks featured differently arranged interior spaces, which towards the new century were focused on family life (Borsi, 2009, Leujeune, 2009):

> By 1907, the well-defined logic of the family home has been generalized, and the city as series of intersecting voids has disappeared. The sense of a loss of richness, and a desire to produce spaces that multiply the relations between the domestic realm and the city, are engendered by the dissolving of associations that proceeded this withdrawal into the space of the family (Borsi, 2009: 149).

This shows that unlike the structure of the 1860 Berlin block, the new typologies were recognized for spatial, formal and aesthetic variety in the city. As illustrated they could either include the courts in the manner of Parisian *courts d'honneur*, greened courtyards with large inner squares or the sequence of internal streets. The internal spaces of the progressed' block equally differentiated between the sizes and statuses of apartments. It seemed that the transformation observed on the plans of the progressed blocks marked the moment in time when the separate conceptions of communal, public and family spaces was introduced to planning. Thus also the housing block was separate from its environment; it distinguishing between different urban scales and differed between private and public spaces.

In addition, the new blocks designed by Goëcke, Messel and Mebes designed for the public cooperatives exemplified lasting ideals, setting 'model for imitation' for the private speculative building trade. They believed to resolve at once 'the architectural, the sanitary, if not the economic problems of high-density low-cost housing' (Bullock and Read, 1985: 133, 136).

3. 6. CHAPTER CONCLUSION

Chapter 3 illustrated the two-streamed transformation of the nineteenth century typology of the block.
The analyses of the post 1862 urban section from around the Oranienstrasse Area of Luisenstadt (today Kreuzberg) demonstrated generous and undifferentiated spaces in the early block, and the flexible set of boundaries between the spaces of the street and the spaces of the block, across the plot and all the way up to the single room. The detailed studies of the maps and Building Police records from the same time evidenced the 1860 Berlin block as a permeable urban structure, that offered proximity and porosity across its form.

Depicted on the drawings through fluidly conceived lines, this permeability further allowed establishment of various, programmes in one urban area, assisting an ongoing diversity and fluctuation of the uses, yet also the unprecedented creation of interrelated programmatic networks. In the Oranienstrasse Area, the early block's unique spatial distribution, permitted flexible infill over time attracting various tenancies - typical for its manufacturing past. Such close thematic relationship between housing and manufactures together with the rich spatial practice inspired the character of the Oranienstrasse Area, which until today is known as the 'Kreuzberg Mix' (Bascón-Borgelt, 2013, Kuck, 2010)[11].

As I also have illustrated, the early block's structure implemented as a collection of independent parts, was developing gradually and in sync with the city's transforming needs or in words of Panerai's at als – the 'substitution terms'. Set out as a 'subordinate type' the 'undifferentiated' organization of the block underlined the mutual dependence of the urban and architectural spaces. As I have shown the block's spaces were marked by flexibly definable boundaries and the lack of strong threshold between them. Running horizontally

[11] I elaborate on the ongoing transformation of the block in Kreuzberg in Chapter 6 of PART II, where I discuss the Berlin Building Exhibition of 1979-1984/87. Yet, to contextualise - Kreuzberg, (known in the past as Luisenstadt) is a central district of Berlin that was particularly hard bombed during WW2. In 1961 the area was completely enclosed by the Berlin Wall seeing its perimeter walled off on three sides. Until today the district stands out with its structure of the block that offers spaces dedicated to various functions, predominantly light industry; this vibrant blend is commonly known as the 'Kreuzberg Mix' (Pugh, 2014, Csestnic and Cloyd, 2008).

from the street to the depth of the plot, and vertically from the ground to the fifth of sixth floor, they shared their status with the city and were only to the degree distinct from the void urban areas. Due to this lack of differentiation, the block distributed its spaces and activities in section and plan, and yet it rendered not only formal but also the economic and social changes possible.

As I have also shown, from around 1880 onwards, the block ceased to be associated with an undifferentiated urban form, and begun its independent existence as a distinct 'monument block' with a single status of 'housing' (Panerai et al, 2005). With a greater variety of street-widths, and preference for the large perimeter blocks the density of the urban areas was reduced; in result, the city space was significant for the spatial and formal separation, and ceased to be understood as 'solid' or 'full'; it was no longer characterized by 'continuity of voids' (Borsi, 2009). Yet, this new spatial and formal arrangement allowed the post 1880 block to be a predictable and permeable from within. Its form therefore provided response to overpopulation, crime, poverty and insalubrious conditions allegedly seen as consequences of the 1860 typology.

As shown, changes in the typology of the block were paralleled in urban scale, seeing the city as segregated in accordance to districts, quarters and neighbourhoods. From that moment onwards, the performance of the block's ground floor, was characterized by the dichotomy and a threshold between the quiet, 'protected' and private life of a courtyard, and the public status of the street. With loosening of the block's space, the typology ceased to perform as a platform for the evolution of the city. In Berlin, the appointment of Martin Wagner in 1925 as a city architect marked the next stage of urban development. The new phase, commonly recognised for the design of the modernist housing estates and their north-south oriented slab-buildings, dominated Europe for almost half a century. The typology of the nineteenth century block was withdrawn from the Modernist planning.

In the next Chapter 4, titled POSTSCRIPT ON MODERNISM I briefly demonstrate the ideas and works of architecture prior to arrival of the new 1970s urbanistic thought. This brief sketch on one hand aims to illustrate continuity of formal, spatial and material changes in architecture, and on the other serves to contextualize the new post 1970s phase during

which the nineteenth century block returned to planning and architecture of the postmodern city as an instrument of design. Chapter 4 also ends PART 1 of this thesis.

Chapter 4

POSTSCRIPT ON MODERNISM

4.1. CHAPTER INTRODUCTION

The Modern Movement produced copious typological works, yet by distancing itself from the influence of history it has abolished the typology of the nineteenth century block. This short chapter illustrates the regulatory doctrines of the Modern Movement represented by CIAM, The *Congrès Internationaux d'Architecture Moderne*, to allow better understanding of the 1970s change that supplanted the modernist attitude to design. It thereby offers context against which the 1970s proponents of the New Rationalism reconsidered history relating it to the architectural and urban form as a solution to the predicament of the city at the time.

More importantly, this section elaborates upon the original contribution of this thesis to knowledge. Whilst the dominant historical narrative that the Modernist (twentieth century) approach portrays the broadly recognized (by the twentieth century historiographies) model of evolution in planning and architecture based on the rejection of the preceding models, and where each new model is a 'radical break' from history and the proposition of an alternative, I propose a different reading. Thus, rather than succession of forms and the rejection of the previous stage, in conjunction with previous chapter in Chapter 4 I further promote development in architecture and planning as based on the continuity of typological material, seeing it as a consequential step in the process of reasoning about the urban and architectural forms.

4.2. CIAM's REACTION AGAINST HISTORY

CIAM emerged in Switzerland, in 1928, and was formed by the group of 28 architects and planners organised by Le Corbusier (Mumford, 2002, Frampton, 2014). It was established as 'an instrument of propaganda' to catalase and justify the new modernist thought and the direction, with which new architecture was developing in Europe in the early twentieth

century (Rowe and Koetter 1978). In stark response to the nineteenth century forms of architecture and practice of the city, CIAM proclaimed 'the demise of the historic city', illustrating the 'group's desire for re-organisation and remake of the city' (Kostof, 1999: 260). Instead, the proponents of the new thought embraced the rapidly developing technologies and emphasized the rationalization of architectural methods.
However, it is important to note that the dialogue concerning the nineteenth century forms of architecture and planning was opened soon after the delivery of the plan by Hobrecht, and surfaced with the arrival new forms of the block around the third quarter of the nineteenth century. As such, the new modernist thought predated the Congress. Still, it was the works of congress that publicized the new objectives.

The new norm stood against the nineteenth century social segregation, *laisses fair* speculation, the ornamentation of forms, and the urban areas with its 'chaotic' streets and mix use blocks. At the CIAM 1 meeting in 1928, the group declared:

> Urbanisation cannot be conditioned by the claims of a pre-existent aestheticism; its *essence is of functional order*... the chaotic division of land, resulting from sales, speculations, inheritances, must be abolished by a collective and methodical land policy. This redistribution of the land, the indispensable preliminary basis for any town planning, must include the just division between the owners and the community of the unearned increment from the works of joint interest (Frampton, 2014: 269).

Already in 1923 in his text *Towards a new architecture*, the figure head of CIAM - Le Corbusier, pointed towards the new societal motifs for a discipline:

> The problem of the house is a problem of the epoch. The equilibrium of society today depends upon it. Architecture has for its first duty, in this period of renewal, that of bringing about the revision of values, a revision of the constituent elements of the house (Le Corbusier, 1923, in Etchels, 1994).

These early entries illustrated that architecture, rather than as a discipline existing in a separate state, was to be linked with the social, political and economic conditions, leading to the construction of socially driven 'ideal architecture' and the 'ideal city'.

Soon, the new ideas broadcast the standardized dwellings based on the strict measurements carried out by experts; they further promoted hierarchical spatial plans that separated the urban segments according to housing, work, and leisure. The culmination of these aspirations came at the time of CIAM 4, the 1933 Charter of Athens, declaring the commitment to the design of rigid functional cities, that were set in accordance to the newly established zones separated by green belts. However, the real impact of these declarations on the shape of the cities around the whole world took place after WW2, when many European governments committed to the functionalist zoning doctrines and the CIAM's model of the 'ideal city' (Mumford, 2002, Cunniffe, 2011, Ellin, 1996, Frampton, 2014).

The new urban model was based on functional separation, and together with the rapidly developing technologies and practices, it prompted the search for the 'ideal dwelling'. The new technologies further presented an opportunity for the optimal, high production output, leading to manufacture of the construction of repetitive elements and standardised dwellings. The new apartments contained in the high individual towers and slabs, were founded on Le Corbusier's model of *maision Domino* (Fig. 4.1), and the 'fordist' model of manufacture: the 'structural frame of reinforced concrete, in which floors, roofs, and vertical supports formed a homogenous whole'. According to this new approach, buildings at once meant to provide the structure, form and finishing (Turner, 1995: 4, Urban, 2012, Iraj, 1996), and 'were to be no more, no less, than the machines themselves serving and moulding the needs of man according to economic criteria' (Vidler, 1978: 30).

The modular dwellings quickly proliferated around the globe, and were 'built anywhere where sand and cement was available'. Standing for 'a guarantee of a better future for the urban inhabitants' they broadcast a progress from the previous era (Urban, 2012: 17).

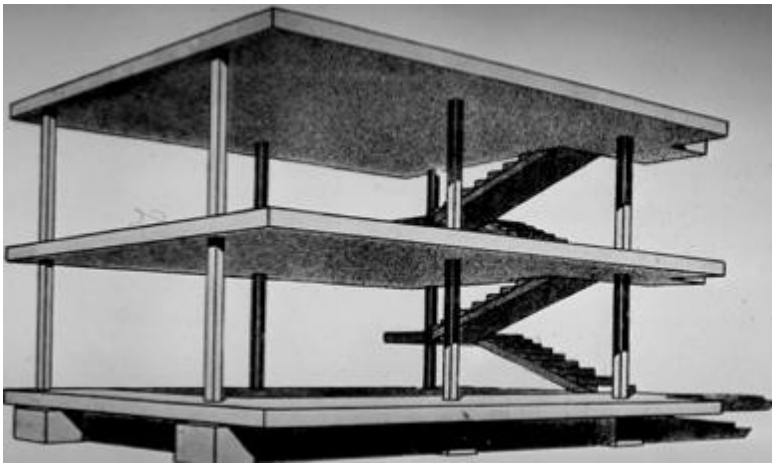


Fig. 4.1 Le Corbusier's *maision Domino* (1914); the structural base for the building constructed out of modular elements resulting in *plan libre* Ref: Herz-Fishler,1927

Accordingly, architecture became dependent on the new norm – function and purpose - which determined the form and structure. The new dictum of 'form follows function' impeccably captured the new meaning of the discipline (Frampton, 2014).
Thus, founded on the 'faith in progress' (Rosenau, 1983: 179) the modernist thought sharply demonstrated that the study of the precedent in architecture was no longer essential (Eisenman, 1984, Colquhoun, 1989). Instead it meant to 'free architecture from the dead weight of traditional styles' (Kolb, 1990:87) and to help to distance the urban populace from the 'closed, cramped, and insalubrious quarters of the old industrial cities' (Vidler, 2014: 226).

With the new construction methods for dwellings based on Le Corbusier's *maision Domino,* and the cities based on the *Plan Libre,* the modernists structures were visually distinct from the blocks of the nineteenth century; the urban space obtained a new visual order, featuring an 'obsessive emptiness' and 'infinite space-field, without any particular orientation such as up or down, left or right' (Frampton, 2007: 44). Everywhere around the world, the technological advances based on the 'the blind faith in the progress of science' (Bradshaw and Dettmar, 2006: 11) and the 'total acceptance of the ephemerality, fragmentation, [and] discontinuity' of urban fabric (Harvey, in Jencks, 1992) puzzled the public. The difficult to grasp abstract concepts, the ambiguous and unfamiliar forms of architecture and planning often caused the 'shock of the new' and were widely ridiculed in public posters (Fig. 4.2, Fig. 4.3) (Turner, 1995, Lampugnani, 2013, Frampton, 2014).



Fig. 4.2 1930 caricature of the modernist architecture (L), and the ridicule of the 1911 Loos House(M)(R); Ref.: Turner, 1995: 4, Frampton, 2014: 91

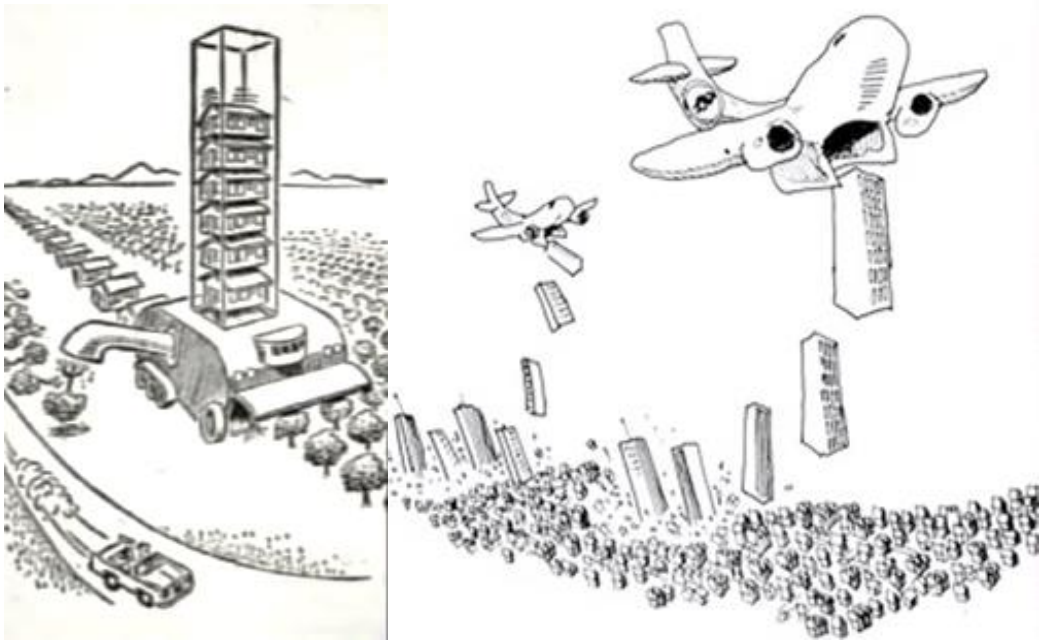


Fig. 4.3 Ridicule of the standardized, mechanistic production of architecture; Ref: Lampugnani, 2013

After the WW2, the modernist themes continued. In 1947, CIAM 6 held in Bridgewater in London took the Charter of Athens to its extreme and declared the new methods for architecture and urban planning as 'pure', 'sterile', 'elitist' and 'avant-garde' (Scolari, 1998). The planners insisted on the high-rise structures 'occupying a no-man's land of open space', giving precedence to automobile circulation. Alan Colquhoun (1989) argued that the 'concept of the building slab in space as opposed to the perimeter block' became a 'figure-ground reversal of the traditional city with its solid fabric cut through with streets'

(Colquhoun, 1989: 227). The city no longer illustrated 'a solid, a ground of stone out of which the spaces for movement … [were] carved' (Borsi, 2009: 135) – its urban space was blown apart.

Together with the transformation of the city's structure and its buildings also the social organization was changing (Lampugnani, 1985). Also during CIAM 6 meeting, the congress drew the new picture of a uniform mass society with shared tastes and goals, and declared that 'industralisation had rendered social categories irrelevant'; Charles Jencks (1991) summed up their objectives: the 'good form' and 'the intelligent planning of abstract space was to promote healthy behaviour', and further 'lead to good content, or at least good conduct'. It seemed that in the newly imagined classless city, all citizens regardless their social or economic status would have right to hygienic, 'normalized buildings [...] exclusively determined by their function' (Jencks, 2012: 11).
It further appeared that the role of a modernist architect and planner was not only assigned to explorations of the abstract forms and spaces but also a broader social role, nominating him to the rank of the 'social crusader' (Mc Leod, 1979: 24).

4.3. MODERNIST PLANNING AND ARCHITECTURE IN CONTEXT OF BERLIN - THE BEGINNINGS OF CHANGE

The modernists' objectives based on the 'ubiquitous avantgardist models of anti-urban revolution' (Sonne, 2005: 3, Choay, 1997) influenced the shape of the urban areas in Berlin as around the world, for almost a half a century. Based on the theoretical models of: Ebenezer Howard's new town-country organisation - *Garden City* (1898), Bruno Taut's entity of countryside settlements described in *Dissolution of the City* (1920), Le Corbusier's declarations about 'the demise of the historic city' (Kostof, 1991: 260) in *The Corridor street must be killed* (1925), Frank Lloyd Wright's model of urban sprawl in *Broadacare City* (1935), or Hans Scharoun's model of *Town – Landscape* for Berlin. The new designs that followed, clearly demonstrated a dispersion and separation between the modernist forms of architecture and planning.

As illustrated on the figures below, Berlin's *Siemensstadt* (1929-31) (Fig. 4.4) and the *Britz Horseshoe Estate* (1925-33) (Fig. 4.5), the new housing estates were clearly founded on a different urban spatiality than that of the nineteenth century. Instead of continuous facades, which created strong definition of urban spaces and the direct connection of the blocks to the street, the new forms promoted breaking of the urban grid and the rearrangement of the blocks' edges. For over forty years the new slab typologies and row construction methods became an alternative for the nineteenth century urban plan and the block pattern.

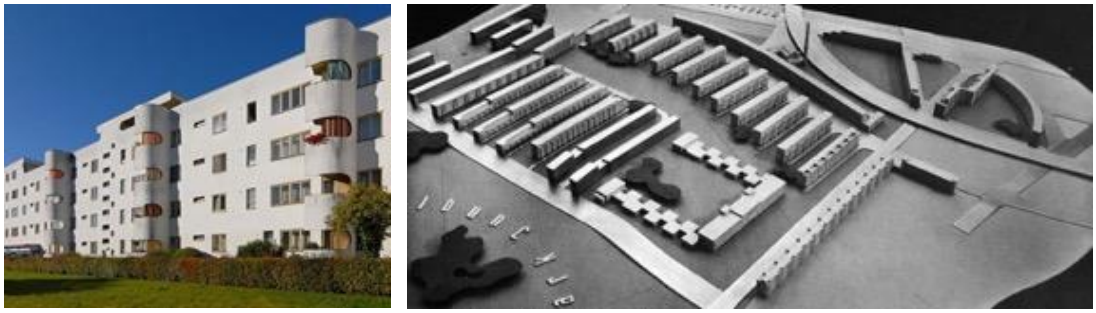


Fig. 4.4 Hans Scharoun, Siemensstadt housing estate Ref: Landesdenkmalamt Berlin, https://www.berlin.de/sehenswuerdigkeiten/3561714-3558930-siemensstadt.html (L), http://scharoun-gesellschaft.de/projekte/siedlung-siemensstadt-berlin/ (R)



Fig. 4.5 Bruno Taut and Martin Wagner's Hufeisensiedlung (Horseshoe Housing Estate), Ref: Buschfield, 2015; http://www.nybooks.com/wp-content/uploads/2015/10/Bruno-Taut-horseshoe.jpg

Soon the the uniform and standardized urban space raised the doubts of the public who criticised the hostility of the public areas. As a result of public disenchantment with the new forms, the 1951 CIAM 8 meeting in Hoddesdon, England, marked yet another change in planning interests. The theme chosen by congress that year was 'the heart of the city:

towards the humanization of urban life'. Questions about urban areas organised by the individual buildings withdrawn from the urban context, prompted the reports about alternative models, bringing to light the interrelationship of architectural and urban forms with a different organisation of the social structure (Rogers, Sert and Tyrwhitt, 1952) (Fig. 4.6).



Fig. 4.6 Alternative model of the city structure, foregrounding the proximity between spaces of architecture and urban space on pages of the CIAM 8 document; Ref: Noev, 2013: 54, 23

Drawing upon these discussions, the 1953 CIAM 9 held in Aix-de-Provence, further challenged the rigid functionalists' categories of the Charter of Athens, pointing instead to the themes of 'belonging' and 'identity' in the city. The search for closer relation between the forms of architecture and new debates about social needs, distanced the old dogmas from the newly arising norm. Unlike the division of the city and its population into the different functional areas, the new model sought to address the objectives discussed at the CIAM 9 meeting (Frampton, 2014).

In 1959, the last meeting of CIAM 10 took place in Otterlo, Holland.
During the same year Ernesto Rogers, in his editorial to October 1959 Italian magazine *Casabella,* announced the departure from the Modernist thought. Admitting the historical

value of the CIAM's works, Rogers disclosed the complete breakdown in communication and lack of any common ground for further debate. With the discontinuation of the CIAM's works during that year, the demise of the Modern Movement could no longer be refuted (Engel, 2003a).

4.4. CHAPTER CONCLUSION

In the early 1960s, following from the debates of CIAM 10, the proponents of the new thought reviewed the ideas of the Modern Movement. Critical of the standardization and functionalism in architecture and the city at the time, the new urbanistic debate marked the changing attitudes towards the city, its architecture and history.

Chapter 4 proposed a brief illustration of the modernist advances in knowledge and works in Berlin. It served to contextualize the entry of the new 1970s *urban science'* that marked the return of forms of history to the post-modern city. It provides postscript to Chapter 3, which demonstrated that the real shift from the premodern knowledge of the city and architecture was gradual, and was not an invention of the Modern Movement. It already had its roots in the last quarter of the nineteenth century, when the typology of the block itself prompted the discussions about the new forms. Thereby, in conjunction with Chapter 3 this short section serves to underline the continuity of spatial reasoning illustrating that the modernist form is itself a transition and evolution of earlier forms, rather than its structure being based on the radical break with the past as the superficial account of evolution in architecture offered by the mainstream historiographies suggest.

In PART 2 I elaborate on the vast influence across the European agenda of the Italian Neorationalism (Chapter 5), which contextualized the re-entry of the nineteenth century block to the fabric of Berlin during the 1979-1984/87 planning framework, IBA (Chapter 6). Thereby, in Chapter 5 I introduce the typological narrative of Neorationalists, pointing out the differences and similarities between the typological logic of the 1860s and post 1970s. In addition, Chapter 7 and Chapter 8 will introduce the works and design thesis of two key members of the Neorational debate - Rob Krier and Oswald Mathias Ungers - enabling a

comparison between typology of the post 1970s block with the form of its nineteenth century predecessor. Consequently, and more importantly, PART 2 will foreground the contribution this research makes to our understanding of typology as a changing way of conceptualizing and understanding architecture.

PART 2

THE TYPOLOGY OF THE POST 1970S BLOCK

Chapter 5

THE 1970s THEORY OF 'URBAN SCIENCE'

5.1. CHAPTER INTRODUCTION

Following from the recognition of the 'crisis' of the modernist architecture and the city (Scolari, 1977), the Italian proponents of a new thought, such as: Aldo Rossi, Gulio Carlo Argan, Carlo Aymonino, Gorgio Grassi , Massimo Scolari and Vittorio Gregotti have approached the relationship between architecture and the city as a priority; against the tabula rasa method operandi of the Modern Movement, they reintroduced type and typology to the design theory that underlined their design projects.

This section reviews the 1970s urban and architectural theory. It outlines the argument of the 1970s Neorationalists (known also as *Tendenza* group), seeking an answer to the modernists dogmas of planning and building methods. It discusses main concepts of the 1970s theoretical position such as: the quest for redefinition of the architectural discipline and its design methods through recourse to typology, and a focus on the architecture's links with the city. It further examines the definition of *urban science* as proposed by the figure-head of the Neorationalists - Aldo Rossi, and his approach to type, urban context and history of architecture. These traits will be verified in the following Chapters 6, 7 and 8, which concern the typological reading of the post-1970s Berlin blocks and their relation to the city.

With the view that typology as a formal disciplinary approach provides the most suitable method to study and comparison of the blocks, this section looks at the method theorised and practised by the Neorationalists in their quest for revitalization of the architectural discipline after Modernism. Accordingly, I argue that *Tendenza*'s revision of the eighteen-century type (as formulated by Antoine-Chrysostome Quatremere de Quincy, and his contemporary Jean-Nicholas-Luis Durand), and linking its notion exclusively to form - demonstrated an impoverished and oversimplified interpretation of typology that further underemphasized the contribution of architecture to the city in its formal and

organizational capacity. Unlike the idea propositioned by Cerdá - and practiced by Hobrecht and Assmann in Berlin - based on the strategy of interconnectivity and encompassment of all forms of architecture, the Neorationalists 'jumped' over the preceding modernist period, selectively electing their material repertoire. I also argue that their method, based on the formal autonomy and focused exclusively on the pre-modern forms seen as 'kit of parts' for the free use of the architects (Steadman, 2014), reflected a *laisses fair* approach to typology, which articulated a vague relationship of architecture to the city.

Accordingly, the introduction of the arguments of the 1970s theory will allow the verification of the theoretical traits with the practice of urbanism from around 1860s, particularly the articulation of the block's relation to the urban space. I conduct these studies in Chapters 6,7 and 8.

5.2. ITALIAN HERALDS OF THE NEW ERA – *LA TENDNZA*

The disenchantment with the Modernist 'era of dispirited functionalism and willful eclectism' (Heys, 2000: 437), the city based on the 'rigid functional zoning', and the practice of architecture founded on 'a single type of urban housing' (Frampton, 2014, 270, Broadbent, 1990), encouraged the group of young architectural theorists to seek the alternative approach to the city structure. Gathered around the Italian magazine *Casabella*, they publicly rejected the 'isolated buildings set in an uninterrupted sea of sunlight space' (Vidler, 2014: 226), the cities featuring 'the vast terrains of concrete, [and] the ne'er travelled pedestrian bridge as urban solution' (Mc Leod, 1989: 37). Against the 'loss of human scale in mass society' and 'anonymous impersonal spaces, massive structures and automobile throughways' (Ley, 1987: 43), these young Italian architects and scholars called for reassessment of the role of architecture and its relationship with the city.

Seeking to overcome the Modernist 'curse of the city', and to regain urbanity and architecture's authority (Venturi and Scott-Brown, 1977: 230), the group sought the rationale from which to operate in architecture - to free the discipline from any 'extra architectural categories' invading its domain during the Modern Movement (Frampton,

2007: 294,' Downton, 2003, Turan, 1998).[3] Concerned not only about 'what' to design, but also 'how', their explorations focused on the urban and rationalist tradition of architecture. The review of the history provoked interest in typology and the revaluation of the historic city. Their research emphasised the continuity of the traditional city fabric, and the close relationship between architecture and the city, the value of history for the discipline and the themes of urban preservation and restoration. These themes have consequently led to the development of the Neorationalist theory (Argan, 1967, Moneo, 1978, Güney, 2007, Bandini, 1986, Kleihues, 1993, Rowe, 1993 Engel, 2003).

Through explorations of the architectural legacy, the Neorationalists recognised typology as a mode of organizational logic, in which the certain forms can be understood as a nucleus for a complexity of spatial arrangement that is adaptable but not (or not only) generated by function (Stoppani, 2005). Accordingly, the early 1960s studies of the historic areas[4] illustrated the persistence of certain historic forms, which through the operative processes of typology offered the potential of variety and complexity for the use of design. Typology thereby indicated continuity with the past, opposing the modernist mechanistic approach and the standardised model distanced from history. It implied a solution, which most architects in the late 1960s were searching for. Consequently, the new 'architectural' and autonomous type, became a 'regulative principle' of the new post-modern dominant ideological force - the New Rationalism. Intrinsic to the discipline, it was at once seen as an object used in design and a method for spatial variation and exploration; it had therefore potential to free the architecture from any dependence on function (Oechslin, 1986,

[3] Several authors described the influence of external disciplines such as: sociology, psychology, functionalism, semiotics or environmental studies on the architecture's countenance in the 1960s. Amongst them are Peter Eisenman's text: *The End of the Classical* (1984), Belgin Turan's : *'Is 'Rational' Knowledge of Architecture Possible?* (1998), Henk Engel's: *Autonomous Architecture and the Project of the City* (2003), or Ignasi Sola-Moralez (1984) *Neorationalism and Figuration.*

[4] After CIAM 8 meeting, two publications by the Italian architects: the 1955 *Preexisting Conditions and Issues of Contemporary Building Practice* by *Casabella*'s editior Ernesto Nathan Rogers (1909-1969), and the 1960 *Studi per una operante storia urbana di Venezia* (English translation: 1955 *Study into an operative urban history of Venice*), by Saverio Muratori (1910-1973) focused on the typological analysis of historic urban fabrics. In search for the new *method operandi* in architecture, these studies emphasised the concept of *historical continuity*, study of precedent and consideration of 'architectural type', urban context and history (Carmona, et al, 2010). These early texts already illustrated the operative and organisational processes of typology, allowing for multiscalar approach to urban and architectural form, and provided foundation for later texts of Neorationalists. Further to these early studies, two Italian and internationally recognized architectural magazines *Casabella* and *Contraspazzio,* used their influence to support the emerging typological projects (Bandini, 1986, Engel, 2003).

McLeod, 1989, Bandini, 1993, Moneo, 2015). Furthermore, its notion could be traced back to the Enlightenment era, when the French scholars introduced the concept of type and elaborated on its practical and rational mechanisms. Developed therefore as a part of the Enlightenment tradition and also modern western science (Sorre- Ferrus, 2003) the type offered an escape from the dogmas of modernist planning.
Alan Colquhoun (1989) observed:

> In lieu with Enlightenment the new 1960s view looked on progress not as the unpredictable open ended development, it was to become for positivism but as a rational rearrangement and exploration of existing architectural material. Accordingly, the typological characteristics of rational architecture are not those created by technological advances or modern form of social behaviour but those that persist through technological and social change (Colquhoun, 1989: 85).

To understand the interpretation of the type and typology by the Neorationalists, the next section draws a brief sketch of the origins of these notions, which entered the discipline at the end on the eighteenth century.

5.2.1. TYPE AND TYPOLOGY IN THE AGE OF ENLIGHTENMENT

5.2.1.1. QUATREMÈRE'S NOTION OF TYPE AND DURAND'S NATURE OF MODEL

In the late eighteen century, at the dawn of the scientific and cultural advances of the new Age of Reason, the old theological view of the world and notions of 'authority, faith and even God had been steadily eroded' (Hill, 2002: 193, Kaufman, 1966). The understanding of the changing reality grounded on symbolism and theology[5] sought to be reviewed and

[5] These notions were contained in the eighteen century nominal text: *Enciclopedie, ou Dictonaire raisonne des sciences, des arts et des métiers (1751-1772)* by Denis Diderot and Jean-Baptiste le Rond d'Alembart.

modernized to become discipline-specific (Vidler, 1998, Jacoby, 2015). In 1825, the art historian Antoine-Chrysostome Quartemère de Quincy (1755-1849) was commissioned to prepare an updated version of the *Enciclopedie.* With the view to simplify the understanding of the methods used in architecture, in 1825, on the pages of modernized *Enciclopedie méthodique* - the art historian entered his description of *type.*

In his search of the new definition of type in architecture, Quatremère took the rationalist stance from the work of a Jesuit priest and architectural scholar of the Enlightenment, Marc Antoine Laugier (1713-1769). In 1753 Laugier formulated his understanding of the origins of architecture and gather his thoughts in the *Essay sur l'architecture*. For the Jesuit, type has materialized as a hut - the first notion of habitation and the graphic of principles of typology. Finding analogy with nature, Laughier validated the typological hut outside the discipline: four trees represented types of columns: 'standing in a perfect square: the branches laid across in the form of beams, perfectly horizontal, and the boughs bent over to form the roof as a triangle, the type of pediment' (Vidler, 1977b: 289) (Fig.5.1).



Fig. 5.1 Laugier's architecture as a reference to nature; Ref: Vidler, 1977b

Laugier's idea offered rationalized rules of the new typological reasoning for the use of an architect. The same rules allowed Quatremère to conceive his critical theory of type (Kaufmann, 1966, Lavin, 1992). Type was therefore a notion assuming a dual meaning; at once a theoretical, abstract or aesthetic concept that related to nature of form, and also a *model* or *modus operandi* - a repeatable notion and the approach to design for production of an object. Characterized by a 'far ranging intelligibility' (Rosenau, 1983: 136, Jacoby, 2015a, Lavin, 1992) it was a function of two constructs, belonging to one principle: the *type* - at once a *product* and the *model* for a design process:

> The use of the word [Type] in French is less often technical and more often metaphorical. This is not to say that it is not applied to some mechanical arts; witness the word typography. It is applied as synonym of the word model although there is between them a dialogue, which is easy to understand. The word type presents less image of the thing to copy or imitate completely, that the idea of an element, which must itself act as a rule for the model. [...]
> the model is an object that should be repeated as it is; the type ... is an object after which each can conceive works of art that may have no resemblance. All
>
> is precise and given in the model; all is more or less vague in type. The type furnishes the imagination of the architect, whilst the model, constrains it (Quatremère de Quincy, 1825, in Vidler, 1998: 618).

Still, although Quatremère's theoretical work allowed Enlightenment architects to find answers to the operative processes of typology, his methods for architecture based on the doctrine of analogy with the laws of nature and which depended on the artist's imagination – were not clear (Vidler, ibid).

Around the same time, similarly prompted by the quest for simplification of the changing reality, the French engineer Jean-Nicholas-Luis Durand (1760-1834) worked on the development of the rational and practical principles for the use of the discipline. Not sharing the art historian's enthusiasm for analogical reasoning and interpretation of nature, Durand,

claimed: ‘type is that of classifiable form’ (Bandini, 1993: 387). Recognising the potential of the formal arrangement in architecture, Durand based his theory on the classification methods already practiced by the natural sciences at the time (Rattray, 2014) (Fig. 5.2).

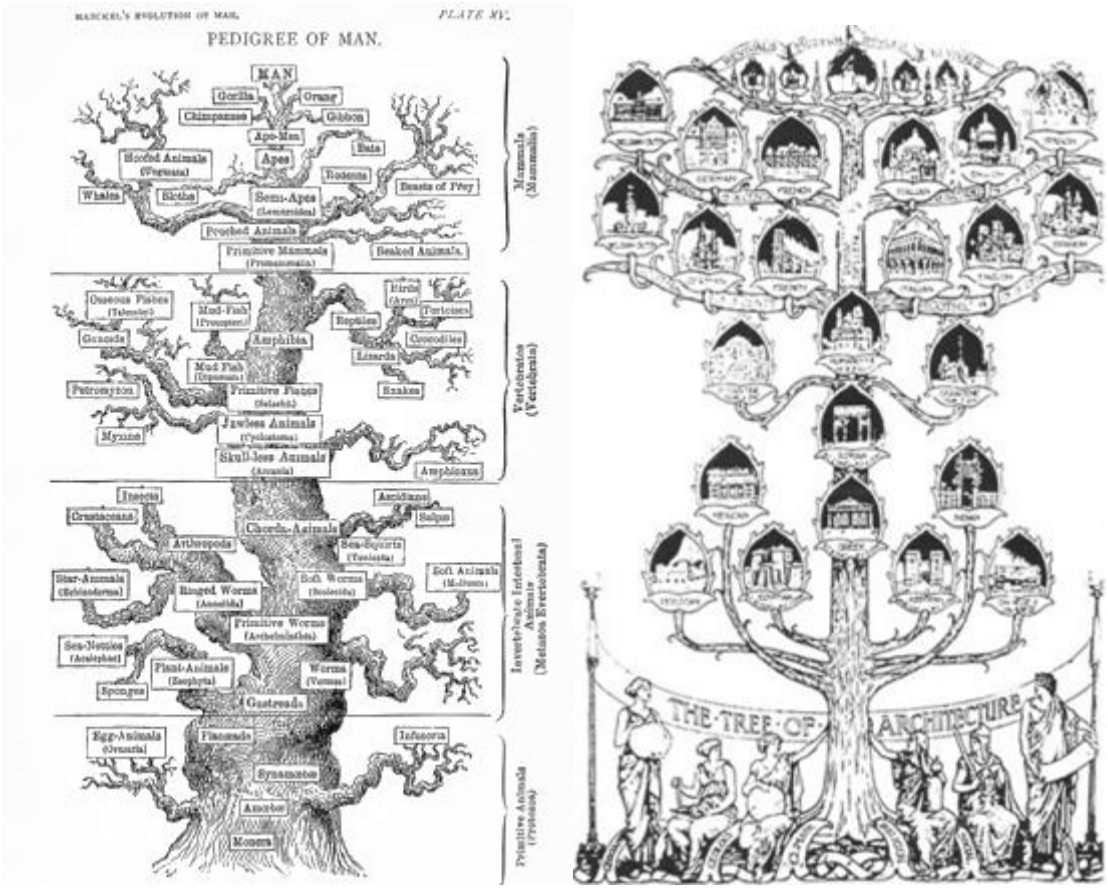


Fig. 5.2 Analogy between the arrangement of types in biology and architecture; organizational biological system by German biologist and philosopher Ernst Haeckel (1834 – 1919) (L) and classification and progression of historical buildings types by English architect Sir Banister Fletcher (1866- 1953) (R); Ref: Fletcher,1996, plate 15(R), Gülsüm, 2004: 23 (L),

Subsequently, like his compatriot and contemporary - zoologist Georges Curvier (1769-1862), who extended the systematization of natural history begun by Comte de Buffon and Carl Linnaeus[6] in the previous century, in his catalogues Durand illustrated a ‘natural history of architecture – a straightforward evolution founded on economy, utility, and structural rationale, that fitted well in post-Revolution and anti-aristocratic French state’ (Rattray, 2014: 25).

[6] Both scientists worked on the methods of classification of the species (Sloan, 1976)

Durand's work of 1799-1801, *Recueil et paralléle des edifices de tout genre, anciens et modernes* (The Collection and Parallel of Buildings of Every Genre, Ancient and Modern: Remarkable for their Beauty, Their Grandeur, or Their Singularity, All Drawn to the Same Scale) illustrated precisely scaled buildings and organised by their form. His theory was based on the idea of *genre* located in the formal morphology (Lavin, 1992, Jacoby, 2013); it illustrated a practical application of type, where the forms 'composed from primary elements which combined with the laws of descriptive geometry [...] produce a model' (Bandini, 1993: 387).

In the same way as grouping of biological species, the detailed drawings included in Durand's *Recueil* have been arranged according to their physical physiognomy. They further illustrated evolution of forms of architecture from simple to more complex, and demonstrated basic architectural elements and their configuration on the grid, superimposed by the structure laid at the meeting of lines. Durand listed a limited number of buildings elements like pilasters, walls and foundations that created a 'highly rationalized encyclopedic survey', empty of any specific content (Frampton, 2015: 29). This 'typological atlas of architecture' became later known as the 'one of the earliest modern compendia of building types', which allowed the nineteenth century builders to discuss and understand the structural distribution of forms in plan and section (Vidler, 1977a, Kruft, 1994, Oeschlin, 1986, Perez-Gomez and Pelletier, 1997) (Fig. 5.3, Fig. 5.4).

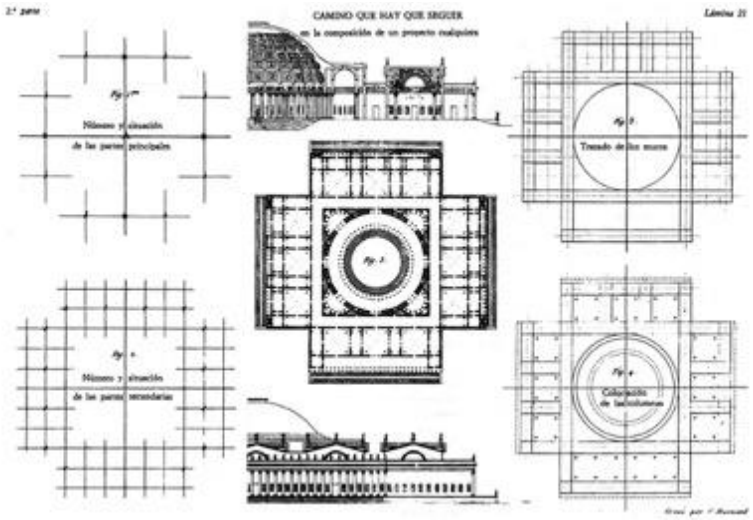


Fig. 5.3 Durand's formal schemata, free of any content; Ref. Oeschlin,1986: 48

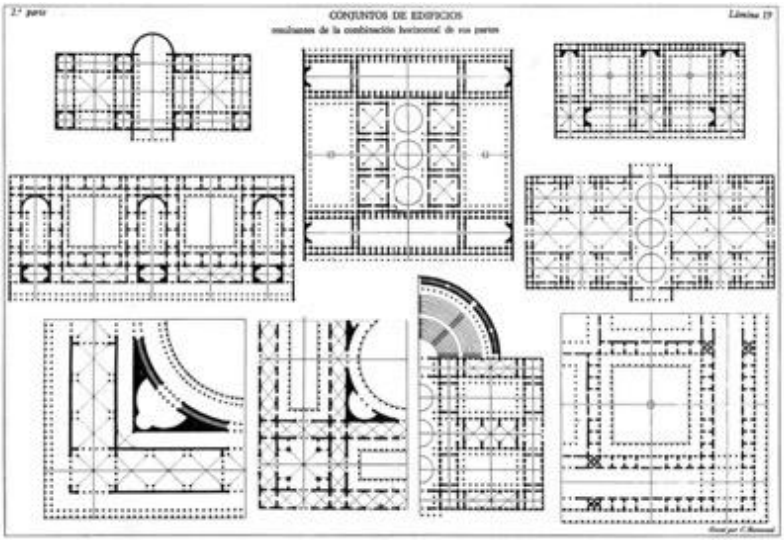


Fig. 5.4 Durand's compositions, from Précis (1819); Ref: Oeschlin: ibid

The 'accurately presented and drawn in two dimensions' buildings appear to be arranged by *type* rather than *style*. Their plans depict continuous, undifferentiated formal grids ornamented by rows of colonnades and Durand's focus on symmetry and regularity, and his emphasis on axis as the structure's support (Fig. 5.5, Fig. 5.6). As argued by the critics, his drawings at once provided a model and the 'technique of geometry' clearly demonstrating the 'architectural methodology, [and] a guide to composing architecture from its constituent parts' (Vidler, 1998: 452, Rattray, 2014: 24).

This perspective suggests that *genre,* similarly to Quatremère's concept of type, was also a complex construct: it not only illustrated a common architectural form that could be extracted from the building of the past, but it equally offered a guide on design composition opened to further interpretations. It was this notion of typology, that highly appealed to the Neorationalists.

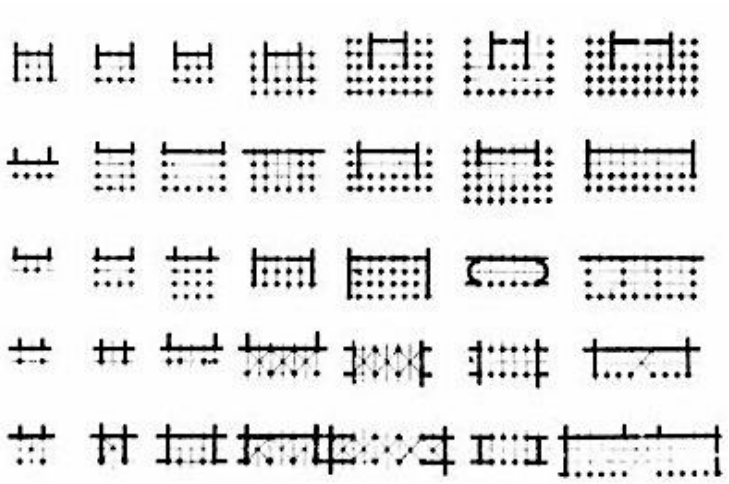


Fig. 5.5 Durand's geometric configuration of structural systems; Ref: Oswalt, 2017

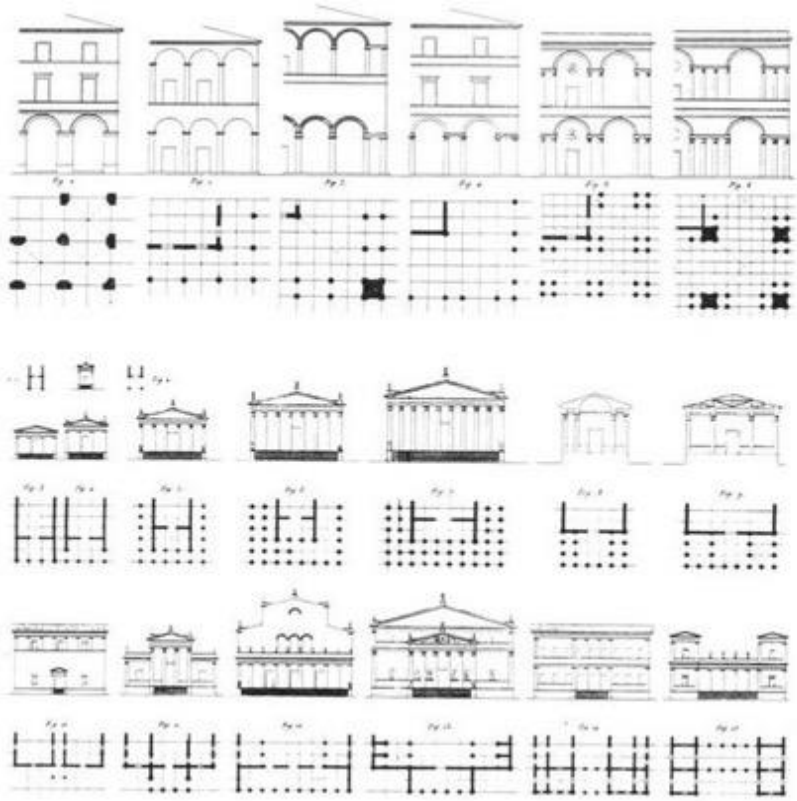


Fig. 5.6 Durand's building fragments (porches, vestibules) and principle of arrangement and combination; from *Précis* 1802 -1805; Ref: Oeschlin, 1996

Based it on the idea of: 'solidity, salubrity and economy', Durand's *genre* and layouts related to the economic requirements and feasibility. Unlike Quatremere's type understood in analogy to nature, Durand's drawings clarified building's structural systems and provided a practical approach that 'allow[ed] to handle the composition and to direct the construction

of a building regardless the program, or recourse to any tradition or culture' (Moneo, 1978: 30, Frampton, 2015). His typological method rationalized the act of building and systematized the architectural knowledge of the nineteenth century. For this reason Durand's atlases were vastly reprinted across Europe during the nineteenth century, making the architectural discipline accessible to both professionals and non-professionals (Kaufmann, 1966, Moneo, 1978, Jacoby, 2014, Lee, 2014).

Given that the development of the 'pragmatic and social institutions of the bourgeois world throughout the nineteenth century' prompted the construction of the vast numbers of buildings (Frampton, 2015: 30, Moneo, 1978), the blank pages of *Précis* forms were deemed easy to be filled by any required function. Consequently also, rather than recommendations and potential design solution[7], they were seen as the 'ready-to-use' examples to copy (Vidler, 1978). The forms constructed according to *Précis* allowed reference to them by the virtue of familiar typological elements: columns, pilasters or staircases, and even the whole buildings fragments. Crucially, this account of typology became important for the proponents of the new post-modern thought focused on making the links with history.

However, soon after the 1802 publication, typology as a disciplinary method became subjected to mockery as the naive 'join the dots'[8] method, 'lacking in beauty' of Quatremère's analogous types.

[7] I have already discussed this objective with regards to Assmann's atlases in Chapter 2

[8] Already in the nineteenth century the method was perceived as the 'join-the dots' approach to architecture;) and deemed as 'lacking in beauty'; Gottfried Semper for instance in 1834, (after Durand's death) compared Durand's compendia to a blank sheet of paper, 'divided into many squares in the manner of a knitting pattern or chessboard, on which the plans of buildings arrange themselves quite mechanically [...] with them, the first year polytechnical student in Paris becomes a complete architect within six months' (Semper 1834). In contrast to Semper's mockery, Karl Friedrich Schinkel may provide a different perspective. In 1823 he proposed the plan of Altes Museum (1823-1828) as based on Durand's model of museum plan, with further interpretations. The building, 'in particular admired', demonstrated potential of Durand's 'method of architectural order and final unity' rather than it constrain and simplicity (Rattray, 2014: 25, Moneo, 1978: 30). Yet the method become representative of a reductive reading: 'Durand claims to have captured the complexity of architecture and of composition, merely by dealing with the arrangement of components on a grid according to rules. Putting things in their place in this way is an attempt to use the part to stand for the whole', 'it means reduction' (Coyne and Snodgrass, 2006:123). On the other hand, Werner Oechslin (1986) argued that it was this 'naïve' translating of geometry to design, which later was 'commonly seen as an example of that narrow conception of typology that turns to the solid of the universal language of geometry to apply it in as an unadulterated a manner as possible to concrete architectonic objects themselves' (Oechslin, 1986: 46).

it was deemed as opposing the intelligent 'type', and a mere reductive approach to design (Rattray, 2014: 25). Recently, opposing such position Werner Oechslin (1986) described Durand's genre and Quatremére's type as the equally complex notions:

> …a closer examination shows that Durand by no means represents only a counterposition to Quatremére de Quincy's [...] discussion of the concept of typology. Not even Durand speaks *only* of a 'geometrical reduction of architecture'. On the contrary, he is concerned with clarifying the relationship in architecture between a concrete (historically) existing typology and the *general form* based on the universal law of geometry. [...] Despite the elementary nature of the geometric figures shown, even in these simple forms, one can make out the architectonic thought behind them. Durand reveals this himself in the revised, 1813 version of the table, where simple ('pure') geometric figures and their 'architectonic correlates, in the form of fully developed types, are presented together in the same illustration (Oechslin, 1986: 46) (Fig. 5.7).

Oeschlin's illustration clarified the nature of Durand's models, not as a mere reductive solution to form. In opposition, the author deemed the method as illustrative of the great multi-scalar potential of typology which demonstrated that the simple forms of geometry can be developed by the means of 'architectonic thought' - to the complex formal arrangements. These formal analysis, along with Quatrèmere's theoretical construct exerted a great influence on the new 1970s architectural and urban debate.

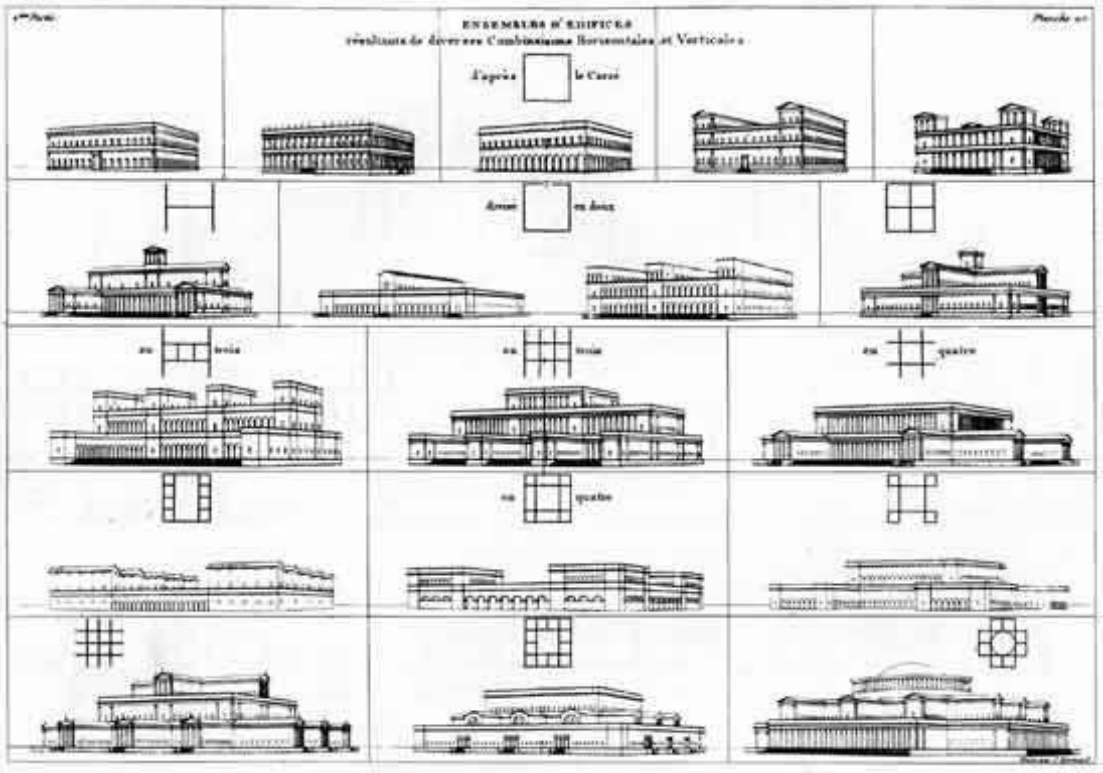


Fig. 5.7 Durand's progression of forms from simple to more complex, illustrating potential of typology(1819); Ref: Perez-Gomez and Pelletier, 1997:300

Thus, to the Neorationalists, the origins of typology drew the nineteenth century type as at once an architectural product - a *form*, and a process of an 'architectonic thought' - a *method* for transformation and disciplinary experimentation. Typology explained the logic behind the architectural composition through the 'very schematic reference to building types' (Frampton, 2015: 29), yet it also gave the Neorationalists a freedom of imaginative design (Vidler, 1998). As the mode of formal arrangement driving architecture's internal processes of experimentation and development it became vastly influential among those Italian architects seeking to move away from the mechanistic dogmas of CIAM.

Seeking not only a new method for architecture but also to link the discipline with the history and the city, the formal type was registered by the New Rationalists as a language of their urban theory. The use of the familiar typological elements from the past visually demonstrated the link of architecture with the historic city. Such link resonated well with the opponents of the modernist's anti-specific, universally applicable, and stereotype-oriented model. In Italy, the publications of Gulio Argan: *On the Typology of Architecture*

(1963), and Aldo Rossi: *The Architecture of the City* (1966) (1982 English edition) in particular influenced the newly developing Neorational agenda.

5.3. INFLUENCE OF GULIO CARLO ARGAN AND ALDO ROSSI ON THE ARCHITECTURAL PROFESSION

For the art historian Guilo Carlo Argan (1909-1992), the study of the Quatremère's definition of type: 'which does not present so much an image of something to be copied or imitated exactly as the idea of an element, which should serve itself as a rule for the model' (Argan, 2014: 204), seemed highly confusing. To him, the type's symbolism and imitation of nature at once 'cannot directly affect the design of buildings or their formal quality'(Argan, 1996: 243). Seeking to find a practical method for architecture, the art historian also argued against typology as explored by Durand: 'that of classifiable form' (Bandini, 1993: 387). Further arguing that such mode of typology 'has not produced any important formal results', the author continued: '[h]istorical 'types', such as centrally planned or longitudinal temples, or those resulting from a combination of the two plans, are not intended to 'satisfy contingent, practical requirements' (Argan, 2014: 205). Yet, as illustrated earlier, Argan's critique of Durand, contrasts with the detailed workings of typology as theorised and practiced in the early nineteenth century.

Still, with the view to validate the architectural discipline, Argan explored the operative processes of type, and proposed notion of typology as an instrument that embraces 'historical processes of architecture and the thinking and working processes of individual architect'; he further explained the link between them - as the *typological series* (Argan, 2014: 203).

These 'typological series of instances' were used to extract from them the single, basic formal type (Argan, 2014: 204), which illustrated the element deduced from the relationships amongst architectural forms and from their arrangement in the city; it thereby was generated '*posterori* as a unit of series' (Argan, 1996: 243). This argumentation demonstrated typology as a formally autonomous approach, allowing on one hand to read the formal and material field of architecture and the city as linked with the past, and on the

other, it provided architects with a method of composition. According to author, typology existed no longer only to classify the form, but it also outlined 'a *schema* of spatial articulation' - the method of architectural arrangement that allowed for multiple variation and transformation of forms no longer generated by function (Argan, 2014: 206).

Moreover, pointing to the 'creative process' of an architect, Argan argued that this method could carry 'the possibility of the infinite formal variation and further structural modification' (Argan, in 1996: 243). This shows that typology, whilst inscribed a possibility of an ongoing formal evolution, it also depended on the individual processes of an architect. The art historian asserted this in the conclusion to his 1963 essay: 'the typological and the inventive aspect of creative process are continuous and interlaced – the inventive aspect being merely that of dealing with the demands of the actual historical situation by criticizing and overcoming past solutions deposited and synthesized schematically in the *type* ' (Argan, 1996: 246). In accordance, Argan's definition of *type* in the 1958 *Enciclopedia Universal dell'Arte* stated:

> Type is characterized as a set of rules deduced from a base-form or from a communal scheme. If type is the product of this regressive procedure, the found base-form cannot be understood as a mere structural framework, but either as the internal framework of form in its autonomous artistic value or as the principle, which includes in itself not only all the formal configurations from which it has been deduced but also the possibility of further variations and even the complete modification of the structure of the given type (Argan, 1993).

With this explanation Argan claimed the connection between the architectural typology and figurative arts, positing the notion of type between formal, representational and aesthetic entities. As in figurative arts, such as paintings of different artists produced in the given period, Argan's type - extracted from the typological series and subjected to the design processes of an individual architect - may not always be obvious, yet as Moneo (2015) noted, it would stay in evidence.

Argan's argumentation attracted the new generation of the Italian architects. In response to the standardized practice of design, the art historian's typology allowed them to express at once *continuity* and *variety* of architectural discipline. With type as a form, and at the same time a form-less phenomenon, it offered a liberal method of spatial organization. In result, the art historian's arguments provided a sound stimulus for further exploration of rational processes of typology for the use of discipline after 1965.

After 1965, three important Italian texts legitimized typology as a new rational approach to architecture, and firmly established the discipline's links with the city. These publications were: Aldo Rossi's 1966 *L'architettura della città* (Architecture of the City), Vittorio Gregotti's 1966 *Il territorio dell'architettura* (The Realm of Architecture), and Giorgio Grassi's 1967 *La construzione logica dell'architettura* (Logical Construction of Architecture). Along with affirming typology as the approach to architecture and the city, these texts satisfied one more important point; 'in the face of a perceived crisis in architectural production and in the architectural profession' they brought back the theory into the practice of architecture, strongly positioning New Rationalism away from the 'metanarrative' promoted by CIAM since 1928 (Ellin, 1996: 11).

Echoing the vast implications of typology for the practice of architecture, questions of history, typology, and the city (Jacoby, 2015b), the theory of the Italian architect Aldo Rossi (1931-1997) provided much excitement not only in Italy, but also across Europe. Spanning from the works of Ernesto Rogers, Gulio Argan and Saverio Muratori,[10] in his 1966 text *Architecture of the* City (1966), Rossi reassessed the operational value of typology in the larger than Argan context of the city.
His text explained the ideas for the new *urban science*[11] and the main concepts of the typological method, which were later promoted during the architectural exhibitions in Milan (1973) and Venice (1979). The main concepts of the typological method have quickly

[10] In his 1966 text, Rossi has not admitted to the influence by Muratori's theory, however during early 1960s, he worked together with the Muratori's student, Carlo Aymonino, with whom between 1963-1965, he undertook the series of typo-morphological studies (Mouldon, 1997).
[11] Invited by Rogers to collaborate on the Italian architectural debate and publication of *Casabella*, Rossi explored the notion of new *urban science* since 1950s (Mouldon, 1997)

become popular amongst many other European architects such as: Josef Paul Kleihues, Oswald Mathias Ungers, Rob and Leon Krier, who further developed Rossi's theories (Güney, 2007, Buisquits, 2005, Broadbent, 1990, Frampton, 2007, Engel, 2003).

The examination of the main traits included in Rossi's book in conjunction with the brief account of his exhibited projects in Venice and Milan, allow for a better understanding of the new 1970s design thought.

5.4. ROSSI'S DESIGN THESIS

Rossi begins his 1966 text with rejection of the functionalism as a primary factor for the design of form; arguing against 'its denial of the complexity of the city and [...] its inability to explain the persistence of certain forms, once their function has changed or became obsolete' (Ellin, 1996: 11), he propositioned the themes of his new theory coined by the new term: *urban science.*

As a result of investigations of historic urban areas Rossi illustrated that unlike the study area of the modern city, these results suggested the persistence of certain architectural forms. He explained these forms as *types – permanencies,* which hold 'the past that we are still experiencing'. To Rossi they could be extracted from the reading of the historic city and allowed to link the architecture with the past; thereby also, were representative of 'the memory of the city'. These types-permanencies provided the key to understanding the relationship of architecture with the city, facilitating the historical continuity of urban form (Rossi: 1982: 59, 60). Thus, they could be found and incorporated within all elements defining urban space (Moneo, 1978).

Accordingly, for the first time since Modernism Rossi's *urban science* enabled the study of the city as closely linked with architecture. Used for examination of both urban and architectural forms this study looked at the city as the interconnected formal system, in which, neither the building typology nor urban morphology could be understood or considered separately, either in analysis or design.

This approach closely follows the early typological studies of Muratori, Rogers, and Argan. Posited as 'the analytical model of architecture', typology illustrated a formally autonomous method for design theory, with the type entirely withdrawn from other than their formal context, which now also applied to the city (Rossi, 1982: 14, Gauthiez, 2004)

Having explained his type-permanencies as the basic morphological model that 'cannot be further reduced' (Rossi, ibid), the author argued that they act as a core, or a 'nuclei' of the urban organization. As such they are capable of catalysing the process of urbanization in the city through the processes of spatial transformation over time, and due to existence of 'urban artifacts' (ibid: 86). Rossi asserts that due to the existence of these *urban artifacts* and their formal transformations '[c]ities constitute a world in themselves', and realise their 'own idea of the city' (ibid: 129, 23). Urban artifacts, like the whole city, are characterised by their own history and form, and can be distinguished as a building, a part of a building, or recognised as an individual formal element. The identification of 'urban artifacts' is an important concept derived by Rossi, and illustrates that their urban distribution is catalyzed by the historical process rather than function.

Accordingly, for Rossi, typology played an ongoing role in the development of the city. It thereby actively constituted its's physical structure over time, and also 'dialectically related to city growth' (ibid: 6). Rossi illustrated how starting from the individual monument (or an urban artifact), the historic cities were able to begin their formal evolution. Quoting the Diocletian Palace of Split[12], he confirmed the link between the form and the mechanisms of its formation and transformation: 'Split discovers in its typological form an entire city. From here it follows that the single building can be designed by analogy with the city' (Rossi, 1982: 9).

Through interscalar operations of his type, Rossi reads the elements of the city as the tools for creation and transformation of the design projects at the individual building and the

[12] Built by the Roman emperor Diocletian, at the turn of the fourth century, this massive ancient structure forms half of the old town Split. Rather than single building as suggested by the name, it resembles a fortress – a complex initially intended as a recreational retirement place for the emperor. Over centuries the city of Split grew around the Palace, intertwined with the its historical elements (Hogan, 2007)

scale of the city. These elements play an ongoing role in the development and transformation of the city over time. He follows the same logic that was adopted by Durand in the nineteenth century, and prior to him, by Palladio and Alberti. According to this reasoning '*the house is a city and the city is a house'* (Asensio, 2002); this view thus relates the whole 'city to established elements from
which their artifacts could be derived' (Rossi, 1982: 176). Yet, by not distinguishing between the present and the past, for Rossi therefore, also the scale appears less important than the value of his *urban atrifacts,* or the *analogical* arrangements between them (Eisenman, 1982).

Through compositional possibilities of urban artifacts, Rossi further explains the theme of the 'typological indifference' characteristic to the space that is generic in its form and open to the possibilities of programmes arranged at will. To Rossi, the generic typologies, such as historic monuments or urban artefacts, are independent of the distribution of functions, yet most definitely they are predetermined architecturally:

> Typological indifference assumes space is some kind of container that is if there ever was any clear assumption at all – a kind of volume that may hold any quality, signify anything. Typological indifference means architectural disorder: I am not referring to expressionist disorder but to non-architectural disorder of choices not made. Distributive indifference on the other hand is intrinsic to architecture; which was confirmed by studying of ancient buildings [...]. It has a value of law. The transformations for instance of amphitheaters (Arles, Luca, Rome, etc.) clearly show that even pre-urban transformations have ultimate functional freedom (Rossi, 1970: 67).

Rossi's quote and the drawing of the 1686 Arles Amphitheater (Fig. 5.8) illustrate the transformative value of his 'typologically indifferent' architecture. The building is an example of Rossi's space-container and urban artifact, which evolved in time both formally and spatially. Its transformation between 1686 and 1809 demonstrates that despite deterioration of its parts, it still provided a site for a construction of new buildings, independent from the amphitheater functions. Rossi recalled accordingly: 'one is struck by

the multiplicity of functions that a building of this type can contain over time and how these functions are entirely independent of the form' (Rossi, 1982: 29).

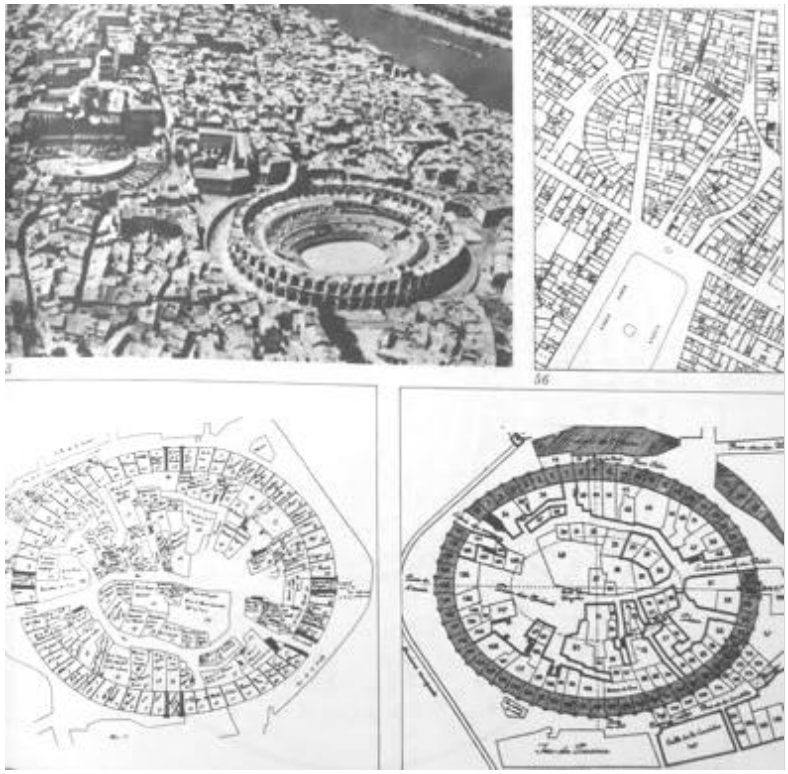


Fig.5.8 Amphitheater in Arles – transforming typology - a container for different functions; Ref: Rossi, 1982: 89

Rossi's interest in the enduring and permanent qualities of architecture (Moudon, 1997) and the forms that 'persist through technological and social change' (Colquhoun, 1989), suggests that the ancient typologies (or urban artifacts), can further be understood as a device that permits them to catalyze the subsequent functions and the aesthetic preferences; for Rossi thereby, the processes of formation and transformation are purely architectural and 'have ultimate functional freedom' (Engel, 2003). He further asserts that the types prompt not only the formation of the city but that they are also transposable across the time. Thus as timeless, they may apply as to the typological development of the nineteenth century Berlin block, as to the works of Palladio's or Le Corbusier:

> This concept is certainly not restricted to ancient and mythological examples; if we think of the rue corridor of Le Corbusier and the distorted meaning of 'street' given to exterior gallery spaces by other modern architects, we realize that both were operating on a similar preestablished typology, that of an elongated element

> branching out into smaller rooms. [...] This is valid for all architecture, and it tells us the meaning of the monument. It best applies to architecture that is most strongly identified with a typological form, for example, Palladio's use of central plan. Modern architecture too has understood this relationship between architecture and the city in its development of the unite d'habitation and the large Höfe[13] of German architecture (Rossi, 1982: 174).

Making analogy between the historical forms and the city, Rossi commends that they both must retain traces of the past to be characterised by *historical continuity*. Here Rossi advises not to focus on the temporary transformations of the urban form that are representative of the different historic epoch, as these embody a 'division', leading to the loss of permanent, collective and universal paradigm. The architect instead postulates for the study of type based on similarities, the 'comparable phenomena … without discontinuities' (Rossi, 1982: 59). This perspective now illustrates that Rossi's autonomous type was not only withdrawn from context and time, but neither would it be conditioned by the cultural situation. The notion itself becomes a cultural phenomenon extended to many capacities across urban and architectural disciplines. Accordingly, Rossi (1975) notes:

> If ... the type is a constant it can be found in all the areas of architecture. It is therefore also a cultural element and as such can be sought in the different areas of architecture; typology thus becomes broadly analytical moment of architecture and can be characterised even better at urban level (Rossi, 1975: 304)

Thereby, as Rossi's type is withdrawn from time, scale, context and culture, it transpires that the processes of formation and transformation of the modern city are the same as those forming the ancient cities. Similarly to his type it appears that also his *urban science* is endless and capable to 'exceed culture and history' (Moneo, 2015). According to Rossi, the mechanisms of this urban science are valid to all urban developments across time.

[13] Courtyard building; the perimeter block of the late nineteenth century

With Rossi's characterization of type being autonomous and not engendered by any function, for the first time since the Modern Movement, the architects could focus entirely on architectural and urban forms and their organization as not addressed in relation to function; Rossi clearly illustrated that the function of the artifact changes in time, thus also 'any explanations of urban artefacts in terms of function must be rejected if the issue is to elucidate their structure and formation' (ibid: 46).

By the early 1970s, the influence with the new urban theory spread throughout the Europe, with other Rationalist architects joining the Neorational movement; Rossi's urban science predominantly attracted those architects concerned about the continuity of urban and architectural forms and relationship between them (Busquets, 2006, Broadband, 1991, Günney, 2007).
Speaking for the rationality and clarity of the new technique, Rossi (1973) proclaimed:

> [the school of thought] does not need individual characters, good students, or bad students but has to cultivate the capacity to start and finish a project by understanding its exact terms. The school should, first of all, provide a technique, even a rigid one, and good craftsmen (Rossi, 1973: 159).

Correspondingly a figurehead of Italian Rationalists, Massimo Scolari (1977) refined the tenets of the new approach:

> For the *Tendenza,* architecture is a cognitive process that in and of itself, in the acknowledgement of its own autonomy, is today necessitating a refunding of the discipline; that refuses interdisciplinary solutions to its own crisis; that does not pursue and immerse itself in political, economic, sociological, and technological events only to mask its own creative and formal sterility, but rather desires to understand them so as to be able to intervene in them with lucidity - not to determine them, but not to subordinate to them either (Scolari, 1977: 162).

These goals clearly described the new 1970s urban science as the exact, coherent and taxonomic production of architecture with the rules of its own. Accordingly, in words of another member of the Italian group, Giorgio Grassi, the Neorationalists were after '*certezza'* - a certainty and clarity of their typological approach (Turan, 1998: 159, 160, Engel, 2003, Broadbent, 1990). As a form of rational knowledge internal to architecture, the new urban science, legitimized architecture as an autonomous field with its own 'disinterested' history and evolution based on timeless principles. The new 'logical system, valid in itself', 'common to all works conceived, designed or built that we know' (Rossi, 1967: 28-29), produced at once 'knowledge of the city' (Turan, 1998: 160) as a verifiable data and autonomous structure, and outlined a comprehensible method for the use of the discipline.

Before I continue, it is crucial to see the relevance of Rossi's type in the context of the earlier theory of urbanization. Claiming timelessness and autonomy of his urban science, Rossi overlooks the fact, that his 'constant' theory only emerges from around the third quarter of the nineteenth century. As I have illustrated earlier, it is only then that the architecture became entirely independent from questions set outside the discipline. His urban science thereby differs from the notion of urbanization that looked at form from the perspective of a strategic aspect of disciplinary autonomy.

Accordingly, Rossi's theory undervalues this aspect of typology that gives rise to particular sphere of interrelations between the formal structure, the city and the outer objectives that Cerdá put forward as a fact; such as for instance the close link between the programmatic and formal structure of Berlin, eminent in the plans of the nineteenth century Berlin block. We have observed how these drawings that gathered a variety of data, sketched the notion of the block as a particular kind of reasoning about the city - seeing its form as quintessence of Cerdá's paradigm of urbanization. In this sense, Rossi's urban science seeing the transformative processes of typology as intrinsic to architecture - is different; as formally autonomous, it undervalues the architecture's contribution to the city in its formal and organizational capacity.

As Rossi's career and influence develops, it could be noted that the architect moves away from the urban analysis to design theory; ten years after the Italian edition of *L'Architettura della Città*, Rossi develops his thesis of 'formal operation of analogy' (Engel, 2003, Nesbit, 1996). Analogy becomes a more metaphysical approach to architecture that aims to bridge the gap between architectural typology and morphology.

Quoting from Carl Jung Rossi (1976) explained the analogical processes of his type: 'analogical is what is sensed, imagined, it is not a discourse, but mediation themes of the past, an interior monologue' to reclaim the 'unexpressed, and practically inexpressible' thought in memory (Nesbit, 1993: 345). The form, withdrawn from time, precisely allows Rossi to claim the status of the ongoing theory to his 'urban science' with its underlying aspects: the continuity, the history and the memory.
Peter Eisenman (1982) noticed accordingly:

> The analogue is detached from specific place and specific time, and instead becomes an abstract *locus* existing in what is purely typological or *architectural* time-place. In this way, by displacing type from history to make a connection between a place and memory, Rossi attempts through the erasure of history and transcendence of real places to reconcile the contradictions of modernist utopia – literally 'no place' – and humanist reality – built 'some place' (Eisenman, 1982: 8).

This illustration shows that Rossi's perspective clearly shifted away from his primary aims to deliver an objective and 'rigid' technique. It instead validated a science grounded on the meaning ingrained in the pre-existing urban artefacts and the subjective contribution of the designer in the project. Self-confessing this further, Rossi admitted: 'there is no art that is not autobiographical' (Rossi, 1967: 36).

In 1973 and 1979, the two architectural exhibitions in Milan and Venice provided occasion to manifest the newly developing Neorationalists' tenets to even wider circles.

5.5. ROSSI'S TYPE MATERIALIZED

In 1973 Rossi presented his work at the xv Triennial in Milan[14] (Broadbent, 1990). The exhibition and the catalogue-manifesto titled *Architettura Razionale* provided an opportunity to link the theory of type with the urban science as explained earlier in his 1966 book; yet, the relationship between the architecture and the city was addressed analogically. Reflecting upon the exhibition Rossi recalled that it was 'a patient work which started from historic analysis, extending to the city topography and typology [...] as the basis of architecture' (Rossi, in Moneo, 2015: 935).

The central point of the exhibition was taken by Rossi's canvas titled *Analogous City* (Fig. 5.9). It represented the city through perspective of the different architectural and urban elements combined together in one typological composition.

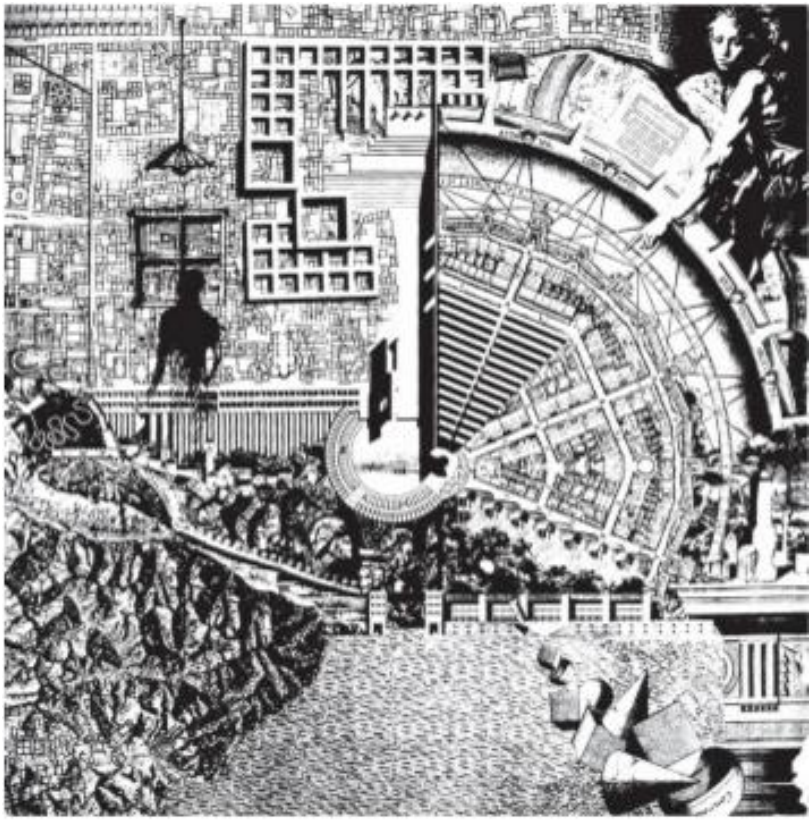


Fig. 5.9 *La città analoga*; Analogous City - drawing exhibited at the Biennale di Venezia Ref: Lotus, 1976: 4

[14] Rossi's work was presented along the designs of pioneer Rationalists from the 1930s and also members of the Italian group: Ezio Bonfanti, Rossaldo Bonicalzi, Massimo Scolari, Daniele Vitale (Broadbent, 1990)

Six years later, in 1979, Rossi's work displayed at the xiii Venice Biennale reconfirmed the methods of the new autonomous urban theory. The Exhibition
Il Teatro del Mondo ('Theatres of memory') reinforced the typological approach to architecture. It illustrated the analogical link between *type-permanencies,* the history, and the urban environment of Venice exemplified by the eighteen century floating theatres. In analogy to the past, Rossi's entry featured a reconstructed floating theatre: 'a classical four square geometry centering like the domed churches of Venice on a lantern and globe. The blue decorative elements relate[d] to the context, while the wooden construction to the vernacular' (Jencks, 2002: 118) (Fig. 5.10).

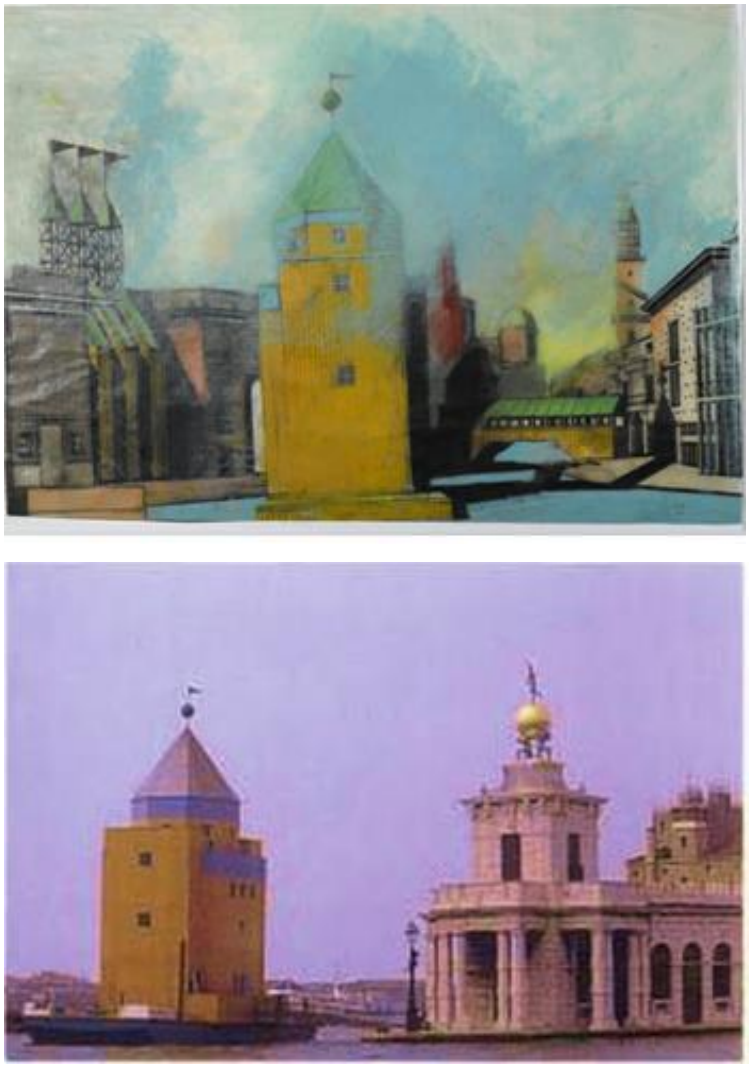


Fig. 5.10 1979 Venice Biennale of Architecture; Rossi's drawing of a floating theatre and the executed design evoking the 'collective memory'; Ref: Rossi, 1979 (T), Jencks, 2002: 118 (B).

Soon after the publishing of his 1966 book and the 1970s architectural exhibitions, the followers of the new school of thought started to express continuity of the city and its buildings in terms of morphology and typology. Typology, as the process internal to architecture, helped them to explain the question of city organization; the method aimed to 'resolve the questions of avenue, arcade, street and square, park and house [...] [it illustrated] a continuous typology of elements that together coheres with past fabric and present intervention to make one comprehensible experience of the city' (Vidler, 2014: 226). Provided as a tool for comparative reading of characteristics of the built environment, typology enabled the comparison of the architectural past with the formal organisation of modernist urban areas. This verified 'the lack of structure in the modern city' and a decline of historical continuity, against which the Neorationalist architects could propose 'an alternative structure based on the historical city' (Colquhoun, 1981: 97).

With the formal autonomous type as a language of architecture, history offered a permanent architectural heritage and a 'quarry' containing various 'urban artifacts' for urban reconstruction. The historical city simply became a 'fertile resource' across time, and a generator of many typologies available for interpretation (Sole-Farras, 2014: 13). It was seen as a formal and spatial object and a source of 'typological complexity' - a 'container' of accumulated forms found in one urban composition. In this context typology was proposed as a basis for the city's formal and structural continuity. Anthony Vidler (2014) explained:

> Columns, houses, and urban spaces, while linked in an unbreakable chain of continuity, refer only to their own nature as architectural elements, and their geometries are neither naturalistic nor technical but essentially architectural (Vidler, 2014: 224).

This illustration clarifies that to some the rationality of the 1970 typology was largely founded on the 'ensemble process', and a mere extraction of the forms from the past, 'linked in an unbreakable chain of continuity'. Many significant and typical elements of the city, such as 'fundamental types of habitat: the street, the arcade, the square, the yard, the quarter, the colonnade, the avenue, the boulevard', were merely understood as formal

instruments that authorize subsequent new formal arrangements (Rowe and Koetter, 1978, Delevoy, 1978) and claims for the continuity of the discipline. To those architects, the strict formal continuity, implied limited formal variation and visual cohesion, and appeared as 'an inadequate means to pursue innovation' (Borsi, 2018).

Yet, typology demonstrating a clear documentation of the past (Engel, 2003), differed from Rossi's notion. Its forms, unlike for Rossi, were seen as the ready-use basis for endless arrangements of the architect (Sola-Moralez, 1984, (Sole-Farras, 2014:13, Engel, 2003, Frampton, 2015). Thus also were understood less as the components of the analogous transformation, and rather portrayed the mere static deployment of historic typologies. As such, in the same way it also applied to the development of the building as to the reparations made to the fragments and 'parts' of urban areas (Castells, 1977, Vidler 1977).

For this reason, as much as the enthusiasm, the new urban science also raised much criticism in the architectural circles.

5.6. CRITIQUE AND COUNTER-CRITIQUE OF THE NEW THEORY

Already in the 1970s, critics began to question the rationality of the new theory that gave rise to the new works of architecture. Particularly its recourse to history has earned the new urban science the largest criticism. Some well renowned architects, such as Peter Smithson and Jaap Bakema, already in the late 1960s attacked the new theory for the 'historical feeling for local traditions', deeming it nostalgic and melancholic (Engel, 2003, Cunniffe, 2008, Crysler Cairns and Heynen, 2012). Similarly, some years later, Charles Jencks (1980, 1987) criticised the new forms as mere copies of the classical concepts, suggesting the static application of historical forms.

To other critics, the arrangement of single types, their formation and transformation in the urban space, depended on the choice of forms of history, the architect's will and his critical approach (Moneo, 2015). The new designs, based on the 'transformation of the selected prototypes in whole or in part into new units', often 'featured abstractions of the

typological architectural elements: columns, towers and gables', and unclear organisation between them. Further claims were made, asserting similarity of methods between the new science and the modernists 'capricious interpretations' (Vidler, 1978, Vidler 2014), with only distinction being the use by some of the Neorationalists of the 'analogous' and 'referential' type, in place of the uniform and mechanistic 'model' of the Modern Movement (Ellin, 1996). Ironically it seemed that the Neorationalist theory raised the same line of criticism, which earlier regarded the methods of the Modern Movement.

Based on the architect's own solutions for the building and the city, the new designs were deemed 'confusing' (Taffuri, 1988), understood as merely relying on the 'memory and fleeting impressions' (Francescato, 1994). Anthony Vidler (2014) observed accordingly: 'for this typology, there is no clear set of rules for the transformations and their objects, nor any polemically defined set of historical precedents'; moreover, the new urban science claimed to gain the 'communicative strength and discerning potential [...] from the understanding of these transformations' (Vidler, 2014: 226). Accordingly, the new designs soon gave an account to typology as a discipline highly focused on the individualistic composition rather than the whole project, and consequently devaluated the method to the building profession (Scolari, 1985). Here the parallel with the nineteenth century *laisses fair* attitude is explicit. Whilst in the mid nineteenth century the speculative builder exercised an unruly construction resulting in ubiquitous numbers of blocks, some one hundred years later architects adopted a variety of design theses that culminated in numerous interpretations of history.

Furthermore, despite being highly critical of the modernist's faith in progress and the alleged rejection of history, the Neorational theory seemed to unable to offer a viable alternative to the Modern Movement's design doctrines (Jacoby, 2015a, Colquhoun, 1981). Correspondingly, Alan Colquhoun (1989) summarised the revival of the forms of history by the Neorationalists:

> [The same] critics have been unable to establish [...] a theory of history that will give a firm basis for this newfound historical consciousness. Because their attack has been restricted mostly to two aspects of Modernism – historical determinism and historical

> amnesia – all they have been able to propose is the reversal of these two ideas: (1) history is not absolutely determined; (2) the acceptance of tradition *in some form*, is the condition of architectural meaning. These two propositions, being reactions to other propositions, remain negative, and lack a systematic and legitimate basis of their own (Colquhoun, 1989: 15)

Questioning the rationality of the new science Colquhoun and others' commentators demonstrated that despite the earlier aims to give the new theory a status of a positive science, to make it rational, logical, and general field of knowledge, this urban theory was driven by intuition, the analogous, and the self-expression of an architect (Engel, 2003, Busquets, 2006, Ellin, 1996, Ockman, 1993, Nesbitt, 1996). This subsequently questioned the eligibility of the new theory and projects arising from it - based on the 'autonomy of architectural order' (Frampton, 1985: 294), in which the forms were applied 'independently of any local constraints' with no reference to other than architectural context (Marzot, 2002: 68).

After 1970, it seemed that the changing countenance of the architectural discipline was a direct consequence of the rethinking of architecture's autonomous dimensions, with its own rationalization and history; this, according to Raphael Moneo (1978), led to the 'frozen [city], unrecognizable at any specific plan, filled with ideal types that communicate only with themselves and their ideal context' (Moneo, 1978: 37). Similarly for Alan Colquhoun (1981), the formally autonomous processes of the urban science were embodied in the aesthetics and reminded more 'of ends rather than means'. As such, this new typology undermined the relationship between the building and the city, by allowing 'the division of the urban continuum into discrete blocks and series of finite experiences, each of which can be designed according to definite aesthetic norms'. Colquhoun finally described the new theorists as accepting:

> the brute fact that the city is made up of discrete parts and that these parts have to be consciously designed 'for now' and relate to each other in a way that engages our aesthetic judgment. They go further and suggest that our knowledge of what is

> beautiful or ugly in the city is based on our memory of past forms of the city, since, without assuming continuity of cultural meaning, no aesthetic judgment is possible (Colquhoun, 1981: 97)

Whilst Colquhoun clearly shows that the urban aesthetics 'justified by the meanings inherited in the typology of the traditional city' (ibid) posited the difficulty with the typological method of the 1970s, he also argued against the new discipline as a 'closed system':

> The notions of opacity of the work of art and the search for basic principles do not presuppose that architecture is a closed system, which has no contact with the outside life, nonaesthetic. The aesthetic comes into anew through the existence of a particular material situation, even if it is not wholly conditioned by this situation (Colquhoun, 1989: 18).

Colquhoun's position suggests that the conditioning of the form by the aesthetics and processes of formal autonomy is limiting; it disallowed the Neorationalists to recognize other than architecture's formal role. Namely, its strategic function, which helps to raise and respond to the questions external to the discipline as seen with Cerdà's description of the method for the city, and exemplified by Hobrecht's interventions.

Similarly, as illustrated by the process of formal transformation of the nineteenth century Berlin block in Chapter 3, it is striking that Rossi overlooks the fact of the impact of changes in the social structures on the programmatic and formal transformation. Equally, the rejection of the time-specific phases, which to Rossi embodied the 'division' and the loss of 'permanent, collective and universal type', suggests that the formally organized city of the Neorationalists is atemporal - 'one piece molded within time' - and as such is not driven by the typical to the certain epoch questions (Choay, 1997, Güney, 2009). I have overturned this claim earlier.

Consequently, within the 1970s' context of understanding, typology had lost its multifaceted value. The instrumentalisation of 'both internal and external relationships of the discipline, … [made] them no longer meaningful' (Jacoby, 2015a: 933). Impoverished of its strategic processes, the method was merely understood as an approach that provided 'little more than historical answers' (Bandini, 1986), and used to answer the nostalgic quest for forms that have been lost in architecture (Ellin, 2009).

Raphael Moneo (1978) provided his summary of the new theory:

> typology has come to be understood simply as a mechanism of composition. The so called 'typological research' today merely results in the production of images, or in the reconstruction of traditional typologies. In the end it can be said that it is the nostalgia for types that gives formal consistency to these works (Moneo, 1978: 38).

This sweeping across history in search of forms represented a mere desire to recapture something that has been 'abandoned' in the Modern city, and as Moneo argued - simply inflamed the nostalgia for the 'richness and variety of forms' of the pre-modern architecture. Drawing upon formal continuity with the city and history the new urbanistic thought ended with the typical for the Modern Movement distortion in scales, lack of hierarchies in the city and urban disorientation (Porpyrious, 1993).
Yet the recovery of elements of history was also deemed positive (Ellin, 1996, Scolari, 1985). As a method of analysis, classification, and interpretation, the new urban science reframed the relation between the city, its forms and history.

Standing against the modernist dogma of *form follows function* and architecture undermined by the 'extra-architectural' approaches borrowed from other disciplines, this 'purely architectural' method offered a long welcomed break. It provided a formal response to the tabula rasa approach to design, the 'irrationality', 'fragmentation, decentralization and formal disintegration' introduced to urban spaces by the zoning techniques and technological advances of the twentieth century (Vidler, 1978). With the type as a formal

reference, typology allowed for understanding of the architectural elements from the past in terms of their relation to the larger urban structure.

5.7. CHAPTER CONCLUSION

Chapter 5 illustrated the objectives of the 1960 typological theory and its investigations into the historical structure of the city that offered a new grounding of the architectural discipline after 1970.

It demonstrated that the operational mechanisms of the new urban science catalyzed a two stream approach to typology, indicating an important difference in deployment of forms and their relation to the whole. On one hand represented by Argan's method grounded on the schemata type-image, the forms could be extracted from the past and placed or 'copied' in the new context. As such, their relation clearly relied on visual impressions and representations, and thus may also be seen as a static link to history. On the other hand, developed from Argan but also influenced by the earlier studies of Rogers and Muratori, I have identified Rossi's approach, grounded on 'the dialectic of typological transformation' (Frampton, 2007:294). According to Rossi's method, the relation of parts to the whole depends on the agency of the transformative paradigm, actively linking the past with the present.

In addition, unlike the art historian's types-*schemata* extracted *posterori* from the past for the use in present, Rossi's urban artefacts asserted the *prior* principles that constituted the form: 'although they are conditioned they also condition' (Rossi, 1982: 32). Differentiating from Argan's static forms of representation, Rossi's typology sketched an active link between the city and its architecture via the transformative processes of type and programmatic indifference opening the form to possibilities. His theory, for the first time since the Modern Movement illustrated a dynamic relation with the form found in the tradition of architecture, insolubly and continuously linking architecture with the history and the city. This realization of a difference between Argan and Rossi's deployment of forms is crucial as it draws a basis for the reading of the blocks developed after 1970s.

This section also demonstrated that despite the Neorationalists' aims to banish the irrational designs of Modernism through clarity and legibility of its methods, and, the new framework 'did not communicate effectively with its ultimate users' (Jencks, 2007: 52). By stressing 'aesthetics over any kind of functionalist dogma' it depicted more of 'ends rather than means' (Colquhoun, 1981). Consequently, by referring back to the values of the pre-industrial cities, and relying on memory and meanings inherent in tradition, it soon gave rise to the new postmodern dictum of 'form follows fiction' (Nash, 1996: 48).

The urban projects resulted from theory that soon became epithetic of 'postmodern mutations', 'architectural zoo' and 'regressive fantasy land' (Pugh, 2014, Ungers and Vieths, 1997), signified that 1970s' urban science was unable to deliver 'a viable synthesis of theory and practice' (Bandini, 1993). These works also proved to be based on the model of independent fragments, the city 'parts' and a minimum coordination with the urban space. Although, I will be able to verify this claim in the following segments of my thesis, this section allowed me to argue that the Neorationalists' insistence on architecture's autonomy as a design approach and disciplinary knowledge, underemphasized the strategic value of typology, drawing a vague account of architecture's contribution to the city in its formal and organizational capacity.

In following, the next chapter verifies how the ideas of 1970s urban science were realised in context of the IBA 1979-84/87. The next section also serves as a prelude to the two chapters that follow it, in which I will measure the process of Neorationalists' thought with the practice of design as exemplified by Rob Krier and Oswald Mathias Ungers (Chapter 7 and Chapter 8). Through the detailed reading of the spatial performance, I will illustrate a different picture of the 1970s block to that sketched by critiques. Rather than seeing the block as the representation of history, I will demonstrate its precise relationship to the urban, comparing the block's performance with the organizational specificity of previous architectural solutions; thereby demonstrating a different approach to the dominant interpretation of the 1970s typology of the block.

Chapter 6

RETURN OF THE BLOCK TO THE URBAN FABRIC IN CONTEXT OF THE 1979-1984/87 IBA

6.1. CHAPTER INTRODUCTION

Chapter 6 provides the background to the more detailed reading of the spatial performance of the post 1970s block, developed in Berlin by Rob Krier and Oswald Mathias Ungers at the time of the 1979-1984/87 International Building Exhibition (IBA). It illustrates the moment of the reinstatement of the block to the fabric of Berlin, and tracing its development until the present day. This section first outlines the general premises of the IBA.
Based on the primary research material (photographic survey) gathered from the fabric of Kreuzberg and Charlottenburg, and further triangulated with the analysis of the existing data, Chapter 6 will verify how the new 1970s urban thought was realized in practice.

After decades of construction of modernist estates promoting the strict north-south slabs, 'housing' typologies, the lack of hierarchies in the city and distortion of urban scales, the IBA reestablished the dense rhythm of street and the European block, ending disorientation in the city. After almost 50 years the model of the urban block [1] returned to the city design as both a form of habitation and urbanism. The formal programme of the IBA, executed in two sections – the Altbau IBA and Neubau IBA, opposed the Modernist orthodoxy directed against the old building stock, and provided the link between the new buildings and the structures of the past. It further posed a reflection on the importance of precedent for architectural design (Krier, 1979, Quaroni, 1983).

[1] Sonne (2005, 2009) observed that the individual examples of perimeter typology with oversized green courtyards and playground, continued to be built in modernist Germany; these blocks however were lower in heights and featured avangardist design and strictly horizontal layout. The new materiality using grey concrete and white plaster further suggested that they were built in the new area. Whilst some of these typologies provided residents with the autonomous garden –housing estate, others were integrated within the larger fabric, including ie. cinema and shops, forming part of a 'neighbourhood'. Between 1925-1930 the examples of these, were built in Berlin- Reinickendorf, Berlin-Lichtenberg, Berlin-Wedding and Berlin-Schönberg by Ervin Anton Gutkind, Rudolf Fränkel and Paul Mebbes (Sonne, 2009)

This chapter describes the objectives of the IBA Altbau, concerned with the 'careful renewal' of the nineteenth century building stock. It further outlines the aims of the IBA Neubau, regarding the 'critical reconstruction' and 'context sensitive' development of the new housing stock. After decades of demolishing the urban fabric during the Modernist period, IBA sought to reinvigorate history through promotion of once 'abhorred' typology of the block, to 'undo the errors of the previous half-century' (Ladd, 1997: 231, Kleihues, 1984, Kleihues, 1993, Pugh, 2010).

This section compares the works of the Altbau and Neubau sections. Whilst the Altbau sought to restore the dilapidating nineteenth century building stock, the Neubau section aimed at re-establishment the formal qualities of the nineteenth century block. It also addressed the core themes of Neorationalism: the typology, history and the city, and applied them to the block. In the modified form, the perimeter blocks 'filled the gaps' in the city, holding numbers of differences and similarities with the form of its predecessor. This section therefore investigates formal and spatial variation between the two thematic streams of the IBA framework; and also illustrates the account of the nineteenth century block today from the Oranienstrasse Area.

In Chapter 6 I argue that despite the IBA's objectives for the reestablishment of the formal values of the nineteenth century block, the overreliance on the formal autonomy of architecture by the Neubau section, resulted in minimum coordination of the building with the surroundings. Thus, the 1970s block was unlike the dynamic, closely interlinked with the city robust network of the nineteenth century typology. Instead, it featured a threshold between its form and the urban spaces. I further argue that the post-1970s spatiality was formed according to the same reflective effort that constituted the city during the third quarter of the nineteenth century, deploying static arrangement of forms that continues also in the present day.

To validate the last argument this section also briefly discusses the IBA's sequel - the 1995 urban framework - Planwerk Innenstadt, which mirrored the formal and spatial traits deployed at the time of the IBA.

To contextualize the arrival of new urban practice, and reinstatement of the block typology after Modernism, I briefly address the socio-political situation at the time of the IBA exhibition.

6.2. URBAN AND HOUSING QUESTION OF THE 1970s

In the 1970s a general disenchantment with modern architecture and planning was as prevalent in Berlin as it was elsewhere. The CIAM's rejection of history, the evolution in architecture based on the succession of forms and the separation of the urban space by functions and zoning, raised questions about the urban conditions and housing quality in general (Pfeifer and Brauneck, 2008, Colquhoun, 1991, Pugh, 2010). In Berlin, against 'the boring and mean looking city' (Lampugnani, 1984: 19) the new ambition was to seek a different model of development reconciling planning and architecture; the new arguments further concerned the necessity of a new dwelling type (Kleihues, 1992).

In the mid 1970s, the series of press articles identifying absence of historical continuity in architectural and urban form, increased public awareness about the state of planning and housing in Berlin. The press argued that separating the tenants from one another and from the urban space below, led to 'anonymity' that came with life in modernist slabs and tower blocks (Kleihues and Siedler, 1977). The new forms of architecture contributed to the fragmentation of the Berlin fabric, the lack of architectural character, which disrupted 'any cohesive sense of urbanness' (Bodenschatz, Heise and Korfmacher, 1983: 28). In addition, the 1970s students revolt and social unrest, sparked the need to search for new dwelling forms and housing policies (Bodenschatz, 2010).
Thereby in the late 1960s Berlin, the 'widely criticized, inhospitable modern city' on one hand searched for the solution for housing developments, and on the other, to restore its 'lost identity' and image as a 'cultural metropolis' on the international scene (WBS, Larch B. Rep. 150/416, Mitteilung 105; Pugh, 2010:160).

At the time, the series of publications reflected the wider criticism of the post WW2 urban planning and its complex problems. Already in 1961, in her book *The Death and Life of Great*

American Cities, Jane Jacobs lamented the failing approach to the city and the physical decay of the urban environment after the second world war. The author voiced her arguments against zoning, 'facelessness' and anonymity of cityscape. Instead Jacobs propagated urban diversity, mix of functions, and smaller block sizes to provide quality of traditional 'neighbourhoods':

> If the sameness of use is shown candidly for what it is – sameness – it looks monotonous. Superficially, this monotony might be thought of as a sort of order, however dull. But esthetically, it unfortunately also carries with it a deep disorder: the disorder of conveying no direction. In places stamped with the monotony and repetition of sameness you move, but in moving you seem to have gotten nowhere. […] Monotony of this sort is generally considered too oppressive to pursue as an ideal by everybody but some project planners or the most routine minded real estate developers (Jacobs, 1989:38).

Jacobs' arguments were reflected in the context of Germany: the 1965 book *The Murdered City* by Wolf Jobst Siedler's and published the same year, *Unhospitability of Our Cities* by Alexander Mitscherlisch. Siedler accused the modern city planners of 'premeditated, collective murder' of Berlin (Siedler, 1993: 405), and based his argument on the comparison of photographic data between the streets and facades of the 'city of stone'[3], and the new postwar urban quarters, which addressed the destruction of the Berlin's historical building blocks (Bohl and Lejeune, 2009: 296). Mitscherlisch, on the other hand lamented over the 'irrational' characteristics of modernist zoning, countered by the observation of the 'neatly packed programmes' of the nineteenth century planning intertwined between the spaces of dwelling and spaces of movement (Mitscherlich, 1984: 59).

Against the established development based on the 'fordism of urban regeneration', demolition and rebuilding (Ipsen, 1992: 19) and zoned planning, in the late 1970s Berlin

[3] The 'city of stone' phrase recalled the famous criticism of the nineteenth century block typology by Werner Hegemann, included in his 1930 book *Berlin of Stone.*

authorities begun their search for the informed and critical approach to architectural and urban design. These investigations closely followed the core arguments of the 1960s debates of the Neorationalists, and originated with the intensive research of the history and typology of the city. Their theoretical foundations, and in particularly Rossi's nominal book *The Architecture of the City* (1966), became very influential amongst those architects and planners interested in preservation of historical Berlin, and working with the architectural types that carry formal and structural continuity in buildings (Bodenschatz, 2010, Pfeiper and Brauneck, 2008). After 1973 Milan Trienalle, the themes of 'rational architecture' attained a wide following in Europe integrating the new group of Neorationalists. It included Leon and Rob Krier, Jürgen Savade, Oswald Mathias Ungers and Joseph Paul Kleihues who became directly involved in the development of Berlin.

A handful of pioneering block schemes were constructed in Germany. The influence with the 1970s framework found its principal manifestation in the early typological works of Kleihues with Hans Heinrich Moldenschardt in the Ruhwaldt area (Fig. 6.1). The scheme featured large blocks organized around the interior courts, and also the series of open blocks. This 1967 housing project is therefore considered to be the 'first conscious return to the traditional configurations of city blocks and public spaces in Berlin', set on the principle of 'continuity between individual pieces of architecture and the urban context' (Kleihues, 1993: 405, Rumpf, 1993).



Fig.6.1 1967 Block configuration at Ruhwaldweg area, west of Berlin-Charlottenburg;
Ref: Kleihues, 1993: 405

A few years later, in 1975, Kleihuies built the block at Vienetaplatz in Berlin-Wedding (Fig. 6.2). Its form, in line with the Neorationalists' thesis was the result of a 'dialectic of typological transformation' of history (Frampton, 2007: 297): 'characterized by the virtue of simplicity' the new typology evoked enthusiasm about historic forms of architecture, and 'intensified the nostalgia of Berlin for traditional forms' (Clelland, 1984: 19).

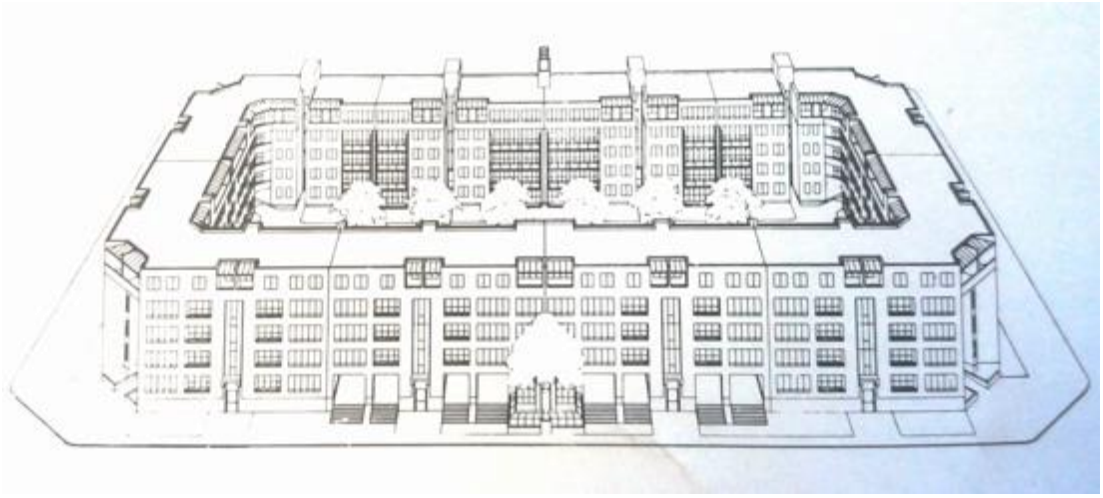


Fig. 6.2 1975 Block design by J.P. Kleihues; Ref: Frampton, 2007: 296

The form respected the pre-existing street pattern, which despite the destruction of both world wars and the functionalist schemata of the modernist planners, could still be determined. As seen on Figure 6.2 the large perimeter form recreates some traditional urban qualities – the hierarchy and orientation - clearly addressing the street through the harmonious and homogenous façade. Yet, its horizontal rhythm also recalls the 1920 Siemenstadt's social housing estates. In addition, the form is set back from the street and protected by the green belt; it features large green courtyard, accessed by the oversized corner entries. Due to their size, the inner space of the block appears exposed and signals the semi-public status of its space. Unlike the homogenous street façade of the nineteenth century block, the inside walls of the block feature vertical changes between continuous horizontal porches, terraces, loggias and windows; these elements added the expected typological variety. Still, overall, the large perimeter form signals the autonomous status of the block. The vertical wall of its façade appears as a threshold 'protecting' the interior of the block from the street and thereby distinguishes the typology from the city space.

In conjunction with the publicized criticism of the urban situation of Berlin at the time, the precedence set by Kleihues invoked an inspiration with the planning legacy of Berlin. In the late 1970s the typology of the nineteenth century block informed the urban discussions at the time of the IBA, which came to be understood as exemplifying a sea change in the approach towards development and regeneration (Bodenschatz, Lampugnani and Sonne, 2012).

6.3. THE INTERNATIONAL BUILDING EXHIBITION BERLIN 1979-1984/87

In critical response to the modernist planning regulations, practices of decentralisation of forms, and reduced densities in the inner city due to separation of work, leisure and residential activities (Ladd, 1997), the IBA promoted the return to the nineteenth century fabric. Alongside debates about the form of the city, it also discussed the design of the individual buildings blocks.

In 1978 the Parliament of West Berlin made a proposal to approve and finance the IBA GmbH, a corporation that would be responsible for the International Building Exhibition, (*Die Internationalle Bauaustellung*). The motto chosen for this parliamentary proposal had a two-pronged approach: 'The Inner City as a Place to Live' (*Die Innenstadt als Wohnort*) and 'Saving the Ruined City' (*Rettung der kaputten Stadt*) (Pugh, 2010). Much has been written about the exhibition[4], which gained an international recognition as a significant urban and architectural event, further portraying Berlin as the city in search for its own identity during the Cold War.[5]

[4] Amongst many writers, the most significant were publications by: Kleihues and Klotz, 1986, Bodenschatz, 2010, Davey and Clelland,1987, Kleihues, 1993, Pugh, 2010, Colquhoun, 1989, Bodenschatz, Lampugnani and Sonne, 2012.

[5] Plans for the 1979-84/87 Building Exhibition had been underway since late 1970, and since the beginning the IBA was to coincide with the larger celebrations of Berlin's 750th anniversary. Thus, aside of improving the formal image of the city, the IBA reflected upon political and economic goals of the jubilee festivities; significantly it was related to the strong influence of the squatter movement on the development of West Berlin's reputation on the global and national scene, as a center of protest in the 1970s and 1980s, as the city's housing situation continued to rank among the toughest issues facing Berlin's government. For these reasons the organisers of both, the IBA and the 750th anniversary shared many of the goals and approaches, focused on improving the 'image' of the city (Bodenschatz, 2010, Pugh, 2014). Berlin's reputation as 'a haven for outcasts' was to be outweighed by its new role as a center of 'openness and tolerance' and 'traditional ability

IBA involved the development of infrastructure and housing stock in the six deprived areas: in Tegel, Prager Platz, Southern Tiergarten, and Southern Friedrichstadt IBA Neubau constructed new buildings, whilst in Kreuzberg – SO36 district, IBA Altbau regenerated the 'old' building stock. These areas are marked in red on the Figure 6.3.

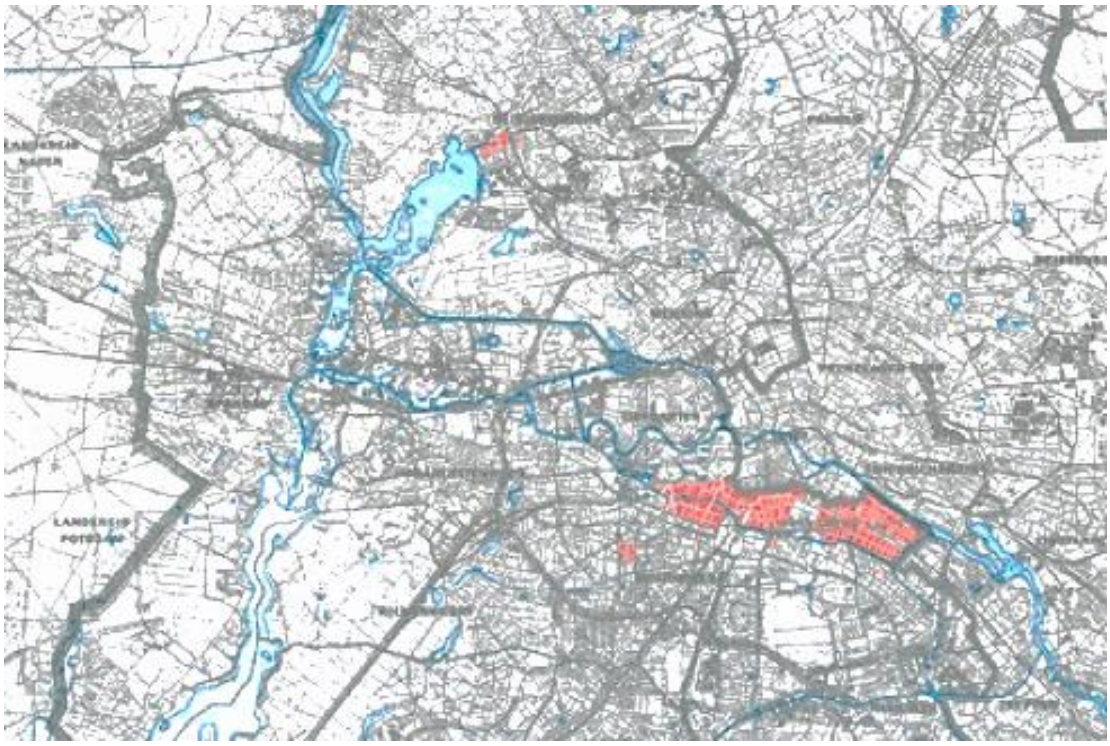


Fig. 6.3 IBA Plan of Development; Ref: Die Senatsverwaltung für Bau- und Wohnungswesen, Archiv Internationale Bauaustellung Berlin 1987.

6.3.1. THEORETICAL FRAMEWORK OF THE IBA

The IBA promoted sensitive restoration of the existing urban fabric of Berlin. Instead of a large scale demolition practiced by the modernist planners, it supported participatory planning processes. Rather than a large scale displacement of the urban population and tabula rasa approach to planning, it promoted working with and enhancing the existing urban qualities and urban regeneration by sensitive infill projects. The goal was to plan Berlin with the 'existing historical features in mind' to reference and restore the historical plan (Kleihues, 1984). Formally the proponents of the IBA sought a contemporary

to 'assimilate and integrate' (Mitteilung des Präsidenten Nr 105; Programm der 750-Jahr-Feier Berlins 1987 Grundlinie; B Rep 150/416 LArchB: 2,3).

interpretation of the qualities of the traditional European city, with the block as the basic unit of urban morphology (Colquhoun, 1989), and also ‘an instant model for sustainable redevelopment’ (Schubert, 1994: 49).

Thereby the new standards of the IBA represented a shift in architectural and urban thought by distancing itself from the ‘modular repetitiveness and images of regimentation’ (Blake, 1993: 393), which concerned most of the planning and building attitudes for almost the half of century. Harald Bodenschatz (2010) explained that the ‘goal was to identify the positive qualities of the tenement house settlement in order to delegitimize the strategy of urban renewal through extensive demolition. The quality of the public space was particularly emphasized’ (Bodenschatz, 2010: 71).

The IBA had two thematic streams: Altbau’s ‘careful renewal’ and Neunau’s ‘critical reconstruction’. The first was deployed under the leadership of Hardt-Walther Hämer, to ‘work with and not against the [existing] urban form’ (Testa, 1987: 48); the aim of this section was the preservation and revival of the original nineteenth century block and repurposing its structure for new programmes, whilst also adopting the ‘democratic attitude’ to planning by involvement of residents as participants in discussion (Bodenschatz, 2010: 70, Clelland, 1987b: 44,45). This less broadcast section of the IBA sought to readapt empty nineteenth century blocks, rebuilt 1600 apartments and modernize circa 5000 further dwellings within its structure (Davey and Clelland, 1987a).

Under the directorship of Josef Paul Kleihues, the greatly publicized IBA Neubau adopted a context sensitive approach to the new projects constructed on the void plots in the inner city. The ‘critical reconstruction’ regarded reinstatement of the historic Berlin plan together with the block typology established during the nineteenth century. The block’s formal properties were in focus: its dense rhythm and spatial distribution, the clear hierarchical order between spaces of residence and movement, the urban orientation, vibrant street life and dynamic mix of uses with varied functions (Bodenschatz, 2010, Pugh, 2014, Davey and Clelland, 1987a, Clelland 1984).
The IBA director Joseph Kleihues (1984) argued:

> First, we want to preserve the ground plan of the city, where this still exists or could be restored. That certainly does not mean that we would not change it, if we could do so without affecting the essential characteristics, and if we thought the change would be an improvement. We can change it, for instance by dividing blocks, where appropriate, to improve communication within the area […].
>
> Second, we are concerned with the scale and geometry of the area […]. Where possible we are orienting our buildings to the lower figure of about 18.50m (ie. about six storeys).
>
> Third, we are concerned with the physiognomy, the visual image of the area. I am convinced that the identity of a city does not primarly depend on functional relations […] [it] is [in] the main dependent on two things: the image it transmits of itself in its architecture and in its intellectual, philosophical and moral position in successive periods (Kleihues, 1984: 43).

By reestablishment of the forms of history with the view of preservation of historical continuity, the IBA became the 'single most important influence on building in Berlin'; drawing upon nineteenth century architecture and planning, the new approach to the development placed emphasis on defined and bounded urban space[7] and was further driven by the aim to 'recreate the city of streets within three-dimentional urban framework established by the nineteenth century pattern of streets, squares, parks and public buildings' (Colquhoun and Fauset, 1991: 31). IBA's aim was to offer a 'warm, humanist antidote' to the 'cold' and recognized for 'rising urban casualties' Modernist planning and architecture (Stimmann, 2009: 296).

IBA's 'open ended' interpretation of the form (Kleihues, 1993) followed the theoretical tenets of Neorationalists, seeking the formal variety yet it also emphasised 'diversity of

[7] The concept, originally advanced by a German historian Dieter Hofmann-Axthelm, became popular with other main actors of the movement: Josef-Paul Kleihues, Vittorio Lampugnani and Rob Krier (Stimmann, 2009).

various ways of life, the coexistence of old and new, of experiment and tradition' (Thijs, 2008: 251). In compliance, Kleihues established a crucial objective stating that different architects should design the infill sites and the entire city blocks to assure the variety and avoid the 'sameness' of many modernist cities (Kleihues, 1987, Blake, 1993).
Thereby this postmodern urbanism, dictated by urban repair and reconstruction, was not about a single approach for the city, but about variety and range of solutions to planning and building. In true Neorationalists manner, the IBA embodied varied methods, styles and design ideas, representing many different 'models for the city' (Miller, 1993, Pugh, 2010). Variety suggested mainly by the new façade manipulation became the new aesthetic that would come to define Berlin after the period of Modernism. Yet this approach was exercised as an analogy to the diversity known from the nineteenth century Berlin: the varied life of neighbourhood blocks with their many courtyards and the eclectic facades of the post 1880s city (Ladd, 1997).

To rebuke the standardised designs, the IBA organisers invited an international array of architects to build within its framework. Encouraged by not too closely prescribed rules, architects such as Peter Eisenman, Herbert Hertzberger, Arata Isosaki, Alvaro Siza, Aldo Rossi, Robert Stern, Daniel Liebskind, Zaha Hadid, and James Stirling, contributed their designs based on their own version of 'critically reconstructing' the historical fabric of Berlin (Bodenschatz, 2010, Pugh, 2008). Many different design models were also used in the block development: self-build Altbau schemes, tenants' involvement, and adaptation of varied environmental strategies (i.e. passive solar, facades working as heat collectors) (Davey and Clelland, 1987 a).

Alan Colquhoun (1989) summarized the formal objectives of the IBA as follows:

- It sees the city with its perimeter blocks and streets, as solid, anonymous fabric which should contain a variety of functions, including housing and commerce
- The new isolated buildings, whether old or modern, would gain symbolic importance by contrast with this continuous fabric
- It reinstates the street and the public square as the places of unprogrammed public enjoyment and congregation

- It reinforces the pedestrian scale and rejects the dominance of fast motorized circulation
- It sees the public space of the city as more analogous to so many external rooms and corridors, with definite boundaries, than to limitless voids within which buildings, circulation routes, etc., occur
- Finally it conceives of the city as historically as well as spatially continuous – capable of being read as palimpsest (Colquhoun, 1989: 232).

In line with the Neorationalist themes, IBA planners sought to reinstate the block as a form of spatial planning, defining urban space of the street and the public square. The form would banish the modernist distortion in the urban scale and lack of orientation and hierarchy. It further seems to suggest a guarantee of the pre-modern values of a vibrant street life, dynamic mix of uses and unprogrammed functions. As such, it portrayed a direct answer against modernist planning.

In order to see how these tenets were reflected in practice, the next section looks at the redeveloped and newly built examples of the block typologies.

6.4. IBA IN PRACTICE

6.4.1. THE ALTBAU SECTION

In the area chosen for rejuvenation - Kreuzberg SO36, the nineteenth century structure withstood the test of time and continued to perform in accordance to the values inherent within its spatial organization at the time of inception. Thinned out by the war bombings and the 1950s planning, the blocks no longer contained narrow courtyards, and instead were filled with light. Ironically, their exposed fire walls and empty plots illustrated the same urban landscape, as when the typology was constructed one property at the time, around the mid ninenteenth century. Brian Ladd (1997) recalled the 1970s situation: ‘A characteristic Berlin sight is a blank wall of bricks, seventy feet high and a hundred or more feet wide. Sometimes a single window has been punched through it, and a face peers out,

supported by arms leaning on a cushion. Other walls reveal Berlin to be an uncompleted city, and as a result they have often been deemed eyesores' (Ladd, 1997:70)

Yet the nineteenth century Berlin blocks were praised by the IBA's planners and urban critics alike, who deemed them as:

> [the] incubators of neighbourhood identity and attractive urbanity. They became charming rather than dilapidated. […] a toilet down the hall and the absence of a bath merely meant a degree of inconvenience in return for an affordable large apartment, which could be renovated step by step. For rebels against the nuclear family and the traditional home, the large high-ceilinged rooms continued to offer the flexibility of arrangements their builders had intended. The *Mietskaserne* presented an alternative to the modern apartment, designed for efficient use of space with small rooms carefully tailored for cooking, eating, or sleeping. As the old buildings attracted residents and small businesses, relatively intact tenement neighbourhoods became Berlin's liveliest areas (Ladd, 1997: 105).

During the IBA Altbau, the rediscovered typology from around the Oranienstrasse Area (as previously seen on the Fig. 3.7 p: 99) proved to provide the architects with the platform for numerous spatial reconfigurations, changes to block circulation, greening of the buildings and courtyards (Fig. 6.4), and further improvements made to sanitary infrastructure (i.e. installation of toilets and bathrooms) often organized with tenant participation. These developments were rarely expressed on the blocks' exterior (Davey, and Clelland, 1987a) – the structure simply accepted the structural changes within its shell - giving testimony to the nineteenth century typology as a highly resilient form open to transformation.



Fig. 6.4 Greening concept for the blocks in the Oranienstrasse Area (L); Ref: FHXB Museen, 2014

Against the established Modern Movement routine of demolition and rebuilding that still continued to dominate the Berlin planning scene in 1970s, the IBA set a small pioneering scheme in Berlin Charlottenburg, at Neue Christstrasse (Fig. 6.5). The project restored and rejuvenated the surviving blocks together with the space around them, and became very popular with the residents (Freestone, Amati, 2014). Kleihues later commented on the scheme, which was an 'attempt to conserve the cityscape', designed to retain the aspect of traditional neighbourhood (Kleihues, 1993: 406).

As seen on the Figures 6.6 and 6.7, the dilapidated block exposing the blank walls, was cleared of rubble and upon completion let much light into the block's interior. The plans of the Figure 6.7 illustrate the regular arrangement of the interior spaces of the block enabling architects to remodel the interiors of the flats, according to modern needs. Linked and differently grouped apartments were installed with new services, such as toilets, bathrooms and heating systems (Fig. 6.8). In order to restore continuity with history, the street façades 'fashioned' the nineteenth century facade of the nearby block at Seelingstrasse (Fig. 6.9).



Fig. 6.5 The block at Christstrasse (marked in yellow) chosen for the redevelopment; Ref: Deutscher Architectur Preis, 1979:37



Fig. 6.6 The block's interior; Ref: Ibid:38



Fig. 6.7 Plan of the 1979 block (marked on the top with the red arrow) before and after renovation; Ref: ibid: 40

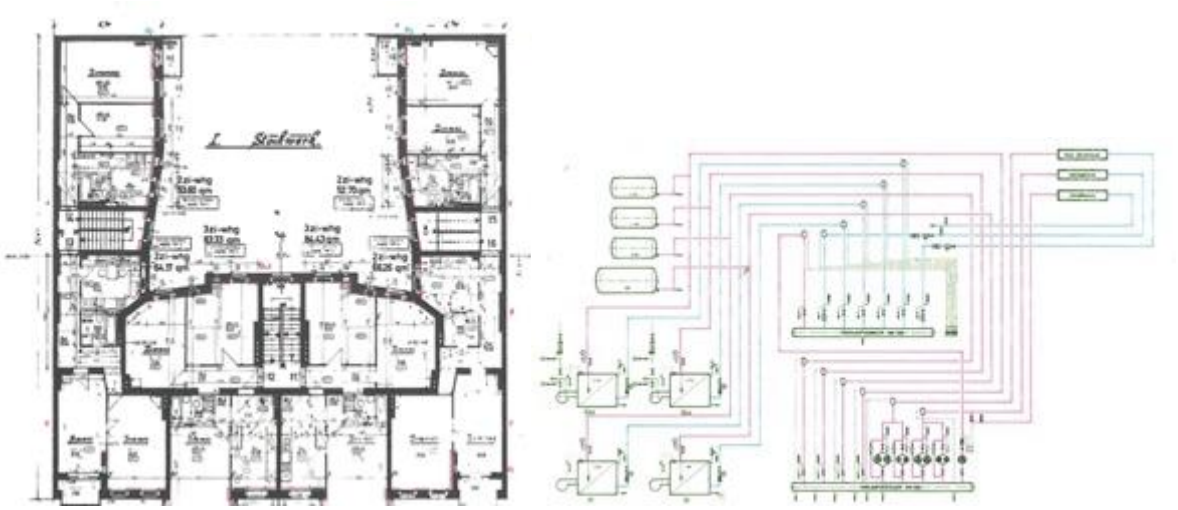


Fig. 6.8 Installation of the central heating at 7 Neue Christstrasse; block's plan and gas and electric diagram; Ref: ibid: 42

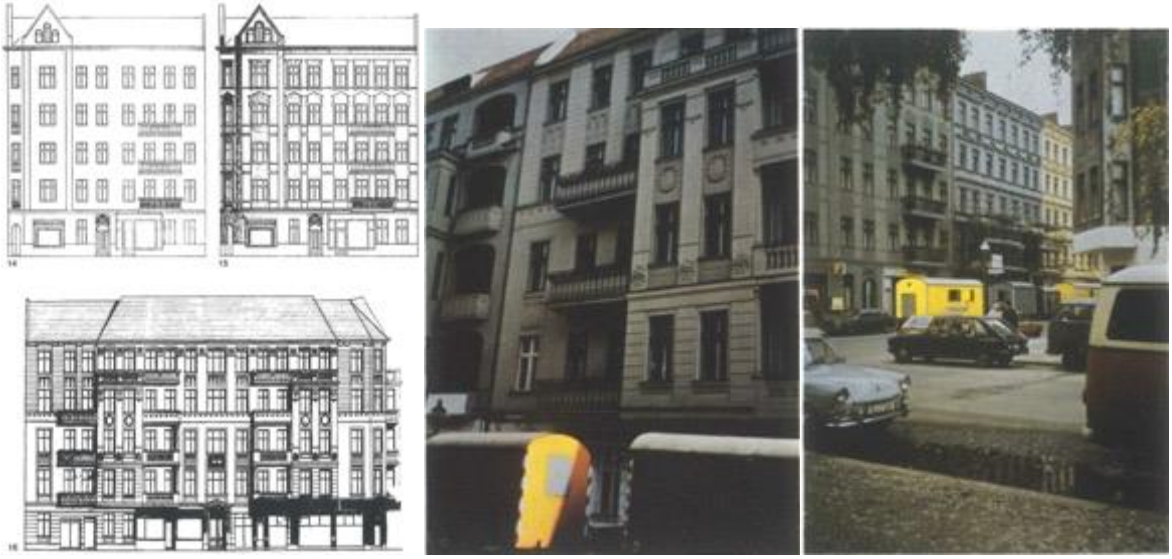


Fig. 6.9 Facade at 14 Seelingstrasse (Left) used as a precedent for reconstruction of the block at 5-6 Neue Christstrasse (Middle), and 30 Nehringstrasse(Right); Photograph, 1987; Ref: ibid: 42

The precedent set in Charlottenburg invoked enthusiasm for further rejuvenation projects. At the time, under the 1963 developmental policy, two plans were in situ for the development of the whole Oranienstrasse Area (Fig. 6.10).



Fig. 6.10 1963 plan for development of the Kreuzberg (Oranienstrasse Area); Ref: Krüger, 2014

Linking the East and West Berlin via the motorway cutting through the district of Kreuzberg, the policy would have brought about the extensive damage to the existing historical three-dimensional framework. The blocks would be raised down to make way for the extension of motorway, and the areas in the tracks of the highway meant to be kept vacant. The modernist government thereby had no interest in reconstructing the gradually dilapidating Kreuzberg blocks. Still in the late 1970s, many buildings were seen 'untouched' since the damage of WW2[8] (Fig. 6.11) (Urban, 2012, Davey, 1987, Nicolin, 1984a, Kleihues, 1986, Testa, 1987, Colquhoun and Fauset, 1991). The poor situation was ridiculed in the public placards depicting the 'claustrophobic' life in the city organized around the traffic (Fig. 6.12).

[8] Along with the plans for the highway, the planning policy, foreseen further large-scale demolition in the area. It sought to make way for the comprehensive planning development subsidized from the government. After closing of the borders between East and West Berlin the workers were prevented from travelling. The West Berlin desperately needed the supply of construction labour. In 1961 the government invited via *Gästarbeit* programme, large group of Turkish workers, who settled in the run down blocks of Kreuzberg. Until today, the 50 % of population of Kreuzberg is made up by migrants (Urban, 2012, Davey, 1987).



Fig. 6.11 112 and 114 Skalitzer Strasse, Kreuzberg, 1980(Top L), and the run-down courtyard, 1982 (Top R), Skalitzer/Oranienstrase, Kreuzberg after war bombings, 1980 (L), Oranienstrasse, Autumn, 1979 (R); Ref: Paul Gesner, 1987(T L), FHXB, 2014 Archiv Sudost Express, 1982

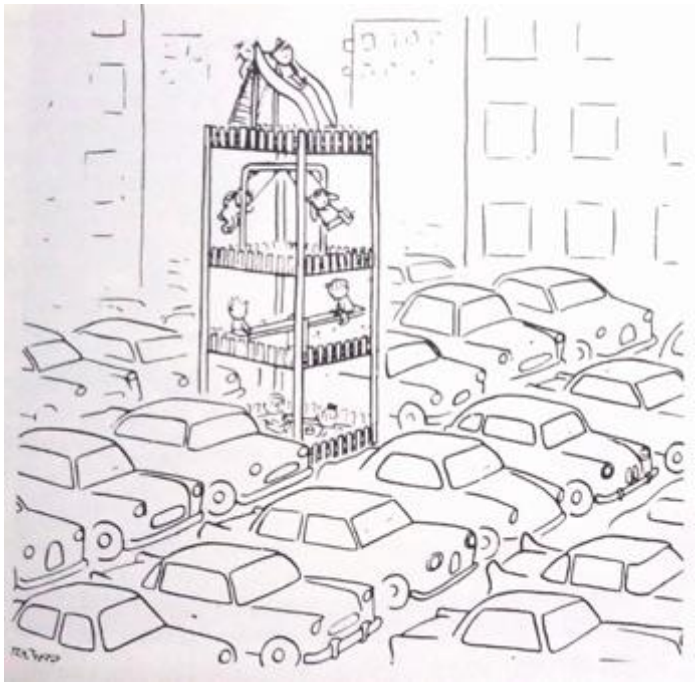


Fig. 6.12 'Deadly preponderance of traffic'; Ref: Rosenau, 1983: 175

Inspired by the example of Neue Christstrasse, the winners of the 1979 ‘Oranienstrasse’ urban development competition, planned to retain the ‘Kreuzberg Mix’ of the nineteenth century. The new conception sought to renovate the residential, commercial and industrial spaces and to conserve them as much as possible. The decisions about courtyards were made after discussions with tenants. The work was done by the residents on the ‘self-help basis’, resulting in the bright and greened courtyards (Fig. 6.13a) (FHXB, 2014). The locally displayed posters, fully supported this new mode of redevelopment (Fig. 6.13b).



Fig. 6.13a Redevelopment of the inner block, IBA 1984/87; Ref: FXHB Museen, 2014



Fig. 6.13b Advertisement of tenant participation scheme; Ref: FXHB Museen, 2014

As seen on the plan of the IBA Altbau (Fig. 6.14) some blocks in the courtyard were removed to comply with the modern requirements for space and light, and in some cases, only the perimeter buildings were preserved.

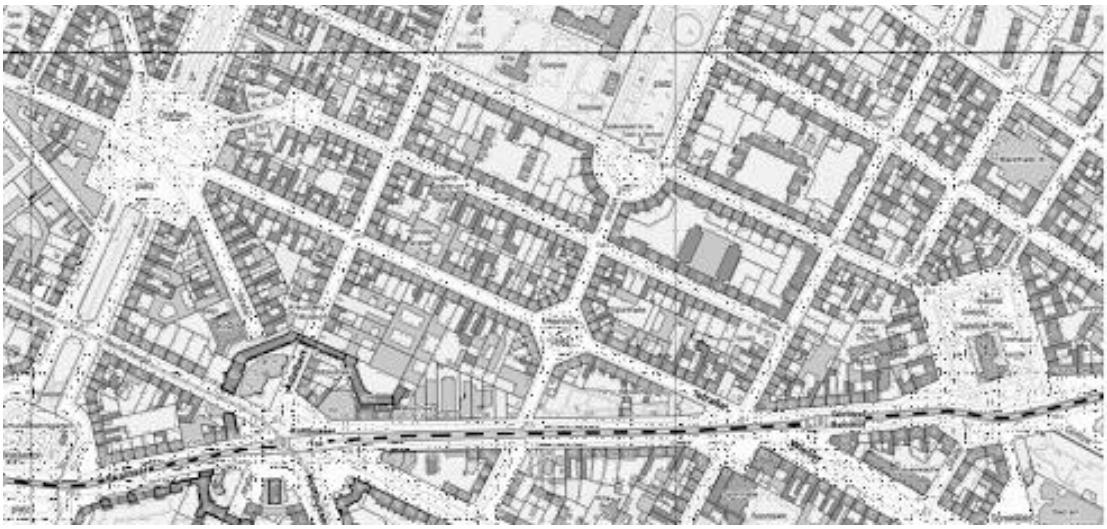


Fig. 6.14 1984 Fragment of the Kreuzberg from around the Oranienstrasse Area proposed for the Altbau renewal; Ref: Kleihues and Klotz, 1986

One example of the Altbau redevelopment at and modification of the nineteenth century block structure at Naunynienstrasse, Oranienstrasse Area, can be seen on the Figure 6.15. In lieu with the precedent set in Charlottenburg, also here decision about the internal layouts was made in consultation with the tenants. The renovation of a number of flats included vertical and horizontal amalgamation of spaces of the block's interior. Changes involved braking through the party walls to enable larger flat configuration; the easily joined up apartments were also fitted with bathrooms and kitchens (Fig. 6.16).

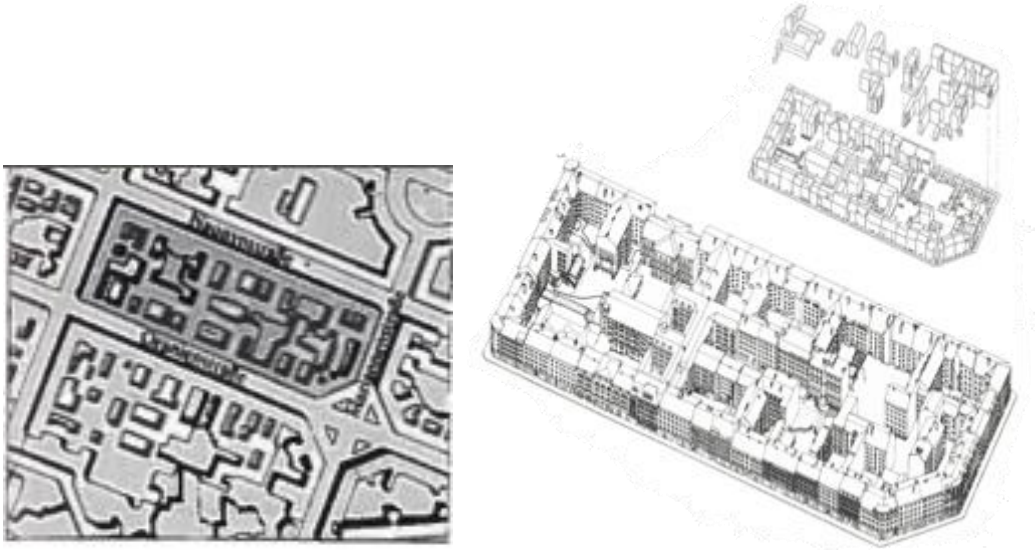


Fig. 6.15 Block at Naunynienstrasse from the Oranienstrasse Area, Kreuzberg, before transformation and a diagram of proposed changes; Ref: Nicolin, 1984b:127

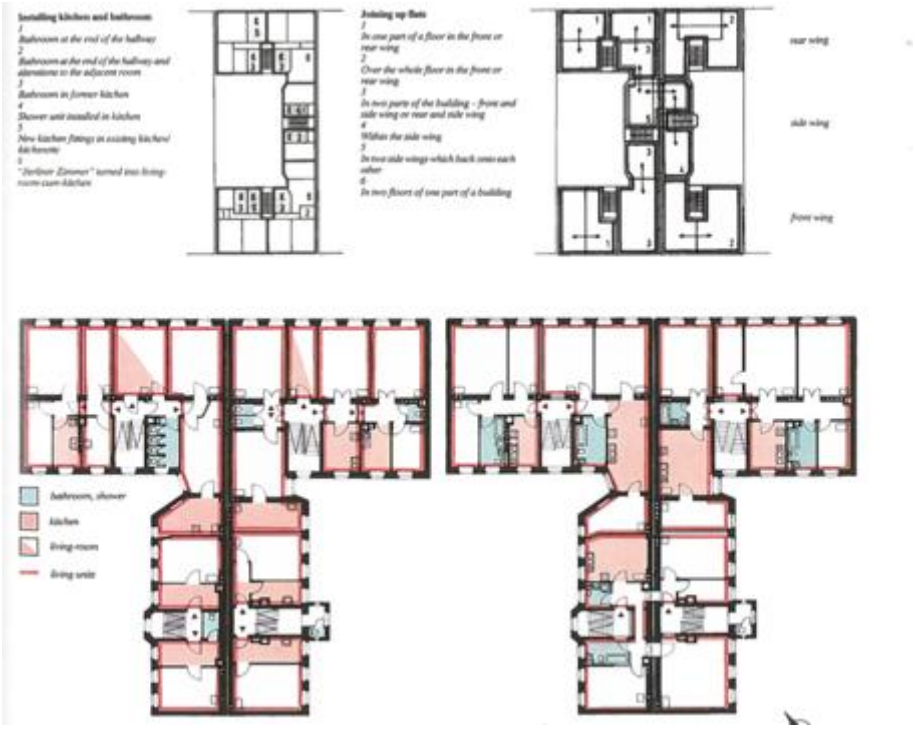


Fig. 6.16 The example of amalgamation of floors, installation of bathrooms and kitchens; Ref: Testa, 1987: 56

Where possible, the plans have responded to the IBA's requirements of double orientation in the flats. Due to economy, instead of installation of expensive central heating the apartments were supplied with gas-fire systems as a cost-effective solution. All reconfigurations were therefore adopted with ease within the largely repetitive and rectangular units of the nineteenth century blocks. To comply with environmental objectives, the buildings were made structurally watertight and insulated (Davey, 1987). They were further covered with new render, quirky paintings or graffiti, whilst the empty plots were greened and utilized for children playgrounds (Fig. 6.17); in some 'self-help' schemes, the blocks were strengthened with the exterior steel casing (Adalbertestraasse), or vividly stylized (Schlesischestrasse) (Fig.6.18)



Fig. 6.17 Newly rendered courtyard blocks, playground and park around Oraniensnstrasse; Ref: Author, 2014



Fig. 6.18 Adalbertestrasse and Schleschischestrasse careful renewal schemes; Ref: Author, 2017

In addition to the residential 'upgrade' of the blocks, other programs were also realized. The commercial spaces fronting the streets were modernized (Fig. 6.19); whilst in many courtyards (ie. 15 Adalbertestrasse), the dilapidated outbuildings were refurbished and like in the past used by the small industry as workshops, garages or offices (Fig. 6.20 and Fig. 6.21).



Fig. 6.19 Street fronts 1984; Ref: Nicolin, 1984b: 127



Fig. 6.20 15 Adalbertestrasse; two strory garages located in the courtyard of the block; late nineteenth century photograph (L), and the courtyard in 1984 (R); Ref: Nicolin, 1984b: 127

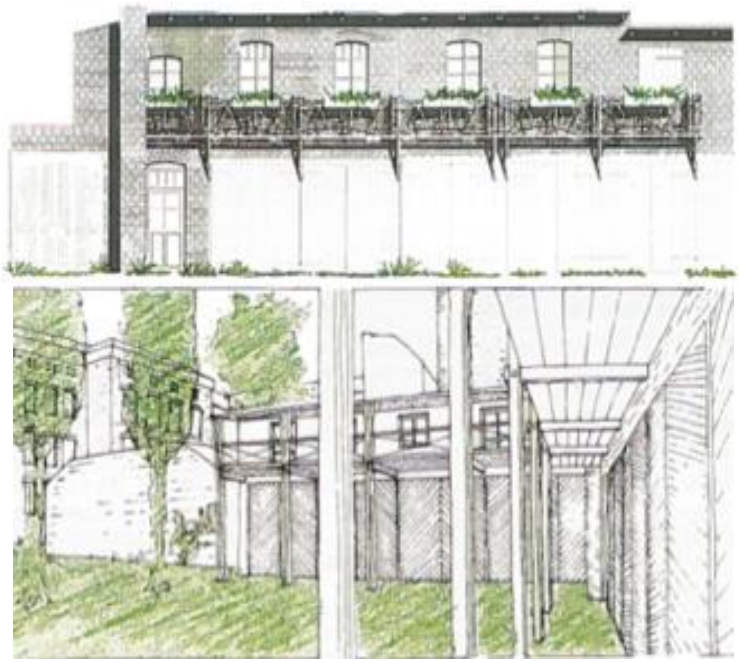


Fig. 6.21 Transformation at the 15 Adalbertestrasse; IBA Albau proposal for the renovation and reuse of the dilapidated garages; Ref: Nicolin, 1984b: 127

In the industrial courtyard blocks at Naunyunstrasse, the developers installed social and communal activities: a child day-care centre and neighbourhood club (Fig. 6.22); the kindergarten appeared at 4 Oranienstrasse (Fig. 6.23), and the void sites, (i.e. corner of

Skalitzer and Oranienstrasse) were cleared and converted for children play areas (Hämer, 1984, Davey and Clelland 1987a).

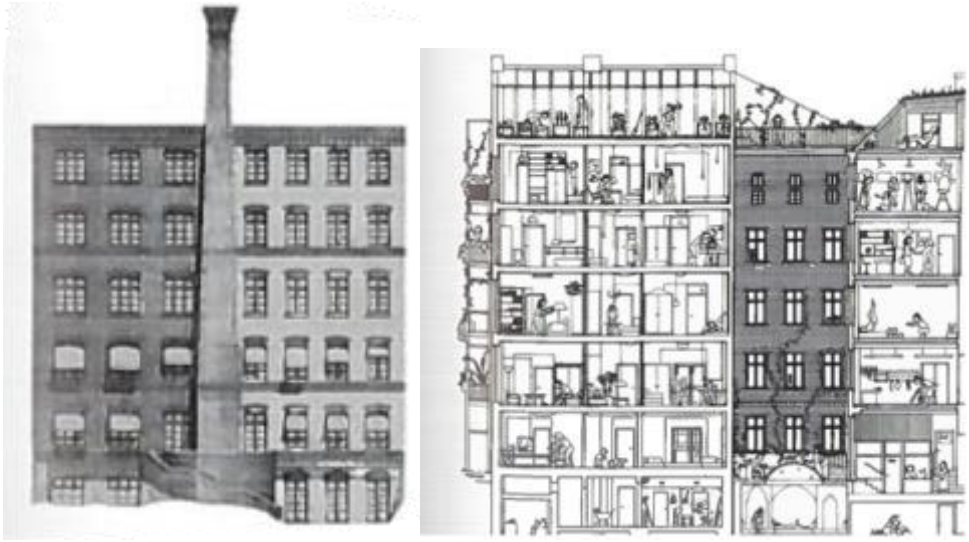


Fig. 6.22 Child day-care center at 69 Naunynstrasse (L), and the Neighbourhood centre at 72 Nanyunienstrasse/6 Marianienstrasse, (R); Ref: Nicolin, 1984b: 187

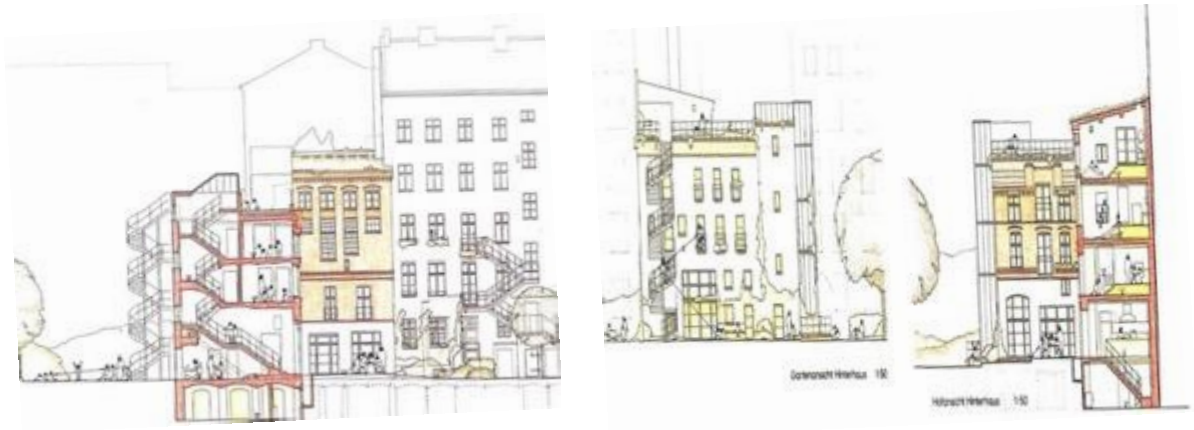


Fig. 6.23 Readaptation at 4 Oranienstrasse; Ref: Kleihues and Klotz, 1986

The improvements resulted in the new interest with the Kreuzberg district 'intermingling of housing, small business and productive activities'. After 1984, attracted by the renewed apartments, low rents, and 'creativity boosting atmosphere', the young Berliners were gradually moving in to the area (Davey, 1987, Krätke, 2011), giving testimony to robust network of blocks seen as remedy against the social restructuring and gentrification (Nowy and Columb, 2013). Accordingly, Kleihues and Stimmann argued about the great potentials of the typology of the block: the 'nostalgic coddling of old neighbourhoods and milieus had been considered a good form in Berlin architectural circles' (Kleihues, 1993: 406); it taught

those involved in rejuvenation of the blocks to 'recognize the difference between the speculative conditions of housing production and the value of its use' (Stimmann, 2009: 297):

> ... the first project designed to retain the aspect of traditional neighbourhood, on Christstrasse in Charlottenburg, seemed merely romantic, a partial social surrogate for a citywide loss of identity. This initial attempt to conserve the cityscape, which eventually led to declaration of the old Charlottenburg district as a renewal area, nevertheless proved popular and served as an example for many similar […] projects (Kleihues, 1993: 405-6)

Certainly, the Altbau's renewal projects demonstrated a new awareness and value of history, further illustrating that just as the urban space, also the urban programmes are closely intertwined with this nineteenth century architecture. Placing emphasis on 'the positive qualities of the tenement house settlement' and 'the value of its use' IBA informed further discussions about the 'quality of the public space' and importance of mixed programmes (Bodenschatz, 2010: 71). It seemed that a hundred years after its inception to the fabric of Berlin, the rediscovered Kreuzberg block stood as a testimony to the dynamism of the mid nineteenth century spatial logic.

To understand the account of the spatial and formal differences and similarities with the Altbau block, the next section examines the 1970s typology constructed for the IBA Neubau.

6.4.2. THE NEUBAU SECTION

Focused on a retrieval of history and 'closing the gaps' in the urban landscape, the Neubau blocks mirrored the typological objectives of Neorationalists. The buildings 'suspended between inventory and memory' (Rossi, in Frampton, 2014: 295) filled the voids of either individual plots or the large urban blocks. The projects were small, rarely larger than 150 dwellings in each scheme, and developed through a design approach resonating formal

aspects of the nineteenth century urban blocks. Whereas the nineteenth century block became the historical example for majority of IBA interventions, IBA Neubau also resurrected other typologies from the past such as urban villa (Caja, 2013). The Neubau entries featured on the plan of 1984 are marked in red (Fig. 6.24). Different examples of the Neubau typologies are seen on the Figure 6.25.

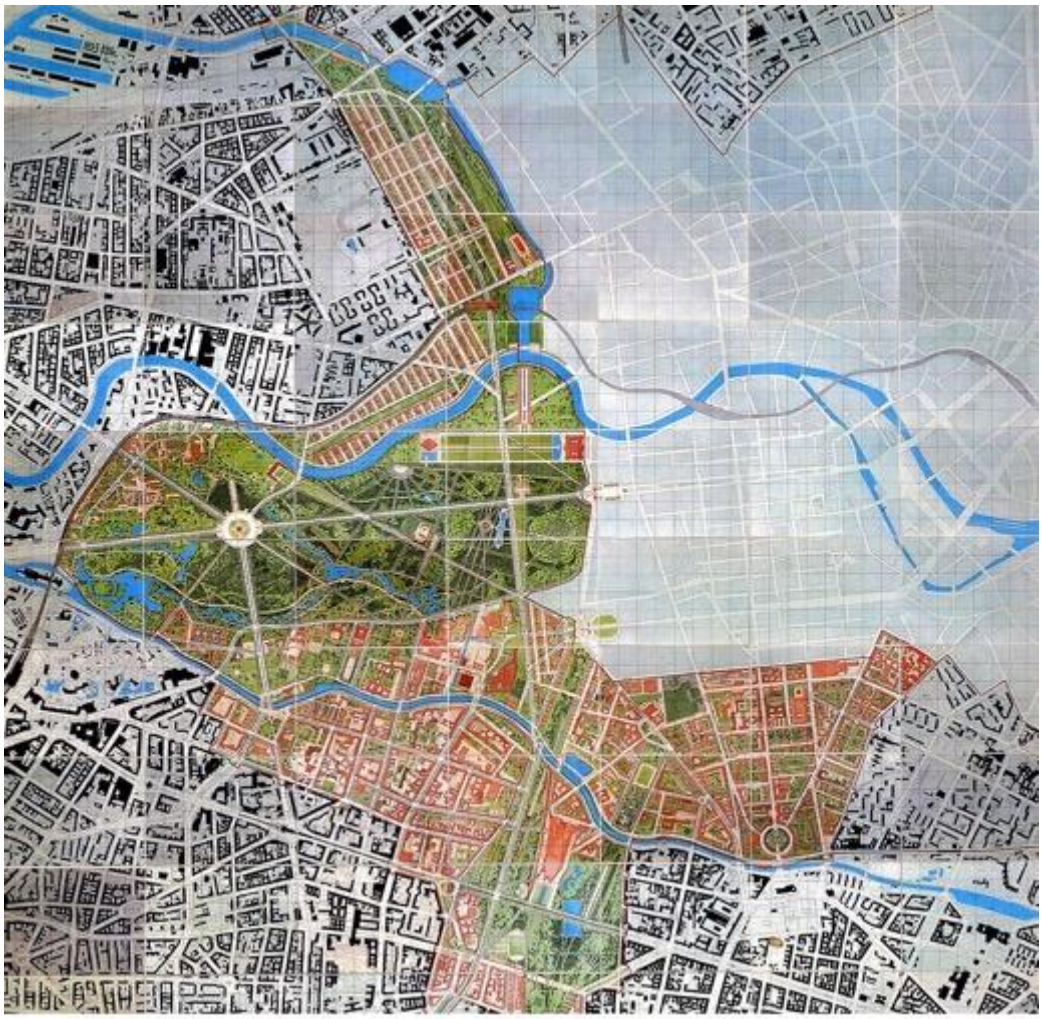


Fig.6.24 Map of Neubau IBA; Ref: Klaihues, 1986



Fig. 6.25 Different typologies developed for the Neubau IBA in Southern Frierdrishstadt, and Kreuzberg: Urban Villa block (L), the Ritterstrasse block (M) – both coordinated by Rob Krier, and the blocks at Lindenstrasse, Alte Jacobstrasse by Hans Kollhoff and Arthur Ovaska, and Am Berlin Museum (behind the Holocaust Museum), by Arata Isosaki; Ref: Caja, 2013

In the late 1970s, a flood of world-wide renowned architects was invited to reinstate the former properties of the nineteenth century typology of the block together with the form's density and spatial distribution, clear hierarchical order, vibrant street life, dynamic mix of uses and mixture of varied functions. To some architects, this former typology provided apparatus for analogy, whilst for others - a ready-use 'kit of parts' (Miller, 1993, Steadman, 2014). Thus the reinstated nineteenth century form offered the vast typological and spatial potentials. Designed according to 'each with a will of his own' attitude, the post 1970s blocks featured many diverse analogies with the form of its predecessor displaying varied postmodern tendencies, philosophies and trends that existed contemporaneously at the time (Kleihues, 1986).

In pursuit of raising an interest and support of the public, the designs were communicated through public exhibitions, publications and events. In line with the sensitive approach to the urban renewal, a great consideration was given to requests of developers, local authorities and tenants' aspirations. Still, such broadly participatory approach was often met with difficulties and delays, and represented the old saying: 'too many cooks spoil the broth' (Kleihues, 1986: 44).

Based on the parameters of the historical city, the forms responded to the requirements for the urbane building stock. They complied with the objectives set to the heights of the buildings, the requirements of building standards, and, 'more or less' conformed to the architectural order, materiality, and mixed use.
The preferred approach was to use the pre-war ground floor plan and urban types of the building block, square and the street, and at the same time not to build 'an imitation of the bygone age' (Kleihues, 1987: 42, Kleihues, 1993). The competition results illustrated as many formal and spatial manipulations in the blocks' exterior as in their internal organization. Drawing upon the formal autonomy of architecture and typological transformation, the new forms sought to comply with the contemporary thought such as accommodation of different uses within the apartment: family, work, and recreation places (Fig. 6.26).

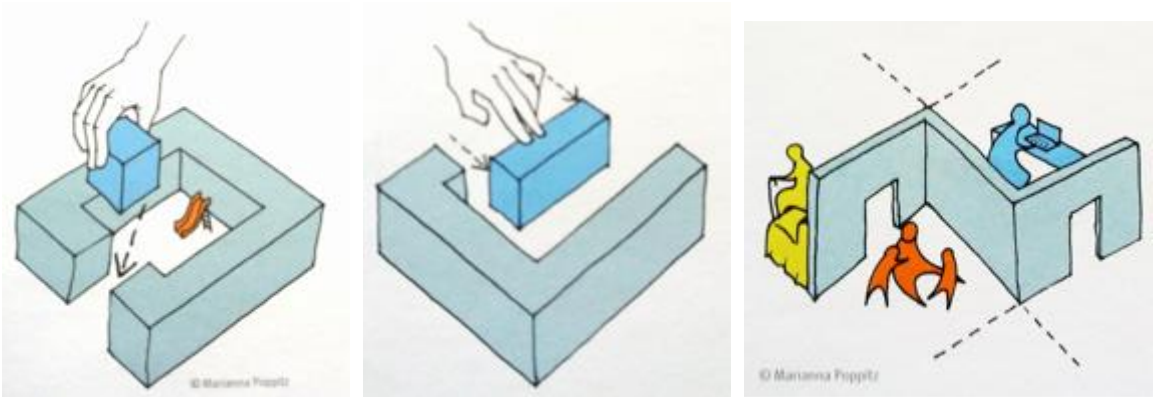


Fig. 6.26 Formal and spatial manipulation of the block structure; the diverse solutions to housing; Ref: Poppitz, 2014

As seen on diagrams (Fig. 6.27), this critical transformation could either leave the block partially open, fully exposing its courtyard from the street, or inform the grouped blocks conceived as one large organization, aligning the street. Whilst many examples demonstrated these changes in spatial configuration, the majority of the new blocks as seen on Figure 6.28 articulated a legible system of reference and orientation on the street. They focused on the formal volume, fixed heights and façade articulation and to some extent also street activities (Fig. 6.28).

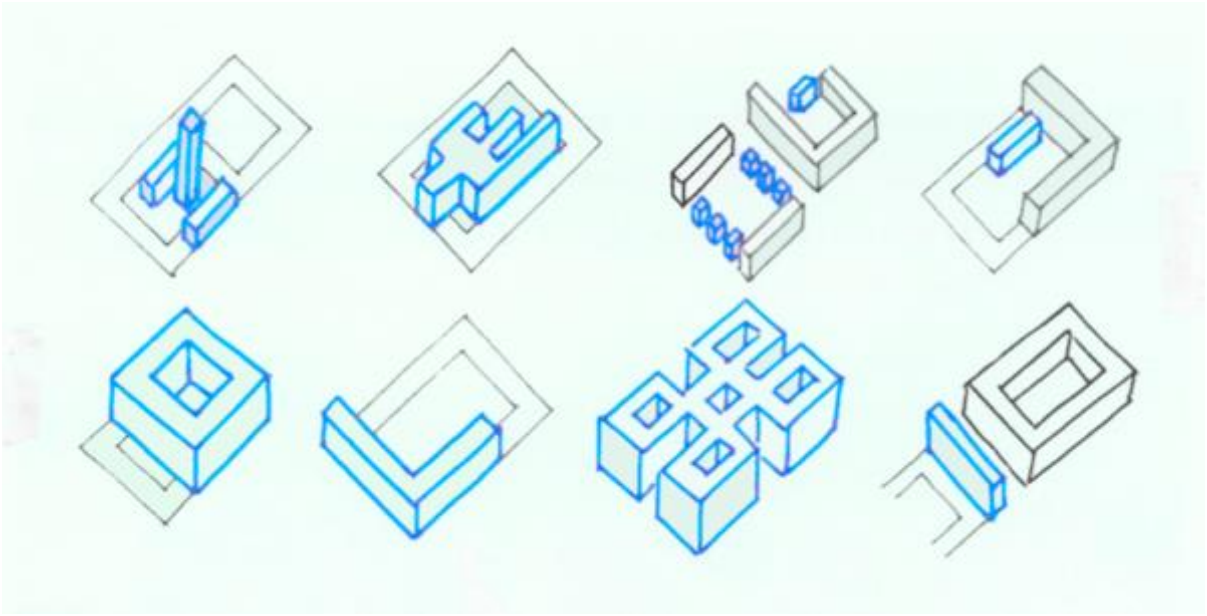


Fig. 6.27 Possible spatial manipulation of the form on the plan of the urban block; Ref: Author, 2018



Fig. 6.28 1970 typology of the block; The blocks by from the top left: Alvaro Siza, Inke Ballar, Aldo Rossi (R), bottom left: Aldo Rossi and Flammang/Grashorn (L), Oriol Bohigas (with Martorell and Mackay) (M), and Jean Flammang and Burkhard Grashorn; Ref: Author, 2014, 2015

As seen on the Figure 6.28, the variations are most notable at the point of the façade, demonstrating many references often taken from other than Berlin context; such as the use of triangular or rounded typologies unknown from the historical Berlin block, pipes or gutters that became ornamental, as well as the cornices, columns, buttresses, and eves. It seems that the architects simply reinterpreted the Berlin's nineteenth century steel fire staircases and lift shafts and used the dark clinker brick, to conceal the link with the legacy of the nineteenth century city.

Therefore, when the post-1970s typology is compared with the form of its predecessor we observe visual differences and similarities. Figure 6.29 illustrate the comparison between the blocks in Kreuzberg from two distinct periods – the nineteenth century typology from around the Oranienstrasse Area (Left Column), and the post 1970s typology (Right Column) - the block by Rob Krier's (as previously seen on the aerial photograph Fig. 6.25 in the middle, p: 220). The aim of this comparison was to study the block and the urban space it resides in, through series of diagrammes.

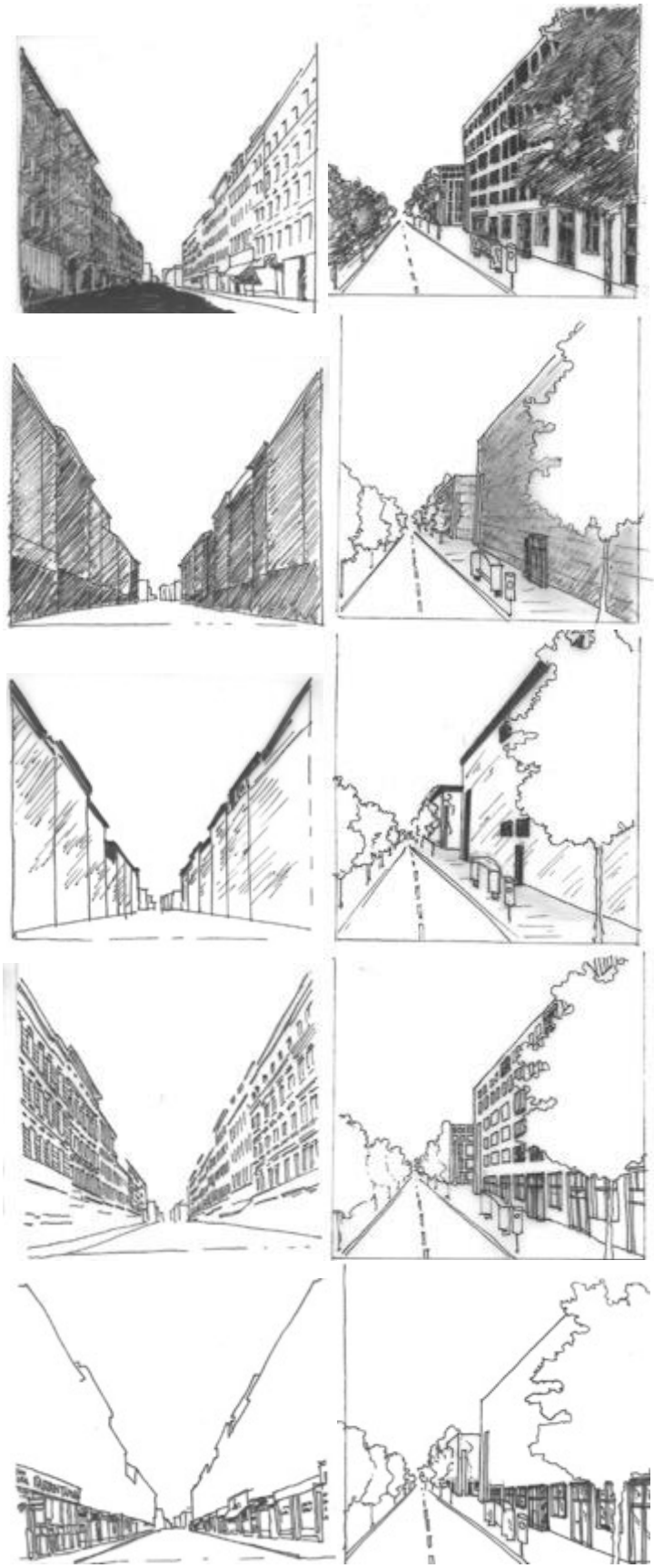


Fig. 6.29 Urban space articulation by the nineteenth century block in the Oranienstrasse Area (L) and the post-1970s typology by Rob Krier (aerial photograph seen on Fig. 6.25 – in the middle) (R); From the top: analysis of the linearity and shade, articulation of the bulk of the form, study of heights, façade articulation, and pedestrian level study of the block; Ref: Author, 2016.

Accordingly, whilst the tightly packed structure of the nineteenth century blocks illustrate continuity of its facades, the post 1970s blocks are disjoined depicting a fragmented façade to the street; they do not support the linearity on the street. Whereas the form of the post 1970s block is respectful to the historic scales and heights, the articulation of the shell in the postmodern typology differs from the 1860s block. As we move up the elevation, the postmodern block features mostly residential programmes, thus is unlike the form of its predecessor offering variety of residential and commercial activities. In addition, at the ground floor, the historic block is highly engaging at the street level, suggesting the permeability of the urban space. This quality is different in the post-1970s block, where the threshold between private and public is emphasized. Overall, we note the striking dynamism and complexity of performance in the spaces of the nineteenth century block that is in opposition to the static and largely monoprogrammatic spaces of its successor.

The differences between the blocks continue in their internal organization. In line with the objectives of the IBA, the blocks are meant to accommodate varied modes of residence, hence, unlike the regularly deployed and undifferentiated spaces of the nineteenth century block the postmodern blocks featured highly diverse arrangements. For instance the block at the border location of West and East Berlin, at the Checkpoint Charlie by Peter Eisenman. Answering to the brief, the new typology filled the void corner site completing the perimeter of the larger group of blocks (Fig.6.30). The site and the block's plan were both conceived in accordance to the architect's interpretation, seeing Berlin as a 'garden of walls' (Eisenman, 2013, Eisenman, 2013a). In analogy to the history of Berlin, Eisenman proposed superimposition of the two orientation grids. The first, with its rectangular structure responded to the topography of the Friedrischstadt district, whilst the second grid - the Eisenman's invention of Mercator geodesic grid - represented symbolic connection between the past and the present (Eisenman, 1984) (Fig. 6.31). It further seems that the two perimeter buildings responded visually to the political context of the cold war, resembling the form of the Berlin's military watch towers.



Fig. 6.30 House at Checkpoint Charlie; Ref: Author, 2016; Schneider, 1986, Landsarchiv Berlin F Rep 290 Nr. 0284763

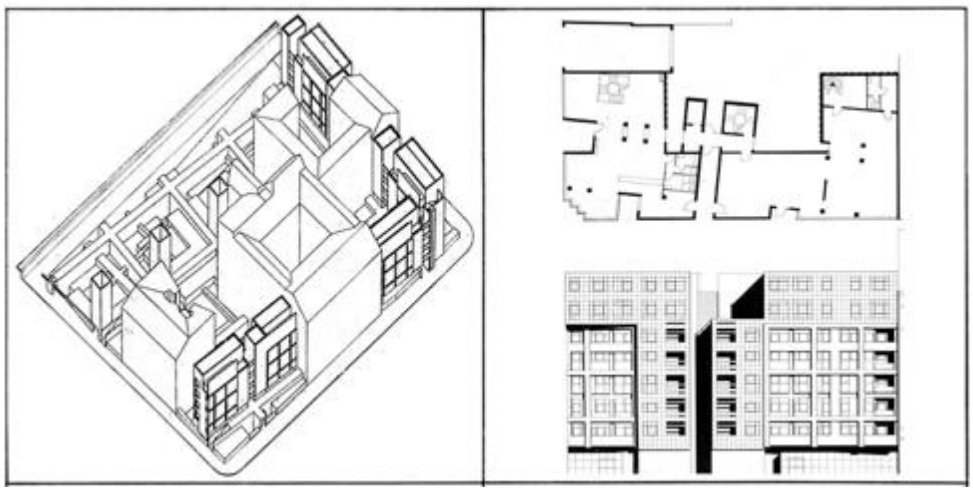


Fig. 6.31 Block-monument at Checkpoint Charlie, grid of 'garden of walls (L), the ground floor plan and elevation (R); Ref: Caja, 2013

As seen on Figure 6.31, the interior of the block contained individual apartments that offered a differentiated type of residence, i.e. single parent units, family units, and 'barrier free' apartments for eldery residents; furthermore, the open plan living area performs as a walk-through space leading to the small, windowless rooms. In response to the political and historical situation of the city at the time, the space of the courtyard was conceptualized as an 'artificially excavated city with overlapping walls and towers'; it took up a concept of an 'artificial ruin' and a 'walk-in planar monument'. Upon completion, the block received high accolades of the IBA jury, who praised the contextual 'concept of the monument' and the project's 'high artistic and intellectual value' (Salgo, 2012). Yet at the same time, its typology clearly demonstrated the high impact of the architect's design thesis on the form and spatiality of the block.

Overall, the mix of different typologies, immediately made up for a more complex typological landscape, significantly contributing towards the new architectural aesthetics in Berlin (Ladd, 1997). Typically, the five and six story blocks were accompanied by other urban typologies of urban villas and high towers (Fig. 6.32). The interior layouts included a mixture of two story maisonnetes, flats for single occupants, family apartments surrounded by the stack of studios; some apartments included balconies, large enough to provide the space for meeting with neighbours (Fig. 6.33). The architects have simply worked within the ethos that the mix of different types of units would make up for more complex neighbourhood community, resulting in rich social mix (Miller, 1993).

Their projects further revealed a sentiment for the old neighbourhood atmosphere reinforced by the kind of mix of programmes, offering 'a fresh perspective on the connections between buildings and their residents' (Ladd, 1997:106).



Fig. 6.32 Typological variation; John Hejduk (L), Inken and Hinrich Baller (M), Oswald Mathias Ungers(M), and Grupo 2c(R); Ref: Author, 2016



Fig. 6.33 Semi-private balconies spaces; Arata Izosaki(L), Hans Kollhoff with Arthur Ovaska (M), Arata Izosaki (R); Ref: Author, 2016

Except for the exterior of the buildings carrying the post-modern themes within the material detailing and enlarged individual forms from elsewhere (such as corner columns and balconies), or tall towers (Fig. 6.34), further spatial modification can be seen at the point of the ground space. Here some blocks feature subdivision of circulation systems unknown

from the structures of the historic block: i.e. split levels of entry, and use of space directly below the block as garages (Fig. 6.35).



Fig. 6.34 Postmodern exterior of the blocks by Aldo Rossi, and Rob Krier; Ref: Author, 2016



Fig. 6.35 Split entry to the block; Rob Krier (Ritterstrasse), Inken and Hinrich Baller(R); Ref: Author, 2015

Other spatial changes further regard the block's interior, where the single large courtyard is conceived as the landscaped place for relaxation and laid out with internal paths (Fig. 6.36). This spatiality, as earlier noted by Panerai et al (2005) was earlier deployed in the 1930s Siedlungen Römerstadt. As seen of the Figure 6.37, the space of the courtyard is also arranged in accordance to a different hierarchy between the central part of the large green court, the paths, and the green-belt space adjacent with the block.



Fig. 6.36 Highly Landscaped interior of the block, with the internal alleys; Arata Izosaki (L)(M), and Rob Krier (Raustrasse) (R); Ref: Author, 2016



Fig. 6.37 Hierarchy at the courtyard level, space organization according to semi-private and private spaces in the block by Rave and Rave, Kreuzberg; Ref: Author, 2015

Further differences in the spatial and programmatic organization can be noted on Figure 6.38. The buildings fronting the streets are conceived as one group of linked houses and appear to demonstrate a lack of possibility of further programmatic or spatial transformation; as such also, they transpire to undermine the IBA's aims for the easily adaptable and replaceable blocks that would act as a 'palimpsest' - as wished for by Colquhoun (Colquhoun 1989).

The long linear facades of the perimeter blocks literally demarcate a rigid threshold between its interior space and the space of the street (Fig. 6.38). In Rossi block (Fig. 6.38 on the right) the facade line filled by the individual residential entries, despite the use of the arcade colonnade, is not flexible. The block does not allow fluidity and permeability known from the nineteenth century fabric and strictly distinguishes between public and private spaces; its spatiality is different.



Fig. 6.38 Lack of permeability at the ground level; Ovaska with Kollhoff (L), Aldo Rossi (R); Ref: Author, 2016

As observed, the Neubau response to the twentieth century spatial and architectural standards resulted in the array of visually varied blocks. Reshuffled across Berlin's fabric, their many patterns, layouts, and green infrastructure, multitude of models, forms, depths and heights, featuring different materials, details and design approaches, resonated with the contemporary requirements of variety in the city. Acting as the 'backdrops to the drama of diverse urban life' of Berlin (Clelland, 1984: 21), these blocks visually strengthened the post-modern urban identity of Berlin (Kleihues, 1987, Kleihues, 1993, Broadbent, 2010).

It further transpires that the new typologies that were highly reliant on the design aesthetic, 30 years since their establishment still 'remain unchanged' (Bereri, 2013). Although, the time scale for this study has not allowed a thorough research of the fluctuations made in the interior spaces of the blocks[10], over the four years of my travels to the research settings I noted the high levels of maintenance in the external spaces of the block. Between my visits, the courtyards of the self-contained blocks appeared to look the same. In some solely residential blocks I noticed a high level of control over flower beds, the lawn and internal paths. The Research Initiative IBA 87 conducted at the Institute for Planning and Research of the Technical University of Berlin in cooperation with the Landesarchiv Berlin in their report underlined the crucial objective of administrative management in the spaces of the Neubau blocks (f-IBA.de) to 'preserve' the postmodern 'look' of their forms, and to allow only the 'subtle interventions in the existing buildings'.

[10] the difficulty was posed by the private ownership of apartments, and the only possibility to it would be to obtain and list changes in ownership from the office of planning permission. This certainly uneasy task, would also require more time for conducting this study.

After the completion of 1979-1984/87 IBA, and the 1989 *Wende*, the objectives of careful urban renewal and critical reconstruction, were adopted by the new framework. In 1995 under the Senatbau Director Hans Stimmann, the second phase of the reconstruction of the city - the *Planwerk Innenstadt* (The Inner City Building Plan), once more situated the essence of Berlin in the pre-war block.

6.5. THE PLANWERK INNENSTADT, 1995

A sequel to the IBA, the new development policy Planwerk Innenstadt (The Plan Inner City) followed the restoration of the nineteenth century dense patterns of streets , squares and blocks, further portraying the typology as a unit of urban composition and a 'favoured building type' (Stimmann, 2002 :9). At the time, Berlin's architectural historian and leading theorist of the 'critical reconstruction' Dieter Hoffmann-Axthelm, argued accordingly:

> in spite of all destruction Berlin is an extant city, shaped by history. We do not need to invent a new city, certainly not a metropolis of the third millennium (Hoffmann-Axthelm, in Ladd, 1997: 231).

To emphasise the historic character of the city, the framework set a certain 'look' of the buildings influenced by the Prussian neoclassicism and the eighteenth century designs of Berlin architect Karl Friedrich Schinkel (Hoffmann-Axthelm and Albers, 1997). The urban plan was to follow the 'plot urbanism' with the view to avoid the long linear facades featured during the IBA Neubau. Each individual block meant to emphasise the entry gate to allow the street activities and diversity known from the pre-war times. The policy also followed the nineteenth century building codes, and established the strict new heights limits at 72 feet for the eves and 100 feet for the set-back attic spaces (Ladd, 1997).

The proponents of the new critical reconstruction claimed that the decision to reestablish the historic 1862 urban plan with its block typology and stone materiality, would 'cure Berlin

of its urban 'deformities' such as its unsightly voids, and put the city back on the map of an allegedly shared aesthetic of European capitals' (Heckner, 2010: 305).

More so, a decisive rationale for reestablishment of the Berlin historic structure of urban plan and the block was provided by the black and white figure-ground plans. As seen on the Figure 6.39a and Figure 6.39b - the *Schwartzplane* have graphically illustrated the gradual weakening of the Berlin fabric after WW2 (Stadtentwicklung.berlin.de).

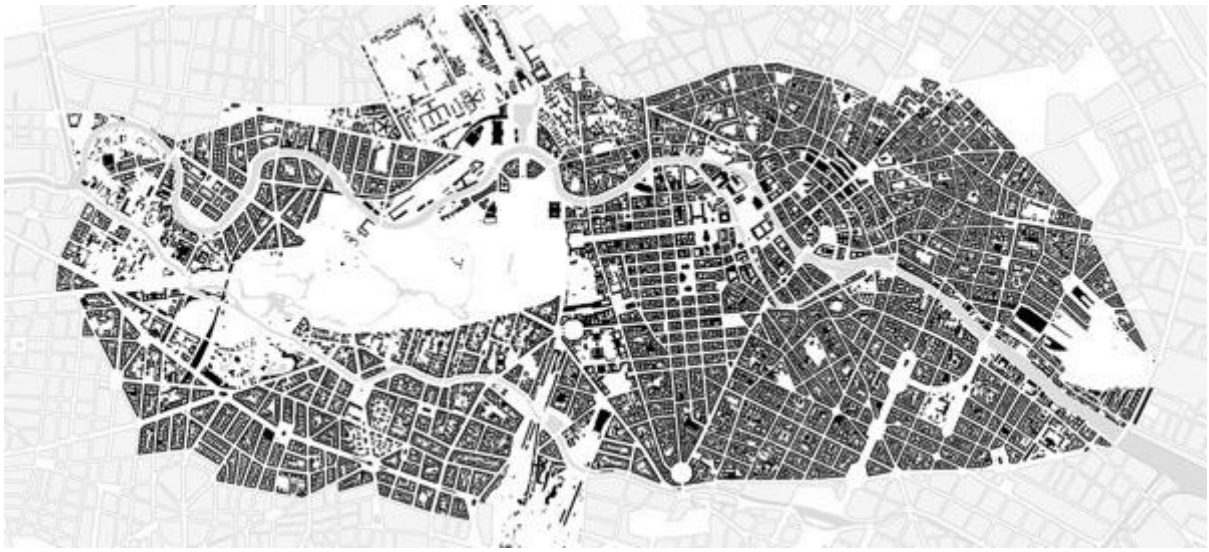


Fig. 6.39a Pre 1940 black and white, dense figure-ground plan of Berlin; Ref: Stadtentwicklung.berlin.de

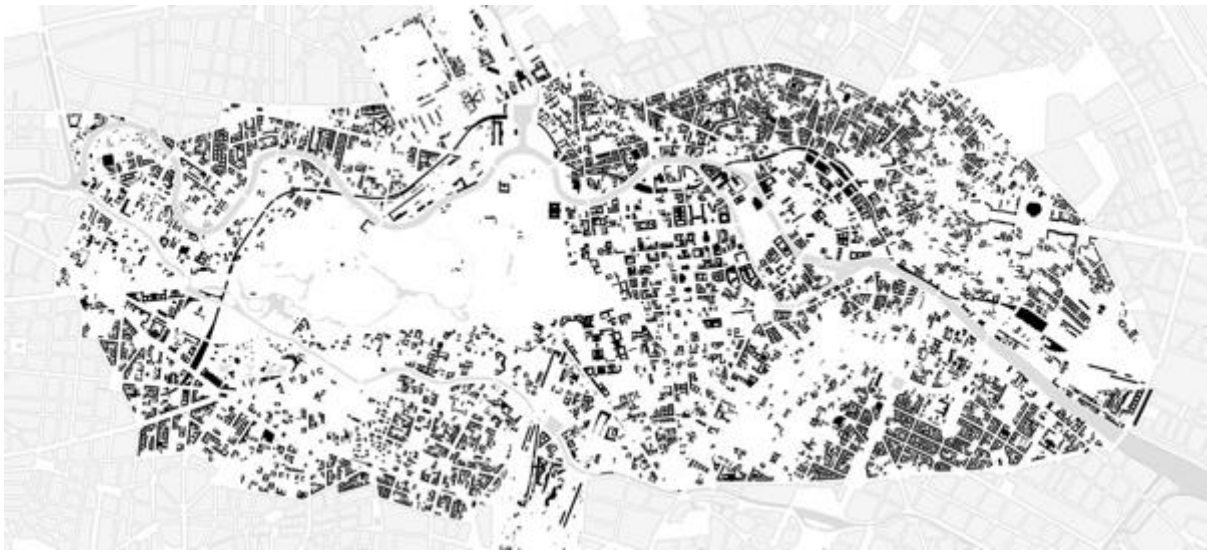


Fig. 6.39b Post WW2 figure-ground weakened fabric of Berlin; Ref: Stadtentwicklung.berlin.de

However, the decision also aroused suspicions criticisising the new policy for its retrospective and spiced with a 'whiff of nostalgia' undertones; in light of the contemporary scale of commercial activities, real estate construction, and capital investment, the new guidelines were simply branded as 'a hopelessly romantic attempt to turn back the clock'; moreover, despite the Hoffmann-Axthelm's focus on the small, plot scale development that meant to restore the urban neighbourhood, the 1995 critical reconstruction developed the block resembling 'mere street decoration, a façade that disguised the continued impoverishment of urban life' (Ladd, 1997: 232, 233).

The framework was further criticised for its 'formalistic straight jacket [that] produced a series of spiritless buildings' (Heckner, 2010: 305), and the transformation of 'the fascinating diversity of the city into banal uniformity' (Ladd, ibid). Harsh critic of the history-driven theme, Berlin architect Daniel Liebskind, argued: 'you can't restart history by pressing a button. It becomes a kitsch idea of history' (Riding, 1999). Still, in defence of his decision to restore Berlin as the image of an 'old city' rather than earlier seen series of 'architectural objects' of 'sculptural value', Stimmann pointed out:

> I was a 1968 man, interested in social and political problems, but not in history. We associated nostalgia with conservatives. But my ideas changed. We slowly saw that old things were not bad. And with the International Building Exhibition, we accepted history. You know, the Berlin of 1989 was not the result of bombing, but of politics and bad planning by people who were against history. For me 90 percent of old things are better, so let's stop with experiments (Stimmann, 2009a).

Stimmann's decision was not only directed towards the historic style and questions of aesthetics. The reestablishment of the urban plan, and the boundedness of space, from the strictly urban perspective, provided for a variety of positive outcomes. After the reunification, Berlin's yearning for continuity was back on the planning agenda, whilst the urban block as a design apparatus, with its urban facades continued to define public space, creating certain density, and allowing for social mixture. Foremost the typology also allows a

re-evaluation of architectural and planning principles of the current day, providing a new interpretation of history for future urban interventions.

Yet, conceived in accordance to the same architectural and urban design standards as the IBA blocks, the buildings developed after 1995 perform alike - both spatially and formally. Whilst this account will become clearer in Chapter 8 where I discuss the block commissioned by the Planwerk Innenstadt, the performance of the post 1995 blocks similarly to the spatiality of the IBA blocks, is unlike the dynamism and permeability of the 1860 spaces of the block described so far. In the next section I illustrate a brief sketch of the historic typology to verify its continuing spatial performance.

6.6. THE MID-NINETEENTH CENTURY BLOCK TODAY

As illustrated earlier, the careful renewal section of the IBA Altbau provided testimony to the values incepted within the form at the time of the block's arrival to the nineteenth century fabric of Berlin: the close interconnectivity across the ground floor, fluidly linking the internal spaces of the block, the courtyards with the space of the street, and further also the block's formal and programmatic adaptability, permeability and flexibility. These values, as I will show, are still legible in the urban fabric of Kreuzberg today (around the Oranienstrasse Area) and continue to be recognized as generous spaces designed for flexibility and adaptation that could be further arrayed or subdivided. The blocks' specific structure can be seen on Figure 6.40.



Fig. 6.40 Structure of the nineteenth century block; Ref: Author, 2014

As I demonstrated in Chapter 3, from the outset Luisenstadt (today Kreuzberg, the Oranienstrasse Area) was intensely occupied with light industries, production, small manufacturerers and living programmes that coexisted in a particular synergy. The Altbau section of the IBA demonstrated that within the spaces of the original blocks built with the steel structures, the block embraced various programmes. This perspective validates the dynamic and ongoing 'update' of the spaces of the block, as the value envisaged by Cerdà in his *Teoríà* and practiced by Hobrecht and Assmann. The form developed accordingly, permits not only its own spatial and formal evolution, but also programmatic and economic development of the city (Fig. 6.41).



Fig. 6.41 The nineteenth century typology as a backdrop of the city, and catalising economic and programmatic development; Ref: Author, 2015

Thereby also today, the regularly conceived and undifferentiated typology (Fig. 6.42) offers a system of change of spatial and programmatic requirement, reoccurring from home to light industry programmes, or from working to living uses. As I have illustrated, it is the quality of nineteenth century urban structure that enabled proximity between work and living spaces, further permitting different qualities of space, and which until today allows to group the particular programmes within one block or larger organization of the blocks.



Fig. 6.42 Undifferentiated and regular structure of the mid 1870s block today; the block at Naunynstrasse (L), and Oranienstrasse (R); Ref: Author, 2016

As exemplified by Kreuzberg Mix, like in the past also today the small and medium industries still exist together with the places of residence; they network and collaborate across scales, disperse and reorganize across the spaces of individual buildings, and the whole urban blocks. The ribbon of individual yet grouped blocks, links the structure along its perimeter, as it does across the individual plot, thus permitting fluid agglomeration of economic activities (Fig. 6.43 and Fig. 6.44).



Fig. 6.43 Linked and continuous structure of the block permitting fluidity of economic functions; Ref: Author, 2017



Fig. 6.44 Mutual persistence of living and working activities across the fluidly conceived ground spaces of the block; Ref: Author, 2014

Such is the example of the block at Erkelenzdamm, located in proximity to the active Oranienstrasse (Fig. 6.45). The block fronting this quiet residential street provides housing units, whilst it's three interlinked courtyards, accommodate the light production industry and creative programmes, ie. galleries, artists, graphic and model making studios; in addition, all these units work with the same material (plastic), also manufactured by the factory located within the block; these programmes are advertised at the point of entry to the block (Fig. 6.46). In the courtyard, tenants reused subterrain cellar spaces as the storage.



Fig. 6.45 11-13 Erkelenzdamm, mix of programs; Living and working; Ref: Author, 2014



Fig. 6.46 Block is occupied across all its scales; the first and second courtyard, and makes use of its cellars; Ref: Author, 2014

Whilst the 'Kreuzberg Mix' was rediscovered during the IBA, it is the form and spatiality of the nineteenth century block that enhances and strengthens the social mixture of the Kreuzberg's inhabitants together with its broad range of functions. Thereby also today, the same logic of the block plays a fundamental role in the process of urban gentrification and economic development in the area. This perspective further illustrates the nineteenth century typology as a spatial and formal model that since its inception plays a strategic role in other than formal processes of the city's development, further contributing to urban economy and socio-cultural evolution.

Correspondingly, since the IBA, Berlin on the whole but in particular Kreuzberg, acts as a magnet for creative industry, the young European artists and designers. The area holds the various cultural, business and technology programmes (ie. advertising, art and architecture firms, antique shops, craft and design studios, film and music companies) that at present are seen by the authorities as the productive 'assets' in boosting post-industrial economy. With the high concentration of these interrelated firms and agencies, can often be found at the depth of the second, third or even forth courtyard,(as in the example of the Orannien-Hof seen on Fig. 6.47) the district seems to translate with ease the creative, cultural and knowledge industries into economy value, contributing about 21% of the city GPD (SenWTF, 2008).



Fig. 6.47 Courtyards at 183 Orannienstrasse, and the agglomeration of micro firms; Ref: Author, 2016

The interconnected network of courtyards is therefore promoted again. The fluid organisation of the block enables such unique spatiality and logic of use since the form's inception. This also allows Kreuzberg to function as a spatially stratified local agglomeration of firms and agencies from different subsectors of the cultural and creative industries that share preference for localities. Accordingly, as supported by Stefan Krätke (2010, 2011), today Kreuzberg assists the tight agglomeration of cultural economies, particularly the music industry, and is considered as one of the most vibrant, cultural hubs and home to the large number of music labels and alternative clubs (Krätke, 2011)[11]. In support of the governmental statistics, Krätke argues that they share high regards for 'a creativity-boosting atmosphere' in addition to formal inter-firms ties and cooperative relations. I argued that it

[11] During the day, the function of these alternative music establishments, is rarely expressed on the exterior. The clubs, which often occupy the whole building block across its all six floors, are however revealed and enliven at night, when the groups of the alternative music fans are seen queuing in front of the buildings.

is the spatial performance of the ‘Berlin Mix’, which allows such intermingling of small businesses, productive activities and housing.

As I have shown, the spatial and formal qualities of the former Berlin block form part of this programmatic intensity through its density, possibility of flexible inhabitation and proximity of the spaces in the depth of the block to the space of the street. The nineteenth century block’s ‘lack of functional determinism’ (Kühne, 2017), resulted in buildings that could be repurposed for varied programmes, what consequently amasses for the dynamism and richness of the Oranienstrasse today. Whilst the front buildings contain much housing, they also house offices, cultural activities or service industries. At street level, the block serves a vibrant retail and leisure industry during day and night (Fig. 6.48).



Fig. 6.48 Vibrancy of the block’s spaces; Author, 2015

The top floors of the blocks are mostly residential, however not strictly reserved for this one use. They can provide space for offices, banks, or entertainment industry; cinemas, casinos, and creative workshop spaces still found in proximity with residential use (Fig. 6.49). Fluidly, the block draws closely its space with the space of the street, spilling the activities onto the street (Fig. 6.50).



Fig. 6.49 Entertainment industry included within the ground floor, basement, and upper floors; Dresdenstrasse (L),(M), Naunyenstrasse(R); Author, 2014



Fig. 6.50 Brick-a brac shop at Oranienstrasse, and the florist at Dresdenstrasse; Ref: Author, 2015

Like the blocks aligning the streets, the courtyard spaces also vary in programmes: from the green residential space (Fig. 6.51), or playgrounds, to service yards, to a combination of cultural and social (Fig. 6.52), industrial, and production spaces (Fig. 6.53). The transformation happens fluently sometimes to the point of almost being an anecdote.[12]

[12] Since the start of this PhD in 2014, I have visited Berlin 12 times; whilst in Berlin, I stayed at the BaxPax Hostel in Kreuzberg. It is fair to say that over the years I have befriended the easy-going staff at that quirky place. During the last couple of my visits I was arriving at BaxPax without making any advance booking, and the place was always available for me. Only the very last time, in Autumn of 2017 planning to stay for a couple of days to my surprise, the place was shut; the whole building was now occupied by the cinema. On the spot I found out that the hostel has moved few streets down to the block at Schlesische Strasse; luckily, once again I was able to stay without prior reservation. This story however made a great impact on me. Seeing the transformation of the nineteenth century block literally happening in front of my eyes prompted me to finish my thesis; so that this happened at the time when I fell out of love with my work and the block all together.



Fig. 6.51 Playground at the Naunynstrasse block (L), spaces of relaxation at Adalbertestrasse (M), and the pub and music establishment at 38 Naunyenstrasse (R); Ref: Author, 2017



Fig. 6.52 Views into courtyards: Turkish Social Club at 8 Oranienstrasse, Grocery Shop at Dresdenstrasse and the Voo clothing shop at 24 Oranisenstrasse; Ref: Author, 2014



Fig. 6.53 Production spaces at 18 Oranienstrasse (L) (M), and the courtyard at Ohlauerstrasse, containing old factory building (R); Ref: Author, 2017

As shown, the nineteenth century block is a highly resilient urban structure and until today fluidly accepts many changes and different functions. Conceived in the nineteenth century

as regular spaces that correspond with the structural elements, also the block's facade does not flaunt what goes on behind it in terms of either the programme or structure.

6.7. CHAPTER CONCLUSION

The 1979-1984/87 IBA was 'the largest urban renewal scheme' of the contemporary world (Bodenschatz, 2010). It provided an occasion to re-confirm the continuity of formal and historical fabric of the city. Arising from the currents in architectural theory, its' framework for the first time since the Modern Movement regarded both the city together with its buildings, allowing the architects and planners to think about the urban space and architecture in parallel. Once again the urban area was seen as an agglomeration of historic spaces that were established and transformed over time, and its architecture demonstrated a strict relation to the historical forms and urban context. In Berlin, as elsewhere in Europe, the block as an urban typology was recovered from history, and became the apparatus of urban design. The return to the pre-modern planning, and qualities of the block, with its mixing and integration of programmes, and promotion of the ground plan, have effectively brought back the continuity of the city form cancelled by the modernist phase.

This section illustrated a two-stream approach to the city and history. On one hand it regarded the rejuvenation of the nineteenth century street-block structure with its individual buildings grouped together along the street, and performing together as one harmonious whole. On the other, the critical reconstruction section, reinterpreted the formal values of the nineteenth century block typology. Promoting 'proximity' and juxtaposition of the historic and the new forms, the 'differentiated' Neubau blocks combined living, and recreational programmes, and some commercial uses. In analogy to history and in lieu with the Neorationalist tenets, the Neubau section sought to visually reconnect the present with Berlin's pre-war past. Using the block, or in Kleihues' words: the 'physionomy' of the historic Berlin (Kleihues, 2007), it focused on the image and aesthetic continuity with the past, drawing upon memory.

As I have shown, the eclectic approach, reflecting upon the tenets of architectural theory at the time, allowed the design decisions to be made on the basis of individual interpretation and according to the own design thesis of an architect[13]. Kleihues explained this 'ready to experiment' and 'open' approach as promoting the variety in unity, in following words:

> I was concerned to find an approach that, instead of striving for a higher unity based on the dissolution of different or conflicting interests, would aim at solving a merely apparent contradiction, by encouraging the free, and in sense even autonomous, development of separate elements of the city (building, block, street, square) while ensuring their integration into a larger whole. […] Although this did not presuppose any priority of urban planning with respect to the individual architectural object in a sense of a value system, it did presuppose the logic of planning decisions. […] The priority of the plan and configuration of the city thus defined, were and remain a methodological constituent of the theoretical concern with the critical reconstruction of the city (Kleihues, 2007: 41).

Still, the IBA's architectural concept encompassing both the city planning and design of the individual blocks, have drawn large criticism from various sources, including theorists, architects, academic, journalists and the general public. The proponents of critical reconstruction have been mainly accused of 'rigid adherence to their own architectural and city-planning philosophies' and further called 'facists' (Barrows, 2007). Not all critiques are relevant, and thus are outside the scope of this thesis. Yet part of the debates about the planning and building developments regarded the built projects and how they responded to the objectives of the IBA. Already in 1983, the opponents accused the IBA about lack of 'correct town planning concept', implying 'that the urban concept was rooted only in a historical and formalistic ground lacking any scientific solidity'; Lampugnani (1984) argued

[13] Two chapters that follow, (Krier + OMU) make that point explicit. They illustrate that the decision behind the typology of the building block, was made based on the subjective understanding of the overall 'character' of Berlin by the individual architects. Chapter 7 and Chapter 8 will elaborate on this different understanding of the continuity in architecture.

against this line of critique, pointing to the thorough preparatory research and consultation with experts from varied fields and the tenants (Lampugnani, 1984)[14].

Lamenting over the reconstruction and unity of the street, Colin Rowe (1984a) summed up the post-modern theme of reconstruction as the 'hostile examination of details' of 'several suburbs in search of the city', that featured 'species of an architectural zoo'. Still, he also admitted that the IBA represented the best what existed at the time (Rowe, 1984a: 93). Alan Colquhoun (1989) similarly pointed to the disadvantage of the post 1970s planning procedures. Arguing against the 'blocks by different architects and in different styles [that] face each other across the streets', he noted that the new spatiality denied 'unity and optical linearity of the street' (Colquhoun, 1989: 232, 239), known from the past. Yet, he also admitted that the new developments demonstrated 'a welcome return to a new concept of the public space' (ibid).

Despite the polarity of opinions, measured from the perspective of spatial performance the blocks carried a number of morphological similarities with the nineteenth century form. Like their predecessors, the Neubau blocks emphasized a clear pattern of block-street development, re-employing the human scale on the street. They bound the urban space, and clearly defined sequence of buildings and courtyard spaces. Their forms contributed to the notion of the street, which after the 'dull' period of Modernism, became a new type of public space (Colquhoun, 1989), and away from traffic, it offered a place to walk and play (Lampugnani, 1984). Furthermore, the Neubau blocks were also deemed 'likable' by the tenants (Bereri, 2013).

Yet, conceived in accordance to the 'open' interpretation of history and formally autonomous, the new typology illustrated highly articulated and pre-ordained living arrangements. The room layouts included open plan living, collective apartments, maisonettes, and single parent flats, sometimes with no right-angle walls. The courtyards

[14] Accordingly, Miller (1993) illustrated accordingly that the new approach to planning was paralleled by the new attitude to site development. Rather than the prior sale of the land to developer followed then by plan proposals, the IBA have chosen the contractors by means of competition. The winning plans were considered not only for aesthetic values but also financial viability, highest quality of construction, and the guarantee of the lowest rent after the development

were predominantly reserved for relaxation and play. Their dichotomous organization, differentiating between private and public, sketched the ground surface as clearly assigned to the buildings that contained functions hardly open to adaptation. Comparing with the nineteenth century blocks these values epitomize the different spatial performance of the post 1970s block.

Unlike the fluid and permeable spatial organization of their predecessor conceived as one with the city (Fig. 6.54), the post 1970s block with the 'protected' courtyard spaces often hidden from the street, was conceived to provide a 'neighbourhood' atmosphere (Ladd, 1997: 231). This perspective is important and suggests that the blocks were developed with the view to becoming a self-contained form, creating one of many autonomous 'fragments' in the city (Huet, 1984). Almost ironically, such rationality, in reminiscent of the logic of the modernist planning, with a difference being that the postmodern blocks designed as 'neighbourhoods' and not zones, vowed to offer a mixture of activities. Yet, also unlike the densely populated forms of their predecessors that were genuinely mixed supported with ease the rich network of uses (Fig. 6.55 and Fig. 6.56), the post 1970s typology due to its 'relaxed' spatiality and decreased density appears unable to support the broad pattern of different activities.



Fig. 6.54 The nineteenth century block's permeability at the ground floor level; Ref: Author, 2016



Fig. 6.55 Engines of economic activity - courtyards of the nineteenth century Berlin today; Ref: Author, 2015



Fig. 6.56 Rich scope of activities offered by the nineteenth century block; Ref: Author, 2014

Chapter 6 served as a prelude to the next two chapters, which will illustrate more nuanced typological reading of the post-1970s block seen as urban structure. Looking at the examples of the blocks proposed by Rob Krier (Chapter 7) and Oswald Mathias Ungers (Chapter 8), the following sections describe formal and spatial qualities of their projects, preceded by the study of each individual architect's design thesis. These chapters thereby will exemplify the new ideas taking place in architecture at the time: such as the 'historicist architecture', the 'craft architecture', and the 'architecture in reverse' (Delevoy, 1979: 21), yet also through the spatial analysis of the blocks, they will address the precise relationship of the post 1970s architecture and the city.

Chapter 7

ROB KRIER: THE QUEST FOR THE CONTINUITY OF A DISCIPLINE

7.1. CHAPTER INTRODUCTION

Around the 1960s and 70s, the city came to be seen as the site of modernism's failure. The qualities of city itself, and architecture's role in it, came to be re-evaluated often in a direct critique against the perceived lack of urbanity in modernist planning and the abstraction of its architectural language.

After the 1973 Milan exhibition presented by Rossi, the themes promoted by the Italian Neorationalists such as 'permanence of the city' and architecture's autonomy, were greatly popular across Europe and North America, and attracted much interest among the new advocates of the *Architettura Razionale,* who sought their own understanding of the newly developing thought. Among them Rob Krier's concerns with typology and precedent, sparked his own search for the method for architecture and its autonomous dimension.

Building upon the critical position of Rossi against the functionalist city, Krier promoted his own typological thought that was formative to the later developed idea of *New Urbanism* (Krier, 2006). This section introduces Krier's theory, his quest for 'return to the inner city' and repair of the traditional urban core, seeing them as being founded on a nostalgic undercurrent. The close reading of Krier's thought is paralleled by the reading of his works, in particular the Berlin block redesigned by Krier. This reading will provide the basis to demonstrate the possibility of a different approach to history and typology, and serves as a basis for later comparison with the works of the contemporary Oswald Mathias Ungers (Chapter 8). The concluding comparison between Krier's and Ungers' deployments of forms will therefore be included in the next chapter.

Through the analysis of Krier's theoretical works and projects, and with the focus on the winning IBA's competition schemes: the block at Rittersttrasse and Rauchstrasse in Berlin, this chapter demonstrates Krier's specific focus on legacy of architecture, his approach to form, and the search for disciplinary continuity. It argues that Krier's translation of the formal type and history differs from Rossi's type and does not illustrate the dynamic reality

with which Rossi inscribed his theorem. As such Krier's reading renders static taxonomy of form and thereby undervalues architecture's contribution to the city in its spatial and organisational capacity.

Yet, I also argue that Krier's expressive formal variety, seen by others as 'reduced to disjunctive assembly of heterogeneous elements' and demonstrating 'the limits of typological variations' (Frampton, 1982: 7) was founded on the 'likability' and 'familiarity' factors (Krier, 1979, 1982), and indeed responded well with the users (Bereri, 2013). Thereby Krier's historicist works although often ridiculed as 'play with the bits of the past' by those critics implying that 'in this architectural jigsaw puzzle, the really original pieces are rare' (Taffuri and Dal Co, 1976: 387), may also be seen as a valued and welcomed return of the architectural legacy to urban design; and further exemplifying the 'recognition of the elements that constitute the city in both the intellectual and the formal, aesthetic sense' (Kleihues, 1993: 406).

7.2. URBAN SPACE THEORY

After the xv Milan Triennalle of Architecture – the 1973 exhibition coordinated by Rossi - the ideas of Tendenza and the new urban debates reflected on the pages of Italian architectural journals: *Contraspazzio* and *Casabella* and the international journal *Oppositions,* sparked the move away from modernist thought. The architects joining the new movement were particularly interested in the themes of the history and notion of 'type-forms', which opened the possibility of variety of forms from the past. The Neorationalists theme reconsidering type in the context of the city, has found its principal manifestation in Rob Krier's specific understanding of typology and its application in practice.

Unlike Rossi's transformative method, Rob Krier's approach featured different rationale to urban form.

In the strong attack against the Modern Movement planning illustrating the 'crises of the city' and loss of 'traditional understanding of urban space', Krier sought to redefine the traces and potentials embedded in the historic European city, and to resurrect it as a model. In his search for the 'neglected' forms of the past, he endorsed the restoration of familiar forms of architecture, the historical urban core and spatial qualities of boundedness (Krier, 1979). Influenced by his childhood memories of Luxemburg, the historical fabric of the city illustrated an 'archive' of tested and enjoyed typologies, together with spaces of streets and squares, described by him as 'urban types'. Krier privileged the insertion of these 'urban types' within the city, and sought to bound them by 'the walls of the buildings' to clearly demarcate the urban area in accordance to public, private and semi-public spaces (Krier, 1979) .

Furthermore, his thesis of that time concerned the reconstruction of forms and the possibility of integrating the new types inside the existing fabric; as illustrated in his seminal handbook, the *Stadtraum in Theorie und Praxis* (Urban Space in Theory and Practice, 1975), which provided an extensive historical survey of form, and a key path in his search for formal continuity.

7.2.1. TYPOLOGY AS A METHOD OF HISTORY AND GEOMETRY

The 1975 book described Krier's ideas on urban typology. Developed as an illustrated and detailed atlas of urban and architectural types, it covered morphological arrangements of streets, squares and monuments as a result of Krier's historical survey. With the view to illustrate the historic city as the unified whole formed out of 'urban types', it assembled the analysis of almost 350 morphological studies in plan alone, of many different significant European urban spaces. Krier depicts these 'urban types' in various formal combinations that essentially are based on the figure of square, circle or triangle. As illustrated by the diagram (Fig. 7.1) the architect argued that each of these combinations could be a result of bending, addition, distortion, segmenting, angling or overlapping. Another diagram (Fig. 7.2) describes different ideas for the formation of the architectural and urban type, which according to Krier can be: regular or irregular, negotiated or pure, differentiated by twisting,

division, addition to others, the inclusion or overlapping with accordance to context, and further open to their environment, enclosed by the walls, colonnades or arcades.

In contrast to the predominant sociological analysis of the urban spaces at the time, Krier proposed a design theory based on the material of architecture and the city itself.

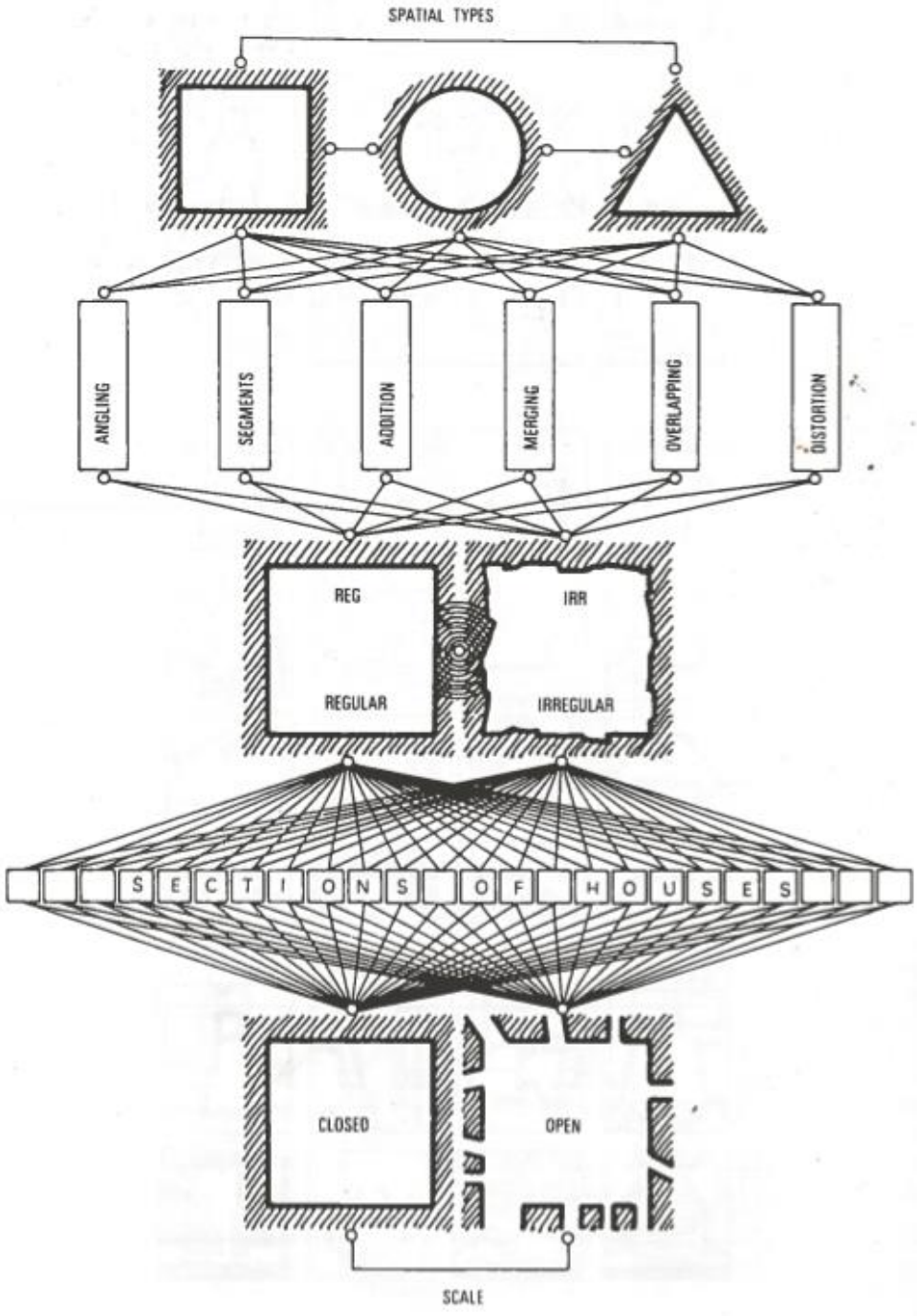


Fig. 7.1 Design method based on the formal material of architecture and the city; Ref: Krier, 1983: 8

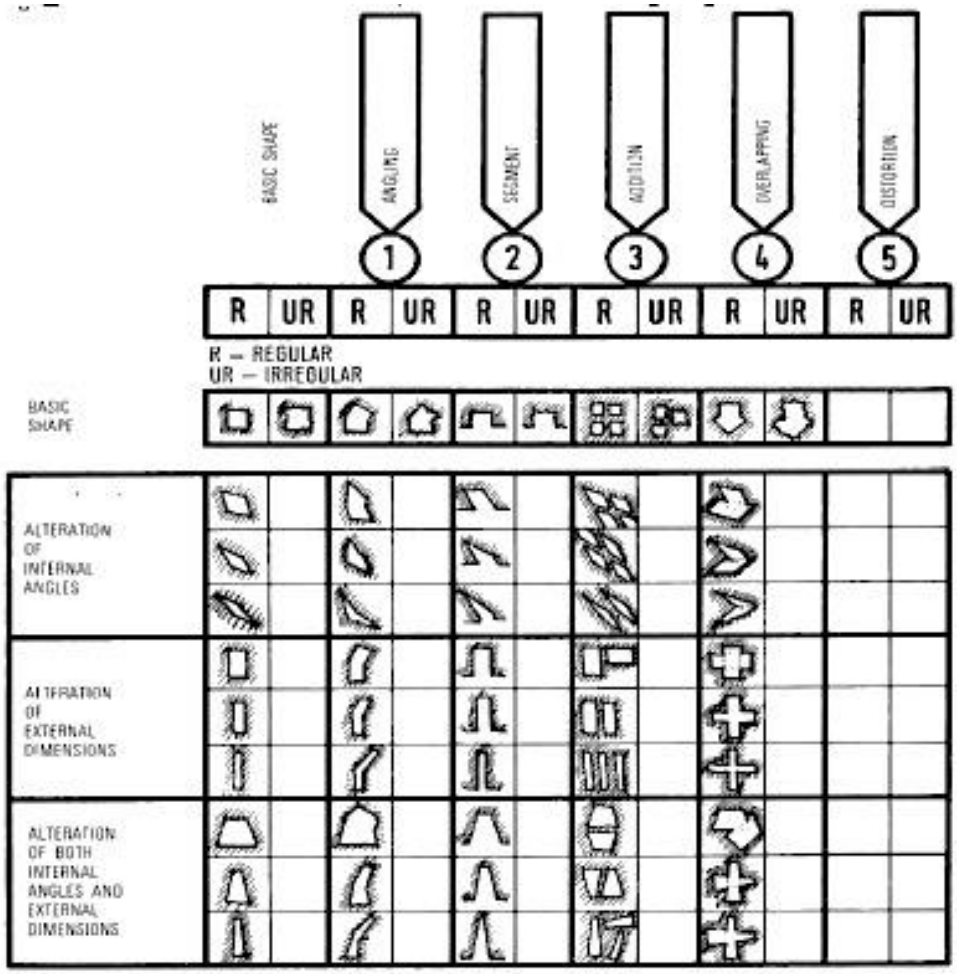


Fig. 7.2 Methods of connections and dependencies in the design process; Ref: Krier, 1988: 44

The framing of the streets and squares by walls is highly significant to Krier, as the bounding of the city with their structures had a great influence on his aesthetics of the urban space. Accordingly, in his typological handbook Krier illustrates many facades' compositions and varied in forms building sections, further presenting solid to masonry elevations with varied openings: fenestration, access, arcades, terraces (Fig. 7.3); in addition, his meticulous taxonomy of building sections presents great combination of forms, from standard traditional sections with pitched roof, through stepped, sloping, containing buttresses, to even referencing Le Corbusier's pilotis (Fig. 7.4)

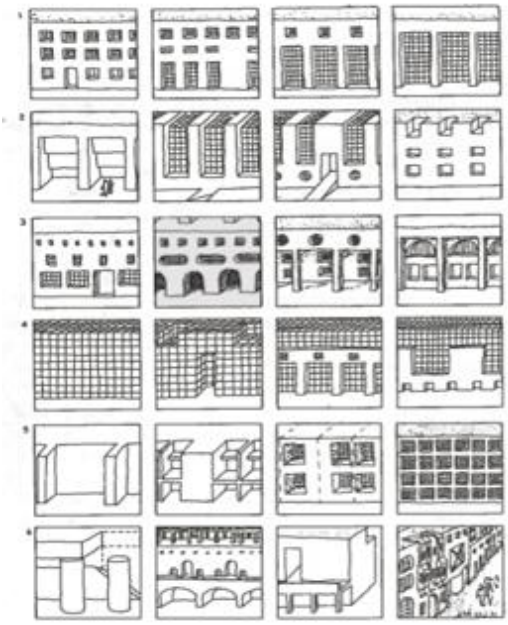


Fig. 7.3 Study of Elevations; Ref: Krier, 1983: 6.



Fig. 7.4 Survey of Sections; Ref: Krier, 1983: 6.

Clearly influenced by Argan's type-schemata, Krier represents typological reasoning based on transposition of a static imagery of form, founded on formal quotation or reproduction. Scaling up, or zooming in between the architectural and city spaces, he adopts the same static formal method to the morphology of the urban area. Also, similar to Anthony Vidler's description of formal and structural continuity between the architecture and the city, Krier

too sees the significance of the typological continuity yet for him it is based on the visual dispositions of urban and architectural types that represents the 'continuous typology of elements'. This is Anthony Vidler (1977):

> The new typology, as a critique of modern urbanism raises the continuous fabric, the clear distinction between public and private marked by the walls of street and square to the level of principle. Its nightmare is the isolated building set in an undifferentiated park. The heroes of this typology are therefore to be found not among the nostalgic anti-city utopians of the nineteenth century nor among the critics of industrial and technical progress, but rather among those who, […], direct their design skills to solving the question of avenue, arcade, street and square, park and house, institution and equipment in a continuous typology of elements that together coheres with the past fabric and present intervention to make one comprehensive experience of the city (Vidler, 1977: 16)

Accordingly, Krier introduces various types of urban space between buildings, describing them as 'spatial types'. Their forms were seen on one hand as unobstructed external spaces for free movement, and the other, as organised according to the understanding of spatiality at the time, as private, semi-private and public areas.

Therefore in analogy to the diversity of his architectural types, Krier also depicts the variety of spatial forms. They range from the courtyards contained within one building, a piazza, to the wide open space, bounded by the surrounding topography (Fig. 7.5). The latter, has references Le Corbusier's *Chandigarh* project featured the urban space surrounded by not necessary buildings, but mountains (Fig. 7.6).

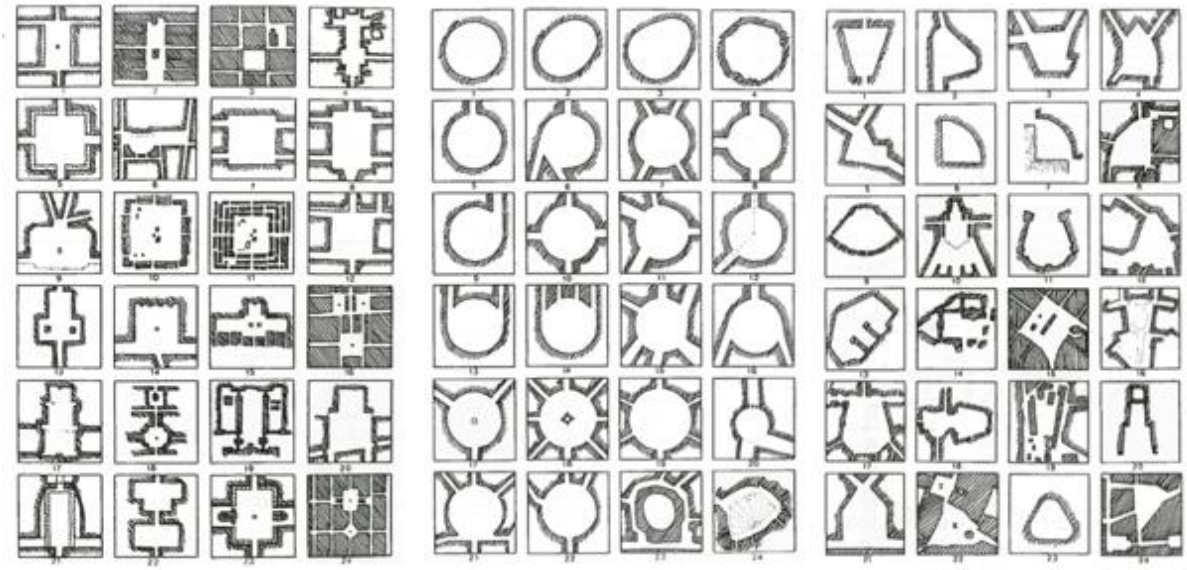


Fig. 7.5 Morphological analysis of urban spaces based on geometries of square, circle and triangle; Ref: Krier, 1990: 190, 191

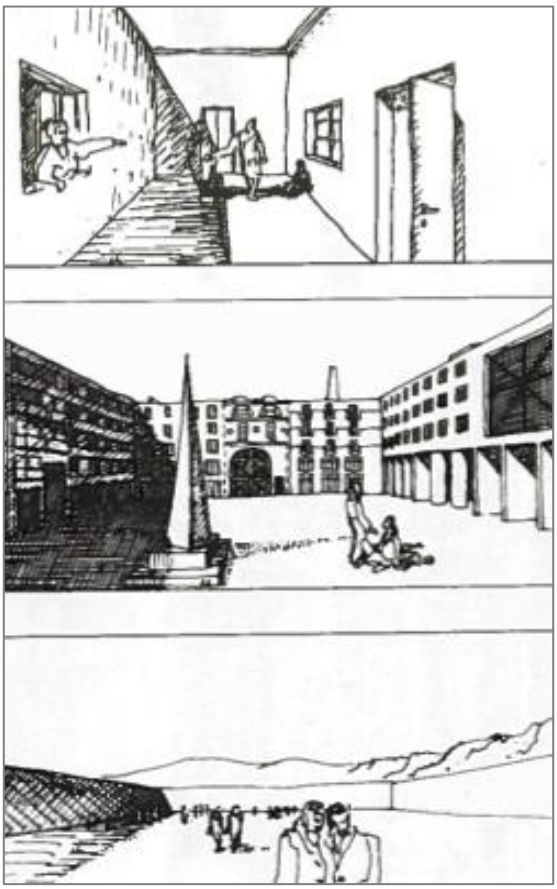


Fig. 7.6 Different scales of Krier's spatial types; Ref: Krier, 1983: 6

This illustration shows that Krier's varied spatial types were implemented in analogy to interior spaces of the building. As such, his urban spatiality was formed in parallel to design

of the building with variety of apartments containing different atmospheres. The scale is the only difference here and it categorises Krier's space, enabling different aesthetic effects.

Deeply critical of the 'erosion of urban space in 20th century town planning' (Krier, 1979: 64) Krier constantly illustrates his focus on the legacy of architecture. His taxonomy of visual models meant to 'rehabilitate architecture that has become dishonoured and disgraced' (Krier, 1988: 1). He therefore finds in the past the array of possible forms for adoption in contemporary situations; forms, which despite their obvious and logical solutions, were neglected by the Modern Movement. The complexity and richness of the historic spaces and their geometries are promoted by Krier; he notes for instance: Paris' Dauphine Place – formed as the result of two forking roads, the Piazza Navona, Rome – for its abundance of different spatial types and combination of roads entering the square, or the eighteenth century Hannover Square, London, commended for its regular, orthogonal plan and central intersections (Krier, 1979a).

With his focus on history and basic geometries, Krier illustrated seemingly endless combinations of mostly pre-modern urban and architectural types. Geometry, as he admitted provided architects with 'the basis for all forms of architectural creation', but also 'the creation of man' (Krier, 1988: 10) (Fig. 7.7). Here Krier describes the relation and proportions between the human figure, and the human scale in architecture and the city. His reading thereby opposes the modernist translation of function: 'As long as man needs two arms and two legs, the scale of his body must be the measure of size for all building. That concerns not only the staircases and ceiling height, but also the design of the public space in the urban context' (Krier, 1979a: 62).

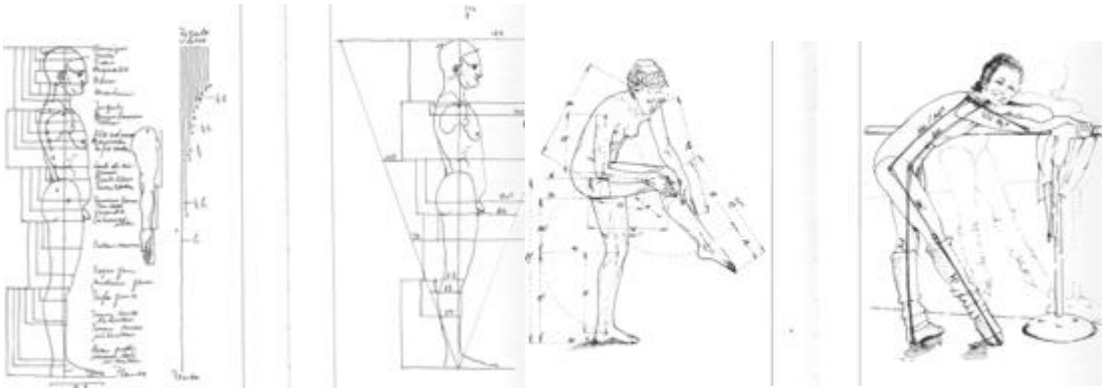


Fig. 7.7 Krier's detailed studies of human figure; Ref: Krier, 1988

Accordingly believing in the 'power of example' Krier's prescriptive illustrations included not only analogies to human figure but also interdependencies between interior and exterior spaces of the buildings (Fig. 7.8), and between geometry and forms of architecture (Fig. 7.9).

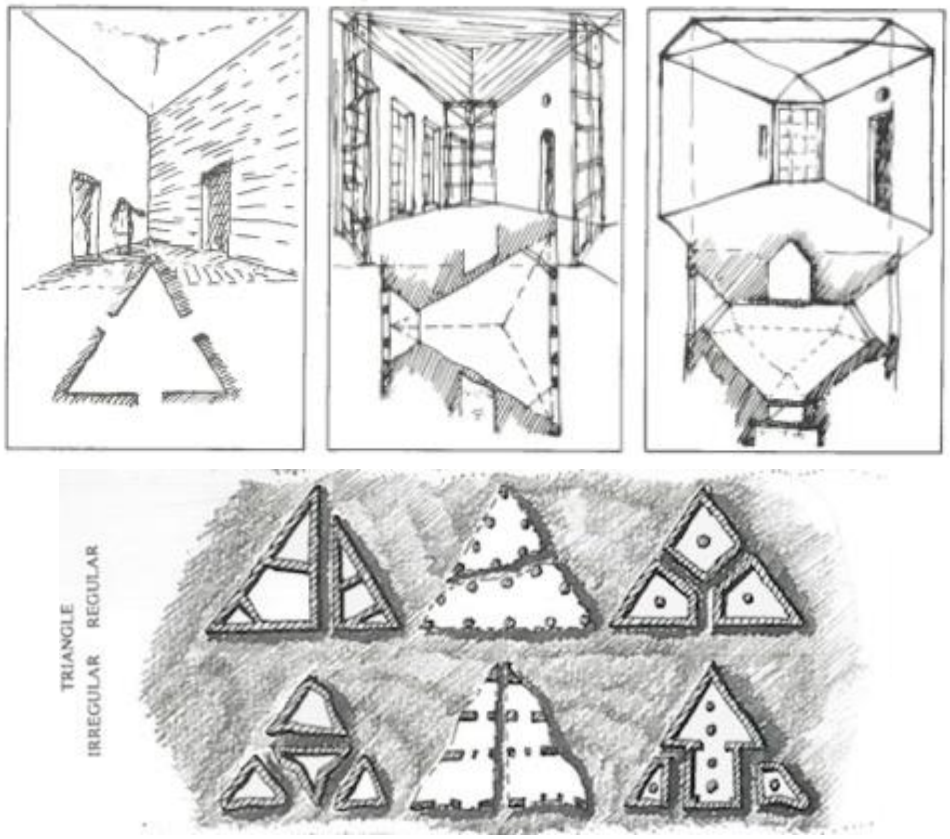


Fig. 7.8 Analogies between the interior plans of the block and the 'spatial' type of urban block; Ref: Krier, 1982: 115, Krier, 1993.

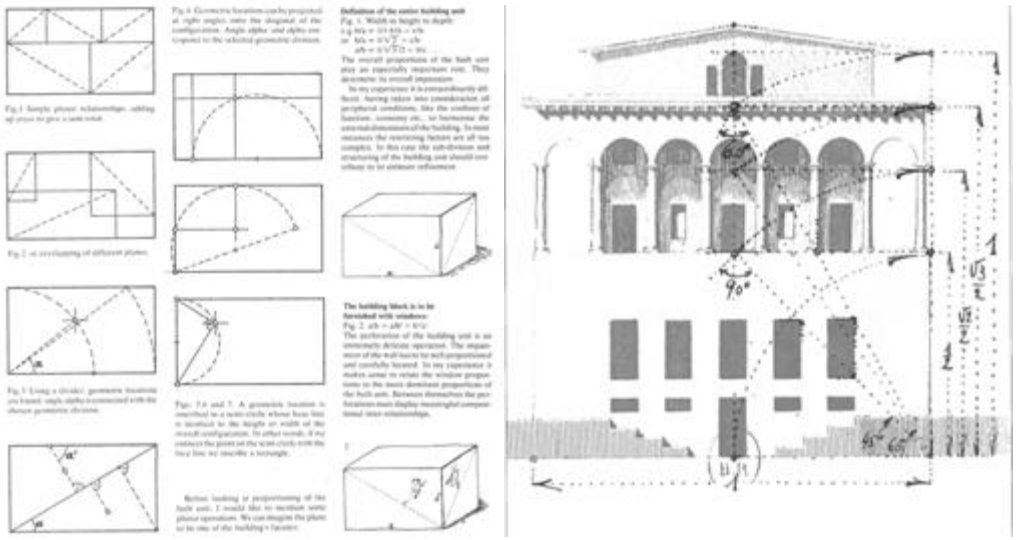


Fig. 7.9 Meticulously executed geometrical study and drawing of a building, illustrated architectural proportions; Ref: Krier, 1988

The interchangeable use of geometries between the building and the city typologies was further detailed in his 1988 book *Architectural Composition*. The book provided a commendation to the *Urban Space* (1975) and promoted even more intricate rules of formal arrangement. Based on the proportions, geometries and symmetries of both internal and external spaces, Krier's meticulously executed drawings and sketches provide an exhaustive survey of type. Realised as progressing from simple to more complex typologies: from 'the doorknob as a Type to that of the city as a whole' (Broadent, 1990: 194), the vast range of formal possibilities illustrated that it is indeed through the drawing exercise that 'the great variety of building […] from the history of building […] [can be] refresh[ed] again and again' (Krier, 1988: 70).

Whilst Krier's text books of urban development illustrate numerous historical examples, they also depict Krier's specific approach to history as based on the 'ready-made' types resurrected from the past. Such rationality followed the belief that 'contemporary architects must recover forms from the past, especially urban forms that have been lost through the antihistorical posture of the Modern Movement' (Francescato, 1994: 256). Highly critical of the alleged refusal of history by the Modernists, and the perceived absence of the architectural theory at the time, Rob Krier's handbook of forms offered highly suggestive

choices for the design of urban typologies, which, as he admitted: reflected upon 'thousands of years worth of experience' (Krier, 1979):

> The wish to cut oneself off from the heritage of the past is extremely shortsighted. By doing so, one deprives oneself of thousands of years' worth of experience. At the beginning of the century, the pioneers of the modern movement frivolously flaunted this attitude. And yet all of them had enjoyed a sound education and were very knowledgeable about history. [...] It was a different matter with the pupils of these pioneers, and with their students in turn. They felt able to do without grounding, which had fitted the pioneers for their transformation into 'moderns'. And we today, armed with our pittyfully inadequate know-how, must make up for a great deal that has been neglected.

The architect continued:

> I have a faint suspicion that a new pioneering situation will grow out of this. [...] I would go so far to maintain that nowadays it is more useful to imitate something 'old' but proven, rather than to turn out something new which risk causing people suffering [...] However not all the blame should be laid on architects, whether they are involved in building or administration. To be fair some of the rubbish should be dumped back in the universities, for it was there that the whole avalanche started (Krier, 1979: 170-71)

In face of the 'inadequate know-how' Krier's ready-made types provided his solution to design. Through postulates for imitation of 'something old but proven', Krier illustrated his typological reasoning, which followed the idea of 'controlled repetition' of the type-form borrowed from history. According to such method 'the finished building being the result of a process of assembling a typology of selected components' (Krier, 1979: 256), featured a formal arrangement of types hand-picked from different contexts and organized anew. As such however, it also reflected upon 'typological series' of Argan. Based on the formal assemblage, the method was clear to follow. According to such approach the new forms

featured a collage of types 'resurrected' from history, newly organized at the architect's will. The method was soon depicted in Krier's post-1970s projects, explicitly in his works during IBA Berlin.

In summary of Krier's particularly 'descriptive' and 'nostalgic' typology, Micha Bandini (1983) depicts Krier's method as triggered by the impossible attempt to capture the whole spectrum of architectural form. However, despite Krier's quest to recapture 1000 years of architectural history, his repertoire features only a selection of forms resurrected from German Romanticism, Baroque and Classicism. This rather signals the specific choice of typologies in accordance to the architect's stylistic preference, and not as Bandini and Krier argued – the full disciplinary diapason.

Still, one more perspective arises from Rob Krier's typological thesis, which goes in line with the Neorationalists' concerns about the autonomy of architecture.
The method, although highly prescriptive and founded on fixed formal arrangement, also suggests that Krier's types-forms are relatively autonomous from their immediate primary functions. Yet as Krier (2006) also admitted, these forms at the same time must be open for future transformation. It thereby seems that for Krier the reinterpretation of elements of the historical city aimed at realizing the urban typology that would also be easily adaptable and replaceable, thus also highly responsive to the needs for new programmes. As noted by Frampton (2007), Krier clearly signified these values in his text, announcing the death of the modernist dictum of *form follows function* and proposing instead the reversal, and his very own motto of *function follows form*. Krier argued accordingly:

> A full register of urban architecture can only assure the external shell. Life then has to take root of its own accord, filling it to completion over the course of generations, breathing a kind of soul into an abstract structure. It is only in such cultural medium that unique towns with a heady variety come into being. The prerequisite for this is the evolutionary capability of their structure. The road network as the support of the public supply system cannot be varied much. The buildings however should be easily adaptable and replaceable at need (Krier, 2006: 12).

Whilst we may continue to argue the rigidity of the prescriptive method described in Krier's texts, the above quote strongly suggests his focus on the performance of the form as 'adaptable', 'replaceable', and flexible, that also somewhat parallels Rossi's transformative workings of type.

It is through the study of the Krier's projects, and in particular his Ritterstrasse and Rauchstrasse block entries for the 1979-1984/87 IBA, that I will elaborate on this thought. Subsequently, the next section explores the themes adopted by Krier to his postmodern schemes.

7.3 KRIER'S URBAN PROJECTS

7.3.1 CITY AS AN OBJECT OF RECONSTRUCTION

In lieu with his thesis for reconstruction of the urban space, Rob Krier proposes the repair of the fabric of the city with a specific reference to the damage of the physical structure of the city centers in the 1960s, made by functionalist and infrastructional planning. Translating his theoretical objectives to practice, in early 1970s Krier developed two small schemes, in which he inserted the typology of the block into the existing fabric of London: the 1973 *Tower Bridge Housing* development, and the 1974 *Royal Mint Square* project in London Docklands (Fig. 7.10 and Fig. 7.11).

Both schemes featured the typology of a block that at once provided the object and the method of urban design. Both projects also included a public square in the centre and featured a group of blocks planned on the form of cruciform. The connection of the inner square with the perimeter buildings was achieved by the four pedestrian streets running north, south, east and west (Krier, 1993). The projects focused therefore of the resurrected from the pre-modern past 'urban types' of streets and squares and the typology of the block.

Sensitive to the social undertones prevalent in architecture at the time (Mc Leod, 1989), Krier proposed the urban type of a square as a focal point of his entire scheme. Its space was overlooked by the semi-private spaces of balconies, which offered more intimate connection with the space of the square. Similarly, the courtyards behind the blocks, each with a different character, were overlooked by terraces and filled with lavish landscaping, trees, pergolas or trellis. The continuous urban facades on the block's perimeter, were to provide greater building density and to invoke the 'familiar' forms of development. With the same view, Krier lined the streets with the arcades adopted from elsewhere. Whilst their form provided protection from the elements, more importantly the arcades depicted 'the complex traditional urban character' of the whole project promoting architectural variety. To further provoke different 'architectural events' (Krier, 1993:17) Krier includes an unusual insertion of the bridge typology inside of his block (Fig. 7.10).



Fig. 7.10 Royal Mint Square, London; Ref: Krier, 1993: 17

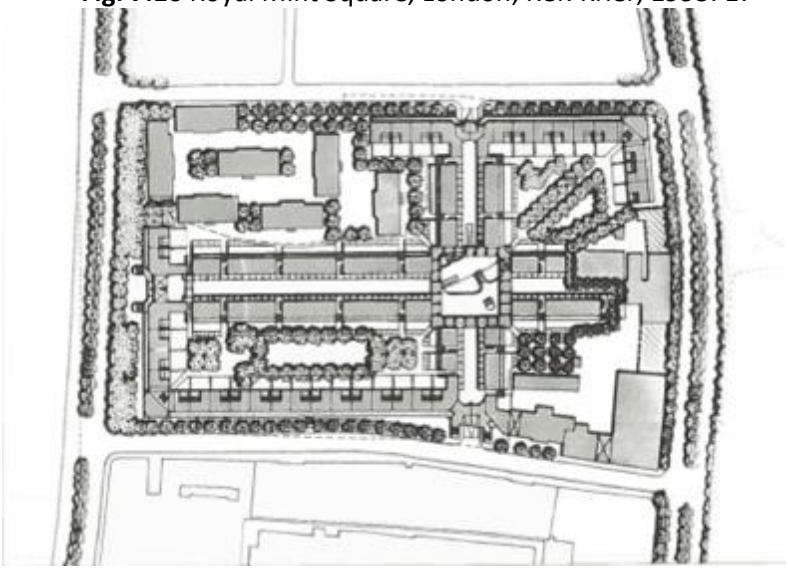


Fig. 7.11 Royal Mint Square, Site plan illustrating the cruciform central square, Ref: Krier, 1993: 17

This perhaps is the clearest remark of Krier, describing his aesthetic. The striking objective of architectural variety, noted in use of forms of architecture, foreign to the context of London: the block typology - 'unlike the English terraces' (Krier, ibid), illustrated his focus on the planning of the city as a bounded structure. The block lined the streets, surrounding the central square and its form was distanced from the modernist uniform towers standing in the sea of space surrounding. Thus for Krier it was less important that the typology was borrowed from a different setting. The scheme further included a mix of programmes: leisure, communication and residence (ibid).

The visual studies of the block (Fig. 7.12) instead of separation of forms and functions depict a greater density and diversity of forms; against the functionalist planning of the city, the block reintroduces spatial types of social gathering: the square, the streets, terraces and balconies. Looking at Krier's interpretation of the inner fabric of the block, its spaces indeed evoke an 'architectural event' and through insertion of columns, voults, and arches, mirror Krier's emphasis on history.

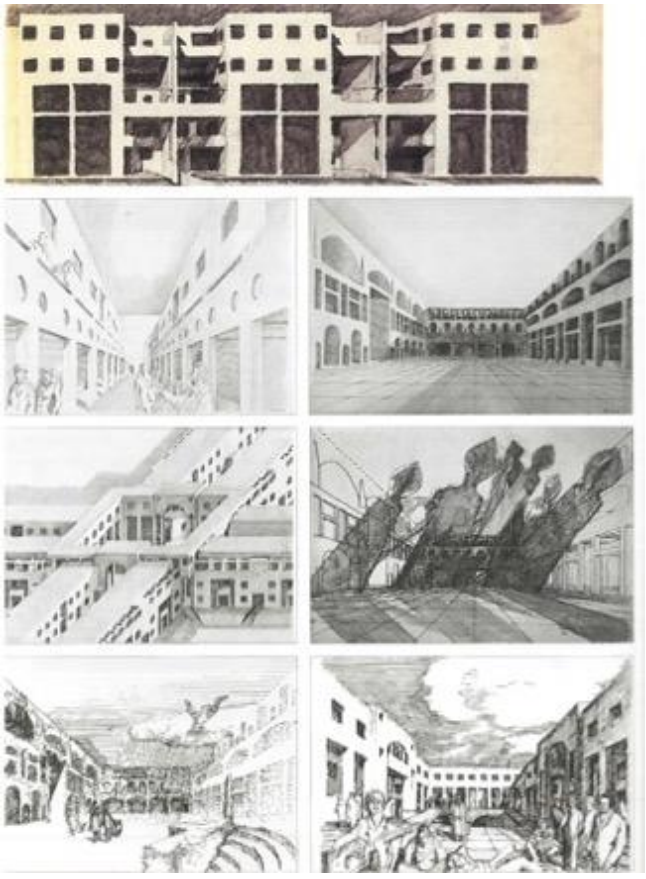


Fig. 7.12 Rob Krier's interpretation of the inner spaces of his block; Ref: Krier, 1993: 16.

Speaking about the block used in his 1974 scheme, Krier (1986) said:

> You need the block as a basic unit, and in that block the house as a cell […] a neighbourhood of some 10, 12, 15, 18 families in one house with the block as a basic unit to built up a city structure […] between blocks you can find streets and a composition of streets and squares (Krier, 1986).

Whilst this position reveals the socio-cultural compound of his thesis, it also suggests the importance of the block in Krier's works, as an 'original cell of every design structure' that permited the definition of the network of movement around the building's edges. Krier further believed in the division of the block into plots. Such organization would determine the diverse rhythm of the perimeter fronting the street, and guarantee the variety and 'intensity' of urban space (Krier, 2006). For Krier therefore the block typology is a primary element of design. Reinforcing the ideas from his 1979 and 1988 handbooks the architect sees the block as a tool capable of design into complex formal structures, and also as a form corresponding to human scale: 'not too tall, not too long'. For him, the block mirrored the richness of forms borrowed from history, and held all prerequisites for a 'great urban structure'. Accordingly, to Krier 'knowing all the conceivable urban space typologies and variety of possible façade designs' (Krier, 2006: 14) undoubtedly guaranteed the continuity of historical development, visually linking present with the past.

These early 1970s projects for the block development reflected the design thought culminating in his theoretical works, yet also these works have signalled the future design proposals; the next subsections illustrate formal and spatial similarities between London's developments and the competition schemes for the IBA Berlin 1984/87: the block at Ritterstrasse, and Rauchstrasse. Still, before I discuss these schemes, I would like to briefly introduce Krier's concept for the reconstruction of the city core, developed prior his IBA entries. This illustration is important, as it once again verifies Krier's fascination with the block.

7.3.2. INTERVENTIONS INTO THE CITY CORE

Krier's approach to postmodern urbanism was founded on reconstruction and urban repair. The use of historic 'spatial types' – the street, the square, and the monuments, become his instrument for the reconstruction of the city. Yet these forms also mirrored Krier's sense of nostalgia for the 'lost' types of urban and architectural past. In *Urban Space* (1975), he makes particular reference to German cities damaged by the modernist planning, which destroyed the physical organization of the city centers. Krier exhaustedly described his reconstruction of the urban core of Stuttgart, which in the same sense, he later intended for Berlin. In both settings, the form and structure of the reparations were dictated by the morphology of the surrounding context, the historical research, Krier's memory of the historical sites, and also - as argued by Frampton - 'the cultural importance of place' (Frampton, 2007: 297).

Promoting the new schemes that 'should submit to the overall order of the city', Krier argued for 'architecture in the city' as subordinate to the existing spatial patterns (Krier, 1988: 10, 290). He transported this idea to the 1977 proposal for reconstruction of Berlin-Südliche Friedrichstadt. The area, originally planned in Baroque times, featured a layout known as the 'foot of geese' (Clelland, 1984). Figure 7.13 clearly shows the defined geometry as favoured by the Krier urban block, and inserted among them large piazzas, easily recognised for their basic geometrical forms. Within his 1977 *Ideal Plan Proposal,* Krier adopted the Baroque conception of space, fusing the relationships between solid spaces of relatively small blocks, with the void spaces of piazzas, and recreating focus on monuments (Krier, 1977).

Krier thus uses the block typology as an analytical instrument for the reinstatement of urban spatiality from Baroque history. His approach however is clearly not about continuity of the city as propositioned by Rossi. Unlike Rossi's permanence achieved in allusive or suggestive terms, the link with the past invoked by Krier, is recreated literally; it depicts the new form of Berlin Südlische Friedrichstadt, with its small rectangular blocks as a direct analogy to the urban ground plan structure from the seventeenth century (Fig 7.13).

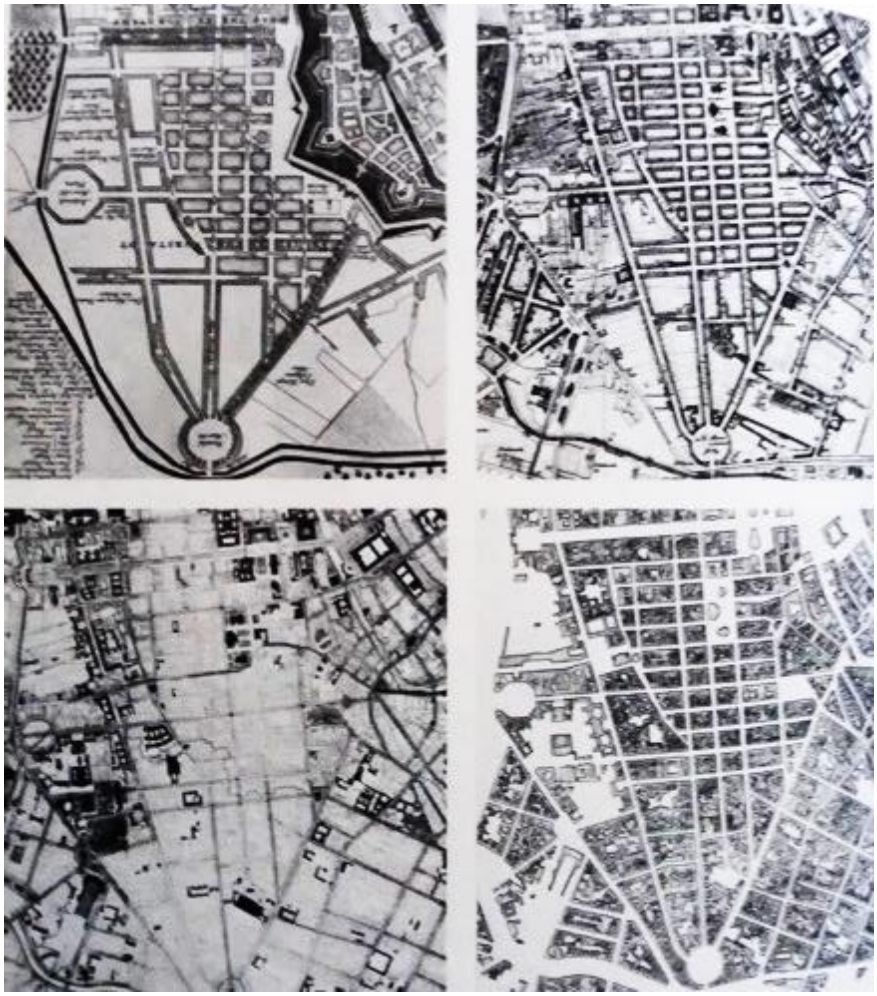


Fig. 7.13 Development Phases of Südlische Fridrischstadt; State in 1790, 1850 (Top row), Situation in 1900 and 1938 (Bottom row); Ref: Krier 1982: 48

For comparison, the plan on the Figure 7.14a illustrates alterations made to the plan by the IBA[2], the plan also includes Rob Krier's block typology at Ritterstrasse (1979), which I describe later. Its striking cruciform spatiality is marked by the red arrow in the upper right corner of the map on the right. On the IBA plan, the small blocks resurrected by Krier from the baroque fabric, are amalgamated by the IBA planners into larger perimeter structures. Consequently, the IBA plan features evidently a smaller number of public squares, replaced in their function by the enlarged semi-private courtyards. These courtyards, developed in

[2] Krier (1988) often makes remarks about the competition's 'unforeseen difficulties' that jeopardized realisation of his projects in Berlin. Unquestionably, the project proposals were met with many financial shortages but also its 'highly political implications' (Lejeune 2009, Miller, 1993, Pugh, 2014, Hämer, 1981).

line with the formal objectives of the IBA for the 'inner landscaped gardens', also differ from the form of the mid nineteenth century. They thus depict modern urban spatiality.



Fig. 7.14a The development of the Ideal Plan for the Südliche Friedrichstadt by Krier (1977), and for comparison, the actual IBA plans, 1981. Red arrow marks Krier's Ritterstrasse block; Ref: Krier, (1982) (L), and Kleihues, 1987: 232 (R).

This spatiality will also feature in Krier's schemes developed for the IBA Berlin, in which he reintroduces the forms swept from across history. This approach precisely parallels Krier's take on type driven by nostalgia and his own memory of the past. The projects also depict the social content of Krier's design thesis. Whilst the next sections clarify and expand on this thought, it is noteworthy that the socialist and 'marxist' attitude to architecture was typical among architects at the time concerned about 'the city as a focus of social life' (Rosenau, 1983: 169).

7.4. REINSTATEMENT OF THE BERLIN HISTORIC TYPOLOGIES: THE BLOCK AND URBAN VILLA

Following the objectives of the IBA described in Chapter 6, Krier develops typology of the block and 'urban villa' that both feature the sequence of buildings defining urban space of the street with the central space of the courtyard. This method of formal organisation around courtyard demonstrates Krier's remedy for the 'ills' of the post-functionalist city.

Both typologies complied with the regulatory objectives of the IBA, yet also differed in their articulation of 'boundedness' of the urban space.

Whilst the reinstated Berlin block at Ritterstrasse clearly defines the space of the street by the grouped organisation of blocks lined together, the re-introduced from the Berlin's past typology of the 'urban villa' at Rauchstrasse depicted the bounded space in other way than the spatiality of the Berlin block. Still, visually both typologies provided greater density than the 'massive' Pruitt-Igoe type housing schemes of the 1960s and 1970s in Germany (particularly in East Berlin) (Lang, 2005: 291), and also drew closely to the 'spatial types' of streets, courtyards, squares and buildings.

Figure 7.14b marks the location of the blocks in red.



Fig. 7.14b Location of the blocks at Rauchstrasse and Ritterstrasse; Ref: Senatsverwaltung für Stadtentwicklung und Umwelt, 2014, marked by the Author, 2018

7.4.1. THE RAUCHSTRASSE 'DECONSTRUCTED BLOCK' SCHEME, 1980 -1986

Formally, Krier's social housing project at Rauchtrasse (Fig. 6.15) seems to be grounded on the concept of Gestalt[3]. The scheme illustrates individual forms arranged around one large central space of a courtyard, and its specific spatiality resembles the form of the deconstructed perimeter block. Whilst such approach could suggest the innovative idea, the closer analysis, revealed, that in true Krier style, the theme of the scheme- the 'urban villa' – and villas spatial composition was traced from the spatial organization developed on the site in the past. Once again, we may note the specific method to the urban development based on the imitation of the 'old but proven' manifested in Krier's approach. The architect (1983) explained:

> The decision on the types of buildings suitable for this area was not difficult to make. Until the Second War it had been the site of embassy buildings and grand villas, and it would not therefore be appropriate to build large housing blocks (Krier, 1983: 66).

With this statement Krier perhaps unintentionally gave testimony to his method based on point for point reintroduction of the spatiality of the past. He also superficially assumed the inappropriateness of the building block in the given area, somewhat denying his own statements about the block as a 'great urban structure' capable of building the entire city (Krier, 1986).

In accordance to his thesis about architectural variety Krier invited different architects to his scheme, for which each architect realized his own villa. In commenting on his decision or coordinated approach to the scheme, Rob Krier (1988) wrote:

[3] The principle of Gestalt, was developed in the late nineteenth century, and was used in architecture as an aesthetic device for organisation of space; i.e. specific grouping of architectural types and spaces around them that resulted in conceptual 'one whole' (Douglas, 2013). I elaborate on this concept in the Section 4 of PART 2.

> In order to achieve a coherent total image in an urban development plan of this size, the concept of the block must be clearly formulated in geometrical terms and should not embody exaggerated fantasies that represent only an individual artistic conception. For the sake of unity, each of the architects taking part must [exert] as much discipline as possible (Krier, 2005: 302)

The project reminiscent of a decomposed block of the nineteenth century, spatially features a variety of individual buildings (Fig. 7.15), each with different ground floor plans and also an array of interior spaces (Fig. 7.16): the vast and bespoke assortment of apartment layouts are served from a central core, a hall forming 'a kind of 'roof-atrium' on the top floor'; their corridor routes derived from twisting and bending of the form and spaces.

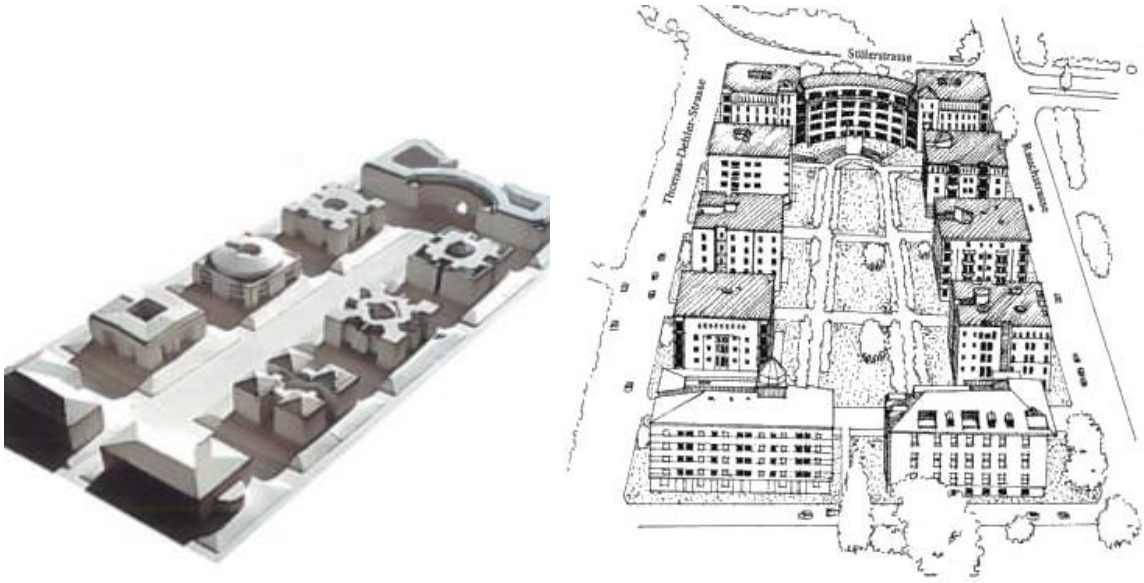


Fig. 7.15 Krier's urban villas organised around the central courtyard; Ref: Kleihues, 1987, Krier, 1993



Fig. 7.16 Variety of internal organizations, and diversity of elevations in the project; Ref: Kleihues 1987, Krier, 1993: 57

The whole project depicts Neoclassical vocabulary: columns, pillars, pilasters, cornices, projected towers and balconies. Entry to the interior courtyard passes underneath the headhouse – a curved building, concave to the interior garden, with a sculpted figure of an angel (Fig. 7.17, Fig. 7.18). Rather than taken from the Berlin vocabulary, these forms 'learnt [by Krier] from old towns', instead illustrate the classical generic models. The scheme clearly acts as Krier's response to the architectural monotony of the Modern Movement, and enlives the streets of Berlin (Krier, 1984, 1988).



Fig. 7.17 Individual Villas Typologies, and the headhouse; Ref: Author, 2016



Fig. 7.18 Headhouse; Ref: Krier, 1993:57

In addition to typological variety, the whole scheme unraveled yet another objective, namely its social undercurrent; in Krier's own words, such architectural diversity was a 'sparing' gesture, 'made of an architectural attitude' that meant to enrich the Rauchstrasse social housing project (Krier, 1983: 66, Francescato, 1994: 256). This quality, whilst depicted in the buildings' interior plans, is also notable at the point of the courtyard, conceived as an enlarged landscaped garden with pedestrian roads cutting through and designed for the enjoyment of tenants (Fig. 7.19).



Fig. 7.19 Rectangular garden surrounded by the urban villa typologies; Author, 2018

The Rauchstrasse project served to illustrate Krier's principal themes adopted to the design, such as coordinated model of design, forms borrowed from history and architectural variety. These themes were paralleled in Krier's second scheme: the Ritterstrasse block that unlike the deconstructed structure of the Rauchstrasse grouping individual villas, responds to the object of my thesis – namely demonstrating the reconstruction of the typology of the block after 1970s intended as a bounded structure. The next subsection illustrates detailed typological reading of the block at Ritterstrasse, Kreuzberg.[4]

7.4.2. THE RITTERSTRASSE BERLIN BLOCK, 1982-1986

Krier's Ritterstrasse development of the small residential scheme precisely aimed to resurrect the structure of the nineteenth century Berlin block based on the idea of individual but adjoined buildings. Prepared for Neubau IBA, it was constructed on vacant land. The urban plan of the striking cruciform organisation sees the insertion of perimeter blocks, which line the street, and that are arranged around four internal courtyards, with the two pedestrian streets crossing the whole scheme. The spatiality is similar to the schemes developed in London, yet it also features number of differences (Fig. 7.20).

[4] In July 2015 I attended the Athens Institute for Education and Research Conference on Architecture and Urban Design (ATINER), where I presented a paper titled: 'The Typology of Berlin Block: History, Continuity and Spatial Performance'. This paper was later published in the Athens Journal of Architecture, in January, 2016. The following subsection consists of expanded version of this paper.

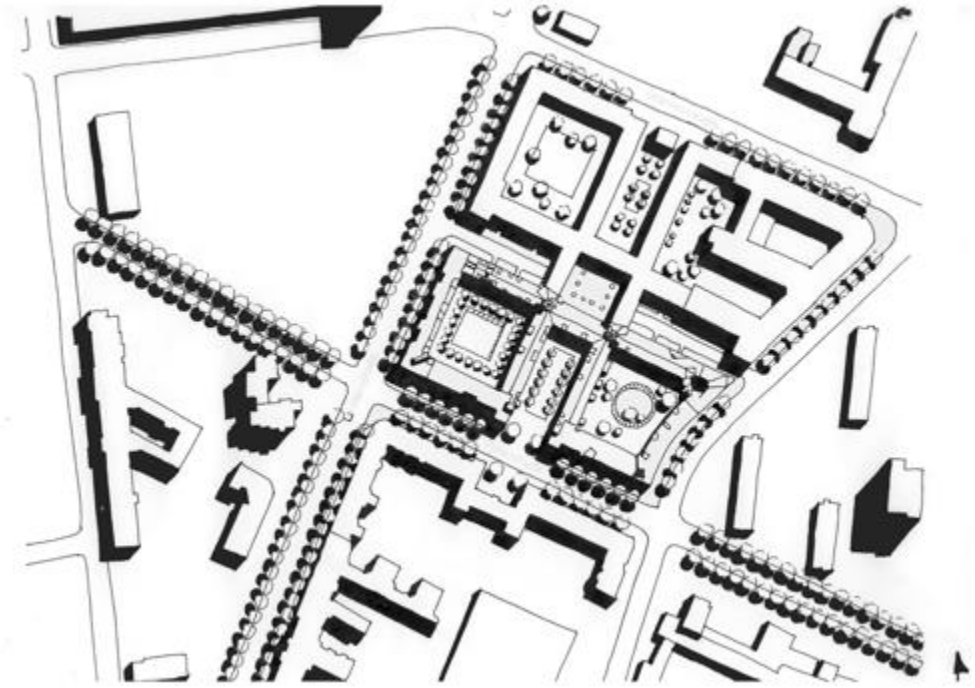


Fig. 7.20 Aerial perspective; Ref: Nicolin, 1984: 30; rendered by Author, 2016

The scheme responded in part to the described earlier ambitions of the IBA, as summarised by Alan Colquhoun. It also parallels Krier's thesis of urban repair in the historic style, to assure spatial and formal continuity. Krier's other goal was to achieve the survival of the project over time (Dunster, 1995) and evoke a sense of diversity that traditionally existed in the urban grain of Berlin (Saunders, 2008). Accordingly, in following his plot design thesis and to ensure both variety and coordination of external aesthetics Krier drew upon another seven local architectural firms to develop individual building blocks. Under Krier's management each architectural practice agreed to reinterpret the formal objectives of the nineteenth century building regulations, comply with the limits set to the heights of the buildings, and to adopt the intensity of the architectural order and materiality (Cestnik and Cloyd, 2008).

Although on paper, Krier's sketches for the scheme (Fig. 7.21) seem to represent the idea of almost 'monumental' blocks, such notion is not conveyed in its setting. The scheme is small; it contains 35 different blocks, delivering 315 dwellings. The overall composition encloses a cruciform of two secondary streets (Fig. 7.22) that are lined with the four and five storey buildings.

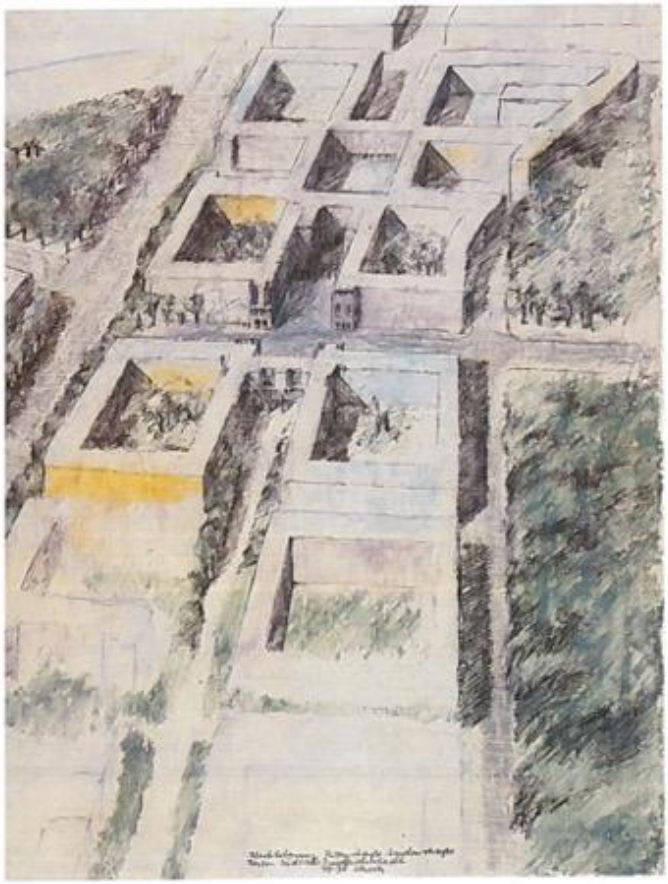


Fig. 7.21 Krier's sketch of the scheme, Ref: Krier, 1982: 52

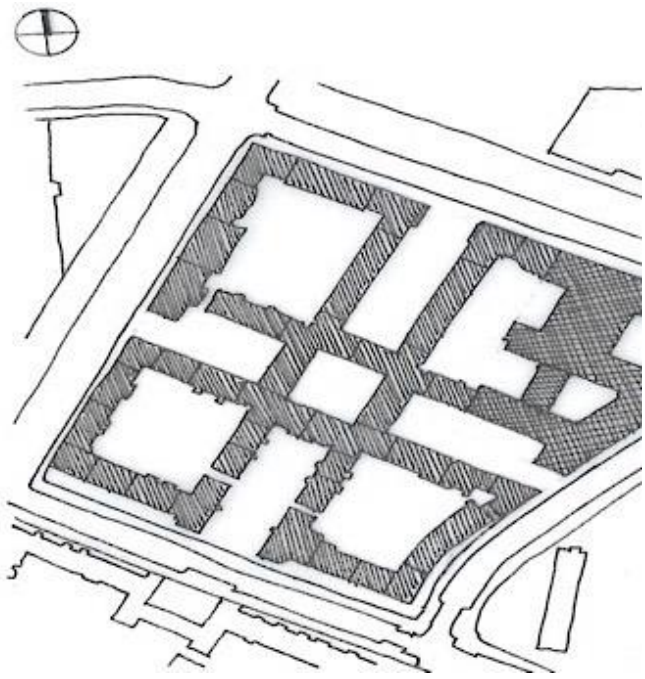


Fig. 7.22 Cruciform plan; Ref: Author, 2016

The block both references and adapts the nineteenth century plan; as its predecessor, Krier's block features the perimeter buildings lining the streets. The heights of the buildings, although slightly varied, follow the height of the nineteenth century block and complete the defined urban space of the street (Fig. 7.23 and Fig. 7.24). Similar to the structure of the nineteenth century the block executed as a group of individual blocks built by a variety of different builders, also Krier's block is composed of individual, adjoining buildings. However, whilst the mid nineteenth century blocks conformed to the general architectural convention of regularity of structure such as position of columns and beams, this is not the case with Krier's block. At the point of the façade on the Figure 7.23 and Figure 7.24, the 1970s blocks feature an abundance of the façade aesthetics also suggesting the diversity of blocks' internal structure.



Fig. 7.23 Varied heights of blocks along the inner street, Feilnerstrasse; Ref: Author, 2017



Fig. 7.24 The corner block fronting the Oranienstrasse – Alte Jakobien Strasse, bounding the urban space; Ref: Author, 2017

The plan connects four continuous blocks with their private courts, linking them to the central square, Schinkelplatz (Fig. 7.25). In this way each apartment that faces the internal streets, faces two orientations – a street and a courtyard. This allowed the tenants to relate to the street life as well as to the quiet block's interior.

Furthermore, Krier envisaged the Schinkelplatz as a focus of his blocks, yet the square also meant to create a focal point in the larger urban intersection, and become 'the main accent in a composition which develops from Oranienstrasse to the Berlin Museum' (Krier, 1982: 53, 54). Krier conveys this notion in his drawing, which sets the focus on the central axis running through the Schinkelplatz (Fig. 7.25), and further also links his project with the larger structure of the city.

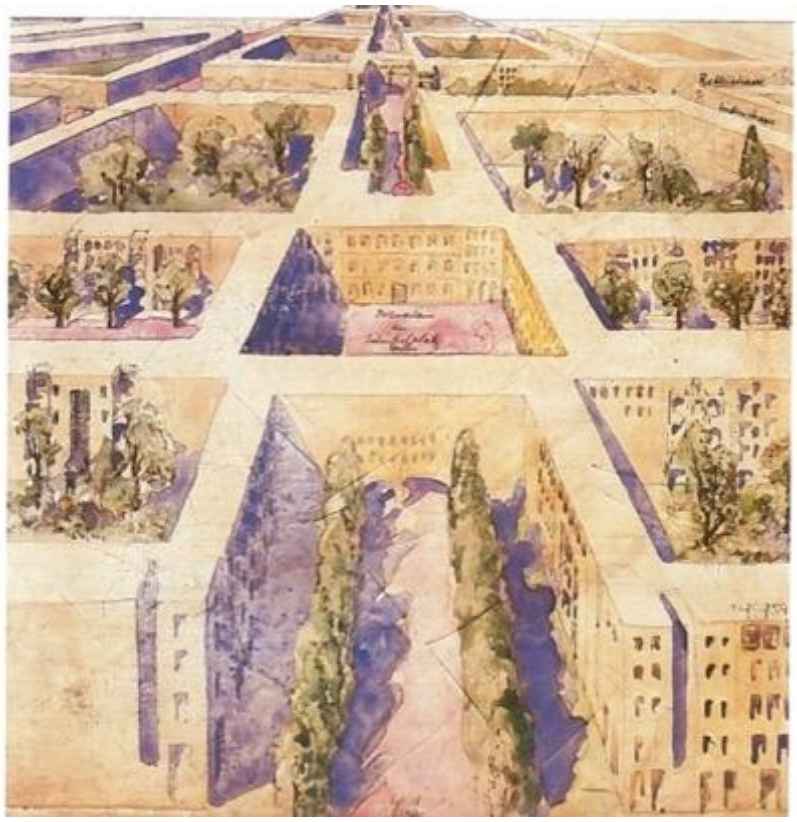


Fig. 7.25 Strategy for the development - central axis linking the Oranienstrasse, running through Schinkel platz to the Berlin Museum; Krier, 1982: 50

The centerpiece of the scheme, the seemingly Italianate square, sits at the crossroads of the internal streets, and features three identical facades, consisting of a base, 2-storey arcade, and the set-back upper floor (Fig. 7.26). Krier explained that this design decision was to make the small square (30x30m) seem larger. The square is closed on all sides to give 'maximum spatial intimacy' and surrounded by varied façade compositions and materiality (Fig. 7.27). The meticulously handled corners, consist of neoclassical architectural elements (Fig. 7.28). Krier explained : '[t]he classical handling of corners to courtyards or squares requires the material to become more dense towards the corner. Here however it needs to be broken up as there are terraces and living spaces behind' (Krier, 1982: 61).

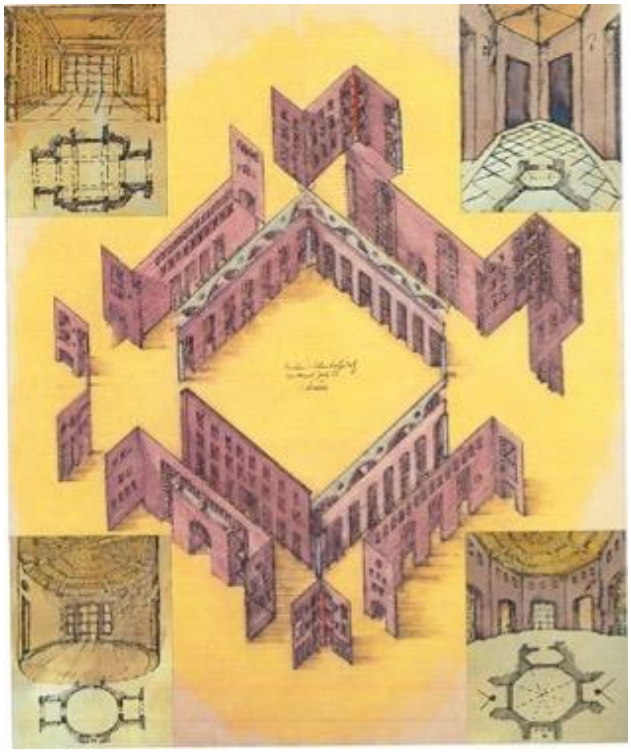


Fig. 7.26 Variety of façades surrounding Schinkelplatz; Ref: Krier, 1993: 46.



Fig. 7.27 Handling of the corners; Ref: Author, 2018



Fig. 7.28 Krier's Italianette square at the crossroads of the scheme; Ref: Author, 2015

The blocks leading up to the square, facilitate their orientation towards the square. They also feature different façade composition conveying Krier's version of an 'architectural event' (Fig. 7.29). Since the site contained the *Feilner House*, an apartment building by Karl Friedrich Schinkel, Krier replicated and integrated the historical façade in his development (Fig. 7.30, Fig. 7.30a). The reconstructed house seems to act as a 'street décor' as its dimensions and ornament are different from the original. The original traces of the *Feilner House* located at the difficult junction with the neighbouring blocks, appear to dictate the employment of the nineteenth century urban plan with the intersecting secondary streets (De Michelis, 1984: 79); they once again depict Krier's attitude based on copying the elements of history.



Fig. 7.29 View into residential street leading to the center of the block, Feilnerplatz; significant variation in façade execution



Fig. 7.30 Feilner House at Schinkel Platz circa 1910; Ref: Rousset, 2017



Fig. 7.30a Reconstructed façade of the Feilner House; Ref: Author, 2016 (L), 2017 (R)

In line with the thought of the time for reconstruction of urban spaces and continuity with history, Krier repaired and integrated within its scheme further two nineteenth century blocks at Lindenstrasse (Fig. 7.31). One of the reconstructed blocks belongs today to the newspaper publisher and offers gallery spaces for art exhibitions. The buildings feature striking contrast of the original stone masonry juxtaposed with the post-modern materiality of the enlarged fenestration with the dark green frames.



Fig. 7.31 Reconstruction of the block at Lindestrasse; Ref: Author, 2016

Clearly, the project is a textbook example of Krier's thesis, and represents a formally complex scheme. Unlike the nineteenth century block that folds inwards to reveal one or two sequential courts, Krier's scheme features a perimeter block that encloses a cruciform of two secondary streets. Its morphology carves out a clearly defined hierarchy of spaces: the urban grid with the focus on central space of the Schinkelplatz, the street, the perimeter blocks, the internal streets and courtyards. Yet it also differentiates between public, semi-

public and private spaces, with the function of ‘housing’ ‘raising above other functions of the city’. Krier (1993) said about his Ritterstrasse development in Berlin:

> I have proposed that the edge of the block be subdivided into manageable plots for a number of reasons, most importantly:
> To put a halt to fast-track production of housing by a single architect and so to give work to other architects.
> To re-establish small groups which will again allow people to get to know their neighbours.
> To create a small-scale architecture that is easy to recognise and orient oneself by.
> To recognise that housing can only rise above other functions of the city if it once again takes on the variety that in the past characterised, enlivened and enriched the streetscape (Krier, 1993: 41).

Krier’s position illustrated that architect inscribed the specific role of ‘housing’ to his block. Following social ambition typical of the urban design at the time, this urban project depicts the ‘neighbourhood’, and allows tenants to get to know each other. Driven by nostalgia, the block also became a clear representation of Krier’s relationship with the past, visually conveying the link with his chosen historical forms.

As the part of the overall programme, the access system to the building was through the shared corner entry and the large, filled with light, stairwells. Seen as an important architectural element, the concern with access presented not only a functional issue but further concealed the social overtones in Krier’s work. According to Krier (1983), the entry meant to influence the way residents interact with each other and also identify with their building (Fig. 7.32).

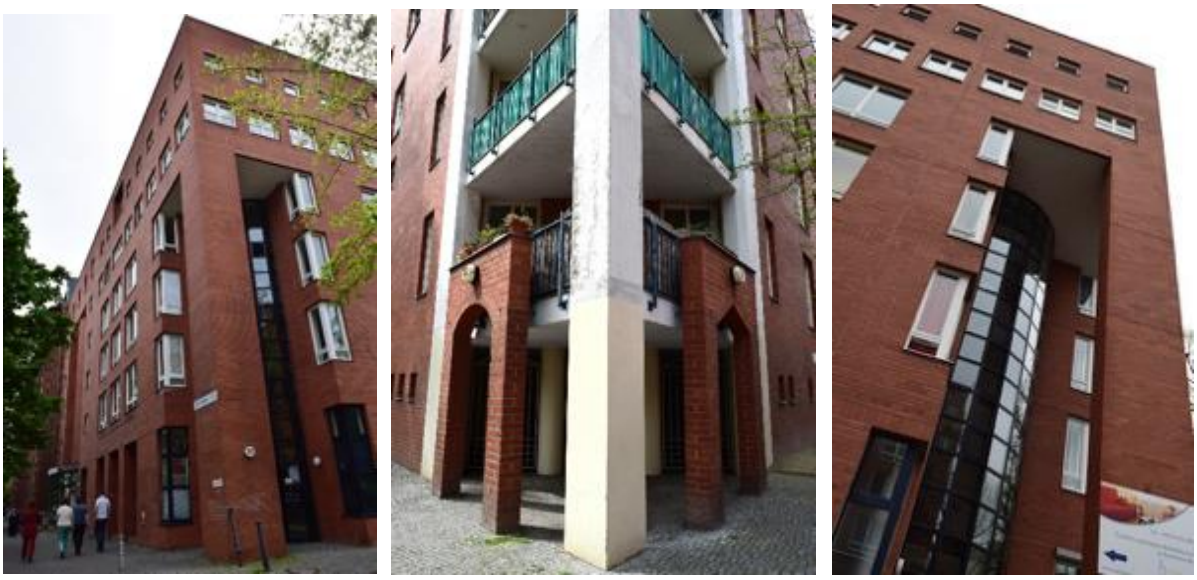


Fig. 7.32 Emphasis on the corner of the blocks - residential entries to blocks; Ref: Author, 2017

The focus on social significance is particularly elevated at the point of access to the building at the corner of Lindenstrasse and Ritterstrasse. Here the block includes some commercial spaces along the street (Fig. 7.33): a shop and the restaurant spaces. Yet, unlike the arrangement of the nineteenth century typology, where corner access was often reserved for retail, in Krier's scheme, this most lucrative space is taken by the residential entry, depicting the hierarchy of the block's uses and Krier's ambition for pre-programmed social interaction. Subsequently the retail access is located away from the block corner (Ritterstrasse side), yet it is advertised by the signage that sits directly above the corner, and residential entry to the block.

The large, irregular and bright coloured fenestration strikes against the red brick materiality.



Fig. 7.33 Italian restaurant located off the block's corner; Ref: Author, 2016 (L), 2017(R)

Following the post-functionalists model of planning ‘with user in mind’ (Jane Jacobs, 1961, Krier, 2006) the block provides some kind of programmatic mix (Fig. 7.34). As well as a restaurant it also contains communal centres, a kindergarden, playgrounds, ice cream, coffee and a print shop and also the underground carpark. It seems however that unlike the dense rhythm of the nineteenth century building stock in the Oranienstrasse Area, the reduced density of Krier’s block is unable to sustain the richer programmatic mix.



Fig. 7.34 Commercial spaces at Ritterstrasse ; Ref: Author, 2016

The block further displays a variety of internal layouts that also differ from the plans of its mid nineteenth century predecessor. Similarly, to the urban external spaces of the block, the rich variety of interior spaces of the block too, convey importance of ‘housing’ function in this scheme, and also social interaction. In the concave in form block on the Alte-Jakob Strasse (Fig. 7.35), Krier propositioned a series of shared communal apartments. The open plans of these apartments have been arranged to allow interaction between co-tenants (Nalbach and Nalbach, 1989).



Fig. 7.35 Block at the Alte-Jacob Strasse; Ref: Author, 2017

In another block at Ritterstrasse, the set of gateway houses are arranged in pairs to create a link between the courtyards and the street. The building features the split entry to the block (Fig. 6.36). Here, the exterior staircases are protected from the elements and designed as a 'playhouse' for children. The block also includes various interior design layouts, ie. maisonettes with atelier spaces (Senatsverwaltung für Stadtenwicklung und Umwelt 1987).



Fig. 6.36 Split entry to the block and the atelier and balcony spaces;
Ref: Author, 2016,(L), Bereri, 2013 (R)

Unlike the nineteenth century courtyards deployed with the large entry gates and an equal status with the street, the entry to the Krier's blocks provide only small connections

between the street and the courtyards, suggesting different status of the courtyard (Fig. 7.37).



Fig. 7.37 Courtyard and street connectivity; Ref: Athor, 2017

Therefore, unlike the 'unprogrammed' and easily accessible courtyards of the nineteenth century block, Krier's landscaped courtyards are private, highly landscaped and pre-programmed, for the exclusive enjoyment of residents (Fig. 6.38).







Fig. 7.38 View into courtyards; Ref: Author, 2017

On the south side of the Ritterstrasse (Fig. 7.39), visually adjoined with the Schinkelplatz is the four story building by Krier. The building signals access to the depth of the block by stretching its gateway into a long, low arch. Leaning towards Krier's socialist roots, the block references the famous Karl Marx Hof in Vienna. Two side-wings provide an offset

asymmetry to the axial opening by variations in the composition of the loggias and balconies. As seen on the Figure 7.40, Krier undertook a detailed geometrical study determining the proportions of his façade. The two-side wings provide an offset asymmetry to the axial opening by variations in the composition of the loggias and balconies. The orientation of the projected wings, allowed Krier to locate the stairs and utility rooms in the shaded areas, distributing apartments to the east and west (Krier, 1993).



Fig. 7. 39 Ritterstrasse South block seen from Schinkelplatz; Ref: Author, 2016

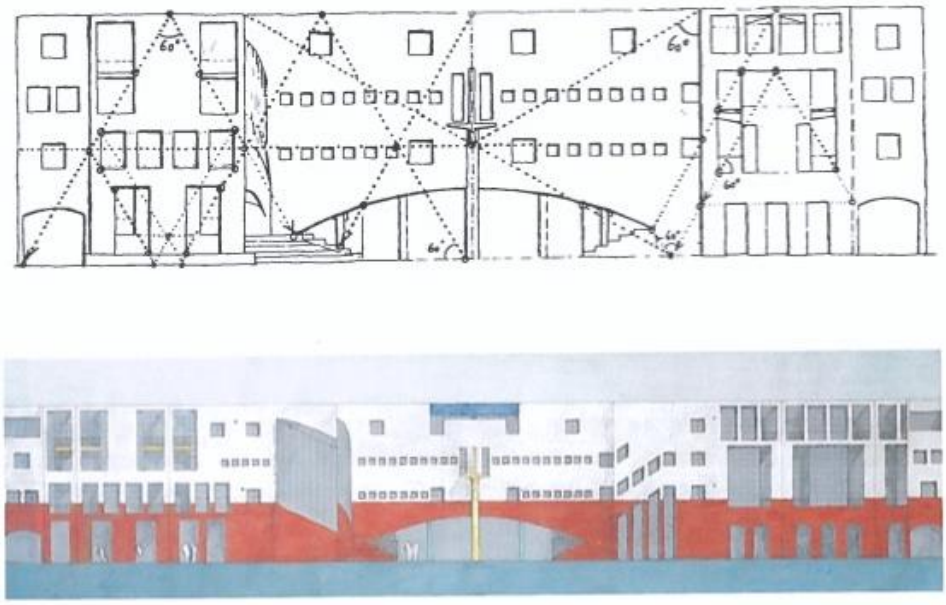


Fig. 7.40 Proportional systems determining the façade composition study for the scheme and rendered design; Ref: Krier, 1993: 40.

As in his Rauchstrasse scheme, a sculpted figure of an angel 'supervises' the entrance (Fig. 7.41). Throughout the architect's career, the relation between the works of sculpture and work of architecture became increasingly more emphasised. In 2010, almost twenty years after the completion of his IBA blocks, Krier commented on the significance of the union between sculpture and architecture: 'sculpture confers sensuous charisma upon the abstract geometry of the building allowing stone to speak' (Krier, 2010). This influence with art is even more evident in the inner plans of the block, where the form is almost superimposed for the 'sake' of art, rather than convenience.



Fig. 7.41 Krier's Entry Arch; Ref: Author, 2017

7.4.2.1. THE INNER SPACES OF THE BLOCK

The plans feature special attention to the design of the inner spaces of the blocks. Krier's floorplans surrounding the Schinkelplatz appear to be developed from the 'inside – out'; they illustrate individual character of each apartment with the layout served from the central living room based on the figures of circle, octagon and square (Fig. 7.42a). Clearly inspired by the variety of Schinkel's bourgeois apartment floorplans (Fig. 7.42b), along historicism, Krier also demonstrates his focus on different geometries and art depicted in

the hand drawn studies of interior layouts (Fig. 6.43). Krier justified his intentions: '[t]he classical spatial geometries are neutral and can be used independently of time and culture. These typologies could be very much extended. In the combination of different sizes of room and geometries lies 'true art'' (Krier, 1982: 63).

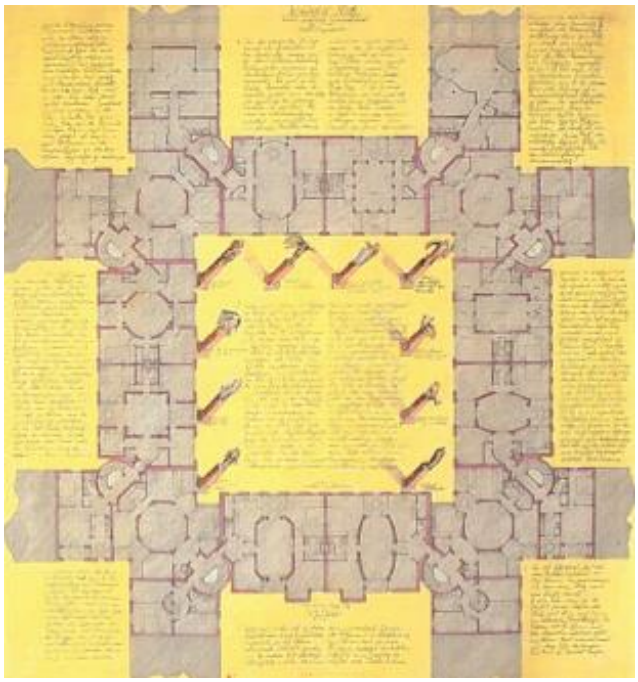


Fig. 7.42a Interior layouts surrounding Schinkel Platz; Ref: Krier, 1993: 47

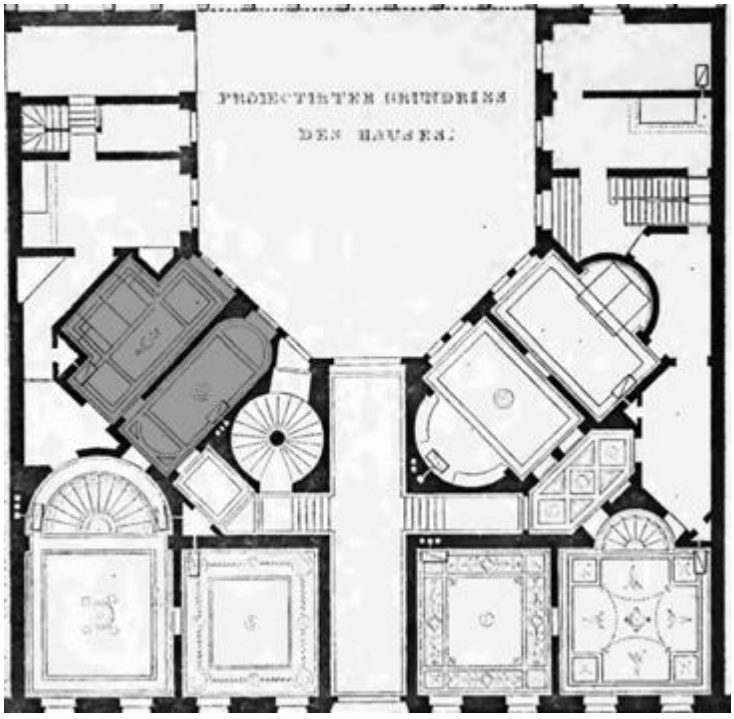


Fig. 7.42b Bourgeois apartment plan by Schinkel; Ref: Ernst and Korn, 1858, plate 113

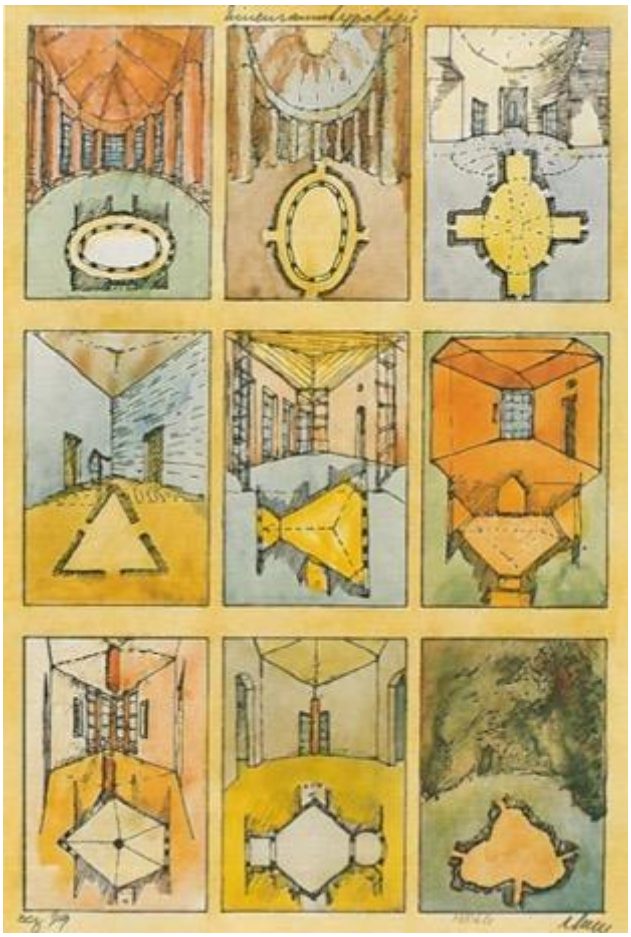


Fig. 7.43 Variety of internal layouts Ref: Krier, 1982: 62-63

By linking together the living room, dining area and loggia into an uninterrupted central space orientated to both sides of the building, the architect ensured that tenants may relate to both the street life as well as to the quiet block interior. Krier (1982a) explained further:

> In the plan, the layout of the rooms was decided to be started from the living room – which takes on the shape of a flattened octagon and proceeding via the hexagonal entrance hall to the seven sided staircase hall. This is not a case of geometrical fetishism, but simply a logical development of the concept of a principle room in which the secondary are connected. The form of the living room grows out of the need to enlarge it in the middle, since it is the family's meeting point, the 'heart of the home' (LB Alberti)... (Krier, 1982a: 5).

Clearly, Krier's position on the design of the apartment layouts in his block is unlike the nineteenth century generic set of spaces that regularly distribute the structural arrangement and thus also the façade elements (i.e. fenestration). Krier's historicist approach makes up for the awkward floorplans and it is unlike the convenient and open to change layouts of the 1860s block. This implementation of history quoting Alberti is somewhat taken too far.

Yet, although this array of different spatialities both in the external and internal spaces enriched the urban environment and variety in the block, this logic is foreign for Berlin. It thus appears that the Ritterstrasse block simply conveyed Krier's aim to offset the prevalently industrial function of the area by supplying a quality housing scheme, that would at the same time create an 'architectural event' on site. Still, the scheme underpinned with 'spatial fascination' (Achleitner, 1982: 8), provided a reason for the critique.

7.5. CRITIQUE OF THE RITTERSTRASSE BLOCK

Considered as a key example of a contextual urban development, Krier's Ritterstrasse project has been met with both accolades and severe criticism. In particular his treatment of the publicly accessible outdoor spaces is recognized as outstanding (Senatsverwaltung für Stadtentwicklung und Umwelt, 2014). On the other side, a statement by Kleihues exemplifies how Krier's historicism came under scrutiny:

> I would consider Rob Krier's work to be especially typical of postmodernistic thinking in architecture; [Krier's] type of historicism is really very nostalgic and conservative; it is a trend that is heavily impregnated with resignation, and manifests little hope of faith in the future; it is problematical because as regards social considerations it calls for an orientation on the past that is not viable (Kleihues and Klotz, 1986: 11).

In a similar tone, Alan Colquhoun described Krier's practice as 'reduced' and exemplifying an 'absolute model that takes as much from neoclassicism as [it takes] from Roman architecture'; as such, within its overall configuration, both externally and internally, it 'denies the chance of further adaptations' (Colquhoun, 1981: 11) - as its form is pre-programmed according to a certain vision by Krier. Accordingly, despite his manifestos, calling for architecture that 'can be handed on' (Krier, 1982:10) and suggesting potential of further transformation (Krier, 2006), Krier's implementation of theory to practice can be charged with the discrepancy. As Colquhoun noticed, Krier's practice is 'reduced' and does not project formal continuity. Krier's quest for permanence of the city is assured by involvement of different formal and spatial elements of history.

The coordinated design, involving different architects building on individual plots realized Krier's goal to achieve 'variety' on site. In lieu with the nineteenth century planning, the urban blocks subordinated to the plot, potentially also allow for replacement and repair. This value exists in Krier's Ritterstrasse scheme, and is also reflected in a more recent attitude to urban design promoting plot design in cities. One of the reasons behind this idea is the flexibility that comes with the method, and which sustains the continuity of the building stock, as well as the notion of permanence and resilience of the larger structure (Tarbatt, 2012, Krier, 2006). For this reason, we may potentially deem Krier's scheme as flexible in terms of use and refill of the building fabric.

The concept of formal variety can be noted at the level of elevation, and used materiality. In response to the nineteenth century's meticulous brickwork practice, Krier correspondingly adopts the craft of making neat stringcourses and brick arches, depicted for instance around his Schinkel Platz. These architectural decisions indeed created abundance of 'architectural events' favoured by the architect, however, they also depicted a specific use of the block as 'housing' and as Krier (1982) argued accordingly for a specific occupant and social situation at the time. Such bespoke attitude was defined by Kenneth Frampton (2007) as 'craft approach' or a 'craft architecture' by Robert Delevoy (1978), deeming the typologies used at Ritterstrasse block as 'hierarchically organised not only in terms of size and sequence but also with respect to shape' (Frampton, 1982: 5). Thus, Krier's typology, founded on the

history as ‘a treasure-chest of unprocessed experience’ (Achleitner, 1982: 8) may be deemed unmovable and static.

This notion of unprocessed type is in particular perceptible at the point of the courtyards developed as lush gardens, and, also the room organization. Accordingly, Frampton (1982) argued that Krier’s plans were determined according to the basic geometries and sequences of nineteenth century bourgeois standards of deportment, but realised through the minimum standards of social housing, which inevitably led to an unduly restricted aggregation of spaces (Frampton, 1982: 2-9). Similarly, Deborah Berke described Krier’s central spaces as resulting in difficult geometries in the peripheral rooms, and as giving no indication of how the central room could actually be furnished or used effectively, given that each room has at least four doors, each in a different wall (Berke, 1982: 10-12).

Indeed, as seen earlier on the drawings of internal layouts, the oval, oblong, and unequal polygon forms of the floorplans appear inconvenient for the practical interior arrangement. For the same reason, this rigid geometry as Berke further argued, precluded simultaneous circulation and ‘static’ room use. On the other hand, speaking in favour of Krier’s internal organisation, the architectural critic Friedrich Achleitner (1982) sees Krier’s ‘typology of the individual apartments [...] as ‘practicible’ that is utilizable in a number of ways’, simply an ‘architecture in the best and most natural sense of the word’ (Achleitner, 1982: 8).

Despite the divided views, Krier’s internal arrangements, similar to his facades, may be seen once again as the architect’s own interpretation of the variety found in the nineteenth century’s Berlin urban grain. His ambition was to redeploy the components that made the traditional city memorable and convivial. Krier’s deployment of forms served to establish a formal dialectic between building and space, architecture and the city, the public and the private. His vision of urban living sees a clear correlation between the reinstatement of architectural and urban form with the appreciation by its users, even when at times this takes on a somewhat condescending tone:

> the intimate and introverted quality of the square and the adjacent block structure will undoubtedly facilitate the initial process of adaptation by its first inhabitants. Moreover, many Turks live in Kreuzberg and I am convinced that this ethnic group still remembers,

> having learned their lesson in their homeland, how to feel at home in a square and a street. It would be nice of the means could be found to decorate the square with stelae and figures, with images that can be read and would help people to understand themselves. I have suggested that the square should be named after Karl Friedrich Schinkel (Krier, 1982: 5).

To the critics Krier's expressive abundance of forms demonstrated thereby 'the limits of typological variations' drawing Krier's implementation of typology as 'reduced to disjunctive assembly of heterogeneous elements' (Frampton, 1982: 7). To those censors, Krier's 'play with the bits of the past' merely verified that 'in this architectural jigsaw puzzle, the really original pieces are rare' (Taffuri and Dal Co, 1976: 387).

Particularly Krier's use of historical quotations was attacked. One of the intellectual figureheads of the IBA, the architectural critic Dieter Hoffmann Axthelm, critiqued the inauthenticity in Krier's reconstruction of the *Feilner House* on Schinkelplatz and revoking of the image from the past. He saw Krier's insertion of historic façade components taken from elsewhere, as exemplifying an urban image without history, given that this formal move can be multiplied randomly and removed from historical time and place (Hoffmann-Axthelm, 1987), depicting 'bits of the past' (Taffuri, ibid).

Accordingly, Deborah Berke (1982) sees the architect's projects as failing to demonstrate the complete understanding of the implications of history. The author commented:

> Given the history of modern housing and urban development, Rob Krier's 'critical' architectural position is understandable but ultimately misguided. Housing as the paradigm of architectural utopia has involved a continuing attempt not only to shelter urban inhabitants but also to teach them how to live, yet it has failed repeatedly because its proponents often do not understand the portent of their designs.
>
> Whether the isolation is physical or perceptual, a sense of distance from the contemporary city typifies Rob Krier's approach. His visions are of a projected city which is largely the product of a nostalgic, utopian historicism that pervades both art

> and politics today. Because of this, and despite their singularity, they paradoxically suffer the same faults as the housing produced by progressive utopians, namely that they are blueprints for the redemption of life through architecture, at the price of ignoring the contradictions of the culture (Berke, 1982: 13).

Whereas, in an even harsher tone Friedrich Achleitner (1982) presented his views:

> Krier would appear to concern himself with history only insofar as it guarantees his a certain constancy of spatial experience, and it is with the patterns he derives from this that he calls into question the basis of the current architectural approach. He does not appear to have any intention of learning from history in another sense or of reproducing a specific historical world. His link with history lacks concrete ties to historical processes or truths; the phenomenological basis is sufficient for the renewal and articulation of spatial experience.
>
> The use of classical categories in the formulation of urban spaces, the adaptation of well-proven patterns (streets, squares, courtyards) and their variations, the withdrawal into a 'sane' reliance on the crafts of building, can only be explained through the dialectic between the physical situation of protest and the architectural reality which has induced it (Achleitner, 1982: 8).

Despite harsh criticism of the theory, perhaps the strictest being given by Derorah Lohrman (2014), who more recently described IBA scheme for reconstruction of the city as the 'plot conspiring the death of urbanity' in Berlin.

I cannot agree with that statement. It is crucial to point that Krier's Ritterstrasse provides until the present day a high quality urban residential environment. The variety of dwelling layouts and the high quality of well-defined outdoor spaces provide a rich, varied environment for the inhabitants and the urban district. The postmodern aesthetics of Krier, and classical appearance of buildings, today form easily-recognised, 'likable' and familiar spaces that are enjoyed by their users. Whilst also, at the time of development the blocks were popular as among residents as they were with the developers who used the 'elegant

themes' for marketing undoubtedly counting on the great return from the sale of these properties (Bereri, 2013 Urban, 2017).

Krier's Ritterstrasse spatial and formal articulation exemplifies many of the formal objectives of the IBA as explained by Colquhoun. It can be read as an urban component configured by perimeter blocks and streets; however, some of its postmodern facade articulation might not be as 'anonymous' as Colquhoun would have wished: Krier's project 'seeks to reinstate the street and the public square as the places of unprogrammed public enjoyment and congregation' through the articulation of voids and differentiated landscaping; its bounded courtyards can be read as seeing 'the public space of the city as more analogous to so many external rooms and corridors, with definite boundaries, than to limitless voids within which buildings, circulation routes, etc., occur', and its siting in the urban context 'conceives of the city as historically as well as spatially continuous – capable of being read as a palimpsest (Colquhoun, 1989: 232).

Overall, Krier's Riterstrasse scheme stands consistently with the architectural thought of the time and in many ways responded to the IBA requirements. The scheme holds a number of spatial similarities with the nineteenth century structure: its lining of the street, clear definition of spaces and sequencing of courtyards are akin to its nineteenth century predecessor and objectives of the IBA as listed by Colquhoun.

7.6. CHAPTER CONCLUSION

Chapter 7 illustrated Rob Krier's deployment of forms as exemplified by two IBA reconstruction schemes: Rauchstrasse and Ritterstrasse. In many ways these projects responded to the aspiration of the IBA's organisers for reinvention of history, yet it was the Ritterstrasse project that trialled the formal qualities of the nineteenth century Berlin block. From an organisational perspective, similar to its nineteenth century predecessor, the Ritterstrasse's archways allow a line of movement into the block. The voids permit access and views into the courtyards, yet are designed as landscaped spaces of relaxation. In that

sense, they are ‘preordained’, and therefore do not perform as envisaged by the IBA’s objectives for places of ‘unprogrammed’ public enjoyment. There is also little flexibility about Krier’s courtyards, where the ground surface clearly is assigned to the buildings surrounding it. Likewise the inside functions and layouts are hardly open to adaptation – except from one size of dwelling to another. Both the apartments’ plans and the courtyard space are part of precisely defined set of spaces, their lines in plan indicate clear demarcations of places for public and private enjoyment with the courtyard space belonging only to, and being differentiated from the highly articulated self-contained apartments.

While access at ground level is granted, nevertheless it appears that the vertical line of the building elevation demarcates a sense of closure between the inside of the block and the space of the street. Here the block will not allow a changing pattern of use over time – the internal differentiation between residences and their respective courtyards, the irregularity seen at the level of facade, do not offer a potential of different distribution of intensities across ground level or a change of uses horizontally and vertically. Overall, as this section demonstrated, Krier’s block, does not simply adapt nineteenth century spaces to a twentieth century concept of public and private, but forms spaces entirely differently. Furthermore, these spaces are deployed in accordance to the same logic that around 1880 marked the shift from the spatiality of the mid nineteenth century city.

As I have shown, based on Krier’s choice of architectural elements, his forms are distilled and ‘hand-picked’ from history and depend on Krier’s own memory. As such they evoke some principles of historical continuity promoted by Rossi. Yet Krier’s quest for the architecture’s continuity is revoked by the image device and formal vocabulary. He achieves the link with the past through the use of the fixed typological repertoire. His transformations of a formal type are founded on imitation and the assembler of historic forms favored by Krier. His typology therefore, seen as a collection of various forms, borrowed from other aesthetic periods and different settings, was founded on nostalgia, and Krier’s own belief that the design of ‘something old and proven is more useful’ than the new ‘that will cause people suffering’ (Krier, 1979:170). Accordingly, Krier inscribed the role to his historical quotations as ‘images that can be read and would help people to understand themselves’. Such application however was deemed inauthentic by Hoffmann-

Axthelm, and marked with resignation as seen by Kleihues.

Krier's historicism rendering the past as a static set of images demonstrated that one approach history as a formal quotation, or merely repetition of form. As a formally autonomous method it also impoverished typology of its strategic organizational values, driving also the broad objectives set outside architecture. Krier's typological process was therefore unlike the method practiced around the mid nineteenth century. Yet, is was also unlike the transformative and active process of Rossi. Accordingly, Achleitner (1982) observed: Aldo Rossi 'in his typological draughtsmanship poetically transforms history [...], to document his distance from it – Rob Krier works outside history insofar as he uses its products as material, as the aesthetic deposits of unreflecting processes, as a treasure-chest of unprocessed experience' (Achleitner, 1982:8).

Still, it must be noted that Krier's view of type helped to shift 'the cause and effect relationship of programmatic requirements and architectural form' advocated by functionalist planners. Likewise, it was this take on typology that allowed the city to link with its architecture and the history, and further to view architectural objects as the consequence of the formally autonomous processes of a discipline rather than relying on the functionalist objectives. The formal type, as the 'tried and tested' solution once again appeared in the architectural and urban repertoire. In this respect, Rob Krier's typological approach might be seen as foregrounding further discussions on the 'more evocative notions of type' (Francescato, 1994: 257).

Accordingly, in Chapter 8 I look at the more suggestive, evolutionary and dynamic approach to formal type. Developed also on the basis of Rossi's idea of 'permanence of the city', the method used by Oswald Mathias Ungers illustrates significantly different attitude to that practiced by Krier. In conjunction, the works of Krier and Ungers provide rationale for comparison of different takes on the post-1970s block and further comparison with the mid nineteenth century predecessor. Yet, rather than serving as a critique of Krier's architectural and urban contribution, Chapter 8 instead aims to provide an alternative reading of typology, and a different use of historical continuity and precedent. It will also investigate the contribution of Ungers' architecture to the city in its formal and organizational capacity.

Chapter 8

OSWALD MATHIAS UNGERS: THE SEARCH FOR AN ONGOING ARCHITECTURE

8.1 CHAPTER INTRODUCTION

In Chapter 8 I discuss the design thought and the works of yet another important contributor to typology and spatial relationship between the architecture and the city, Oswald Mathias Ungers, known also as OMU (1926-2007).
Similar to Rob Krier's method, OMU grounded his approach on the 1970s urban science of Rossi and the formally autonomous language of architecture. However, in contrast to Krier's rich formal repertoire and classification of architectural and urban spaces of the past, this chapter will show that OMU typological reasoning is founded on a different use of history and understanding of continuity.

It describes Ungers' response against the reconstruction of urban fabric through densification as practiced by the IBA, and also the architect's counter position to the formal collage of forms copied and mixed up from the diverse time periods as exemplified by Rob Krier. It will further illustrate Ungers' approach as based on the composition of contrasting forms that complement the existing context, and which demonstrates the architect's quest for continuity with the past'. As I will show, this concept illustrating architecture as an ongoing 'process' derived from the critical design attitude described as *coincidentia oppositorium.* This abstract notion guided Ungers to a differentiated outcome during the design process, which guarantees the dynamic relation of forms with the past, linking them to the future. Based on typological transformation, this conception holds a quintessence of Ungers' complex design thesis and could be only elaborated upon when discussed in parallel with OMU's academic and built schemes.

This section thereby discusses the compounded design theory together with the architect's early projects. Such illustration, and its specific focus on the block typologies will also

demonstrate OMU's intense relationship with Berlin as consistently interwoven with the development of the city's planning frameworks: the 1979-1984/87 IBA and the 1995 *Planwerk Innenstadt*. Thereby, drawing upon the existing scholarship on Oswald Mathias Ungers, particularly Pier Vittorio Aureli (2011), and Sam Jacoby (2013), as well as the OMU's writings and drawings, I look at and interpret the two projects designed for the IBA - the Schillerstrasse block in Berlin-Charlottenburg (1978-1982) and the Kothenerstasse block in Berlin-Kreuzberg (1987), and further explain Ungers' typology at Hallesches Uffer, developed for the *Planwerk Innenstadt*, (1995) - as an alternative to Krier's deployment of forms. The location of these blocks is marked in red on Figure 8.1.

I argue that unlike Krier's partially unmovable and static notion of types, based on set of pre-established and closed typologies collaged from history, OMU's typology illustrates the link with the history of architecture based on morphological and analogical transformation of the forms from the past, that each time enriches Ungers' formal repertoire. Such approach I argue, posits Ungers' theoretical apparatus as interpretative and dynamic, and further offers an alternative to the method based on the faithful and literal reconstruction of the past. Yet, as I will show, unlike Krier's easy to read typologies relying on visual memory of the historic European forms and 'likability' factor (Krier, 1975), Ungers's forms founded on intellect and abstraction are not self-referential and merely appear ambiguous and opaque.

I further argue that despite a different approach to Krier's typology, Ungers' spatial arrangement has not guaranteed the difference in the urban performance of the blocks. Similar to the dichotomous urban spatiality practiced by Krier and IBA, also OMU's forms clearly demarcate the public, semi-public and private activities. I thereby argue that the blocks developed by OMU similar to Krier's typologies, describe a different understanding of spatial organisation between their post-modern forms and the nineteenth century Berlin's ubiquitous urban type. As I will show, the 1970s block that derived as a formally autonomous structure, doesn't show discipline's precise relation to urban, illustrating a vague and static relation between the block and the space surrounding it. As such, it's form underemphasises the strategic values of this urban typology, and also architecture's contribution to the city in its formal and organisational capacity.

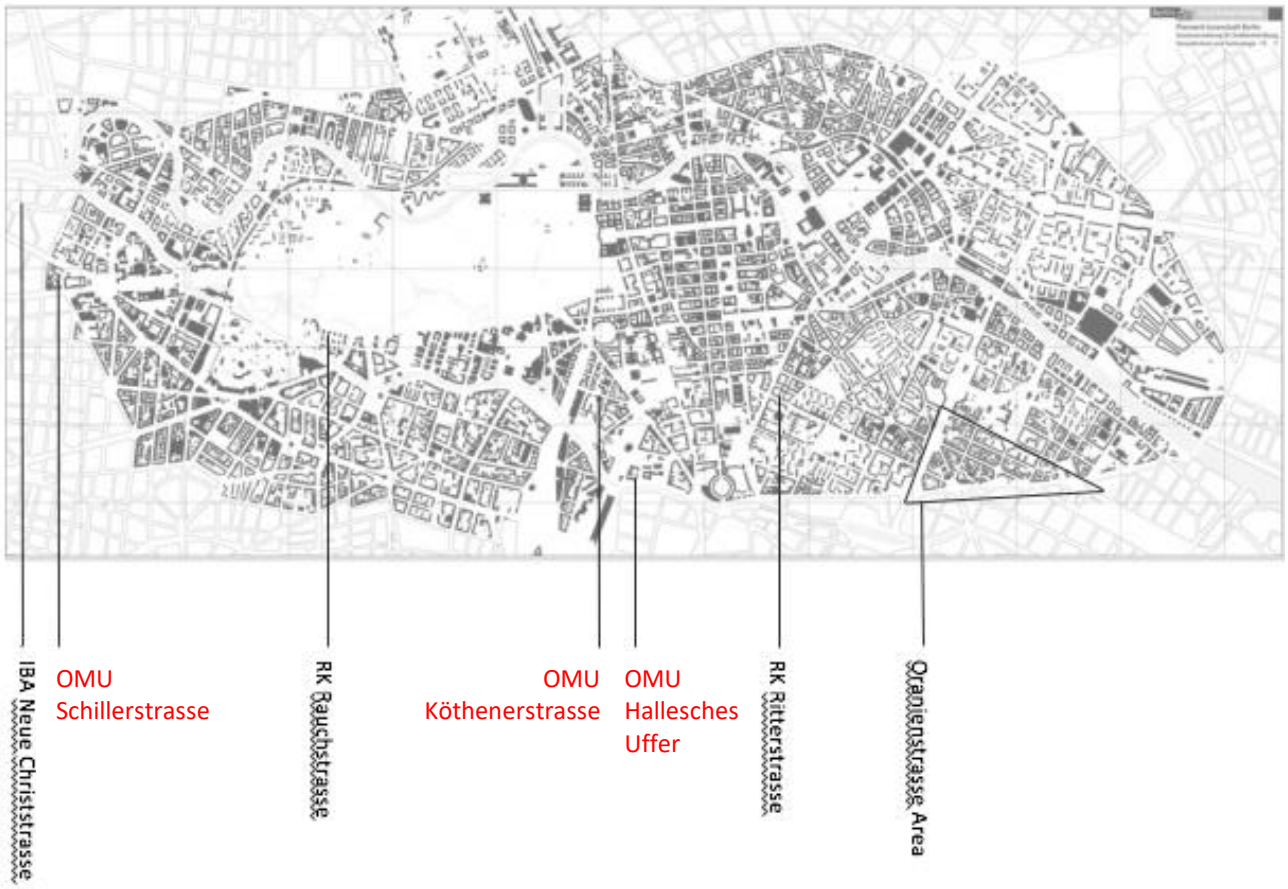


Fig. 8.1 Location of the blocks by Oswald Mathias Ungers (OMU); Ref: Stadtentwicklungskonzept, 2014, marked by the Author, 2019

8.2. MORPHOLOGICAL TRANSFORMATIONS AND *COINCIDENTIA OPPOSITORIUM*

Highly critical of the modernist approach to architecture and planning at the time, the discipline's focus on sociology, 'construction economy' (Khrushchev, 1993: 184), and its expressionistic language, Oswald Mathias Ungers sought a rationally determined and 'independent of all functional determination' method of design (Ockman, 1993: 361).

Influenced by the works of Rossi at the time, Ungers' design thesis converged with the methods of Neorationalism, profoundly, the typologically autonomy and the anti-functional design.

With a focus on the morphologies integral to architecture and a particular interest in cubic forms, in early 1960s Ungers develops the rules of formal autonomy in architecture that will outline the theme of his design thesis. The development of Ungers' theoretical thought coincided with his teaching at the Technische Universiteat (TU) Berlin (1963-64), the Cornell New York (1965), and also the prolific drawing exercises undertaken together with his students (Jacoby, 2013, Ovaska, 2007, Koolhaas, 2007).

In 1964, during his lecturing years at the TU Berlin, the architect developed a project for student campus in Enschende, Holland. This scheme, together with several other significant projects actively contributed towards Ungers' post-functionalist concepts of the city and architecture. The Enschende scheme is important as it underlies some leitmotifs of his design approach that were used for the Berlin block projects developed later.

Located on the green open area, the scheme was developed as 'the form of self-sufficient city' (Boehm, 2007). It grouped the student apartments in blocks according to their formal character and style, framing them in sequences of very specific geometries. It thereby rejected the current focus on function, according to which the student campus would likely contain free-standing and repetitive student pavilions scattered in the green space (Fig. 8.2).

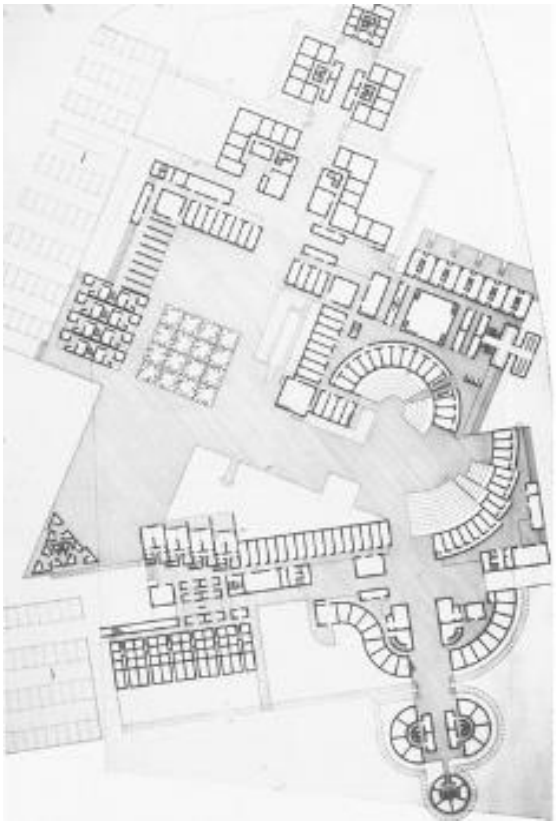


Fig.8.2 Student campus, Enschende; Ref: Ovaska, 2007, Aureli, 2011: 186

For the scheme, Ungers transformed three basic geometries, the square, circle and triangle, and arrived with the complex articulations of formal type and varied spatial morphologies that illustrated his 'morphological code' (Ungers, 2011: 29) and a 'very personal manifesto of a morphological architecture' (Jacoby, 2013: 277). This new 'infinite catalogue of urban forms' was used by Ungers as his tool kit of forms (Ockman, 1993: 361) (Fig. 8.3).

Ungers' syntax of typological possibilities was the result of implementation of the rules of *composition* to the basic form: the variations made to the square, triangle and circle, and their transformation through the themes of 'rupture, folding, repetition, superimpositions, subdivisions, permutation, doubling, reflection, [and] arrangement in series' (Ungers, 1982:23, Aureli, 2011). It is striking that this hand-drawn gridded table of forms, draws also the analogy to the geometric and rectilinear layouts known from Durand's *Précis* (seen previously in Chapter 5, Section 5.2.1). In a similar fashion, the graphs help the architect to generate the new typologies through compositional themes of merging, regrouping, superimposition and different arrangement of typological parts; as seen on the figure below

(Fig. 8.3), the code quotes the chosen form on the left column of the table, which serves as a link with the reinterpreted typologies positioned next to it in the rows. This process, demonstrating morphological continuity of the newly derived forms, as Ungers admitted was 'an attempt to develop through a new interpretation of the image, a new expression that is not to be found in the original' (Ungers, 1976: 115).
Pointing to the rich formal repertoire emerging from the constraint of basic forms, Ungers (2009) argued with regards to Enschende:

> It has three basic shapes: circle, triangle, and square. All of the transformations are performed according to certain criteria. If not, it would lead to an infinite combination and you would drown. […] You have individuals living here, and when this circle is divided you get two semicircles and create group living. This story is then inverted and row and terrace housing are added so that the entire spectrum of living is parsed in the axis here fanned out with the square. Only with the triangle it is not formally possible, because again and again triangles emerge (Ungers, 2009).

In result of these graphic exercises, the new catalogue of forms was later tried on the plot, acting as 'a step towards the fragment of the city' (Boehm, 2007).

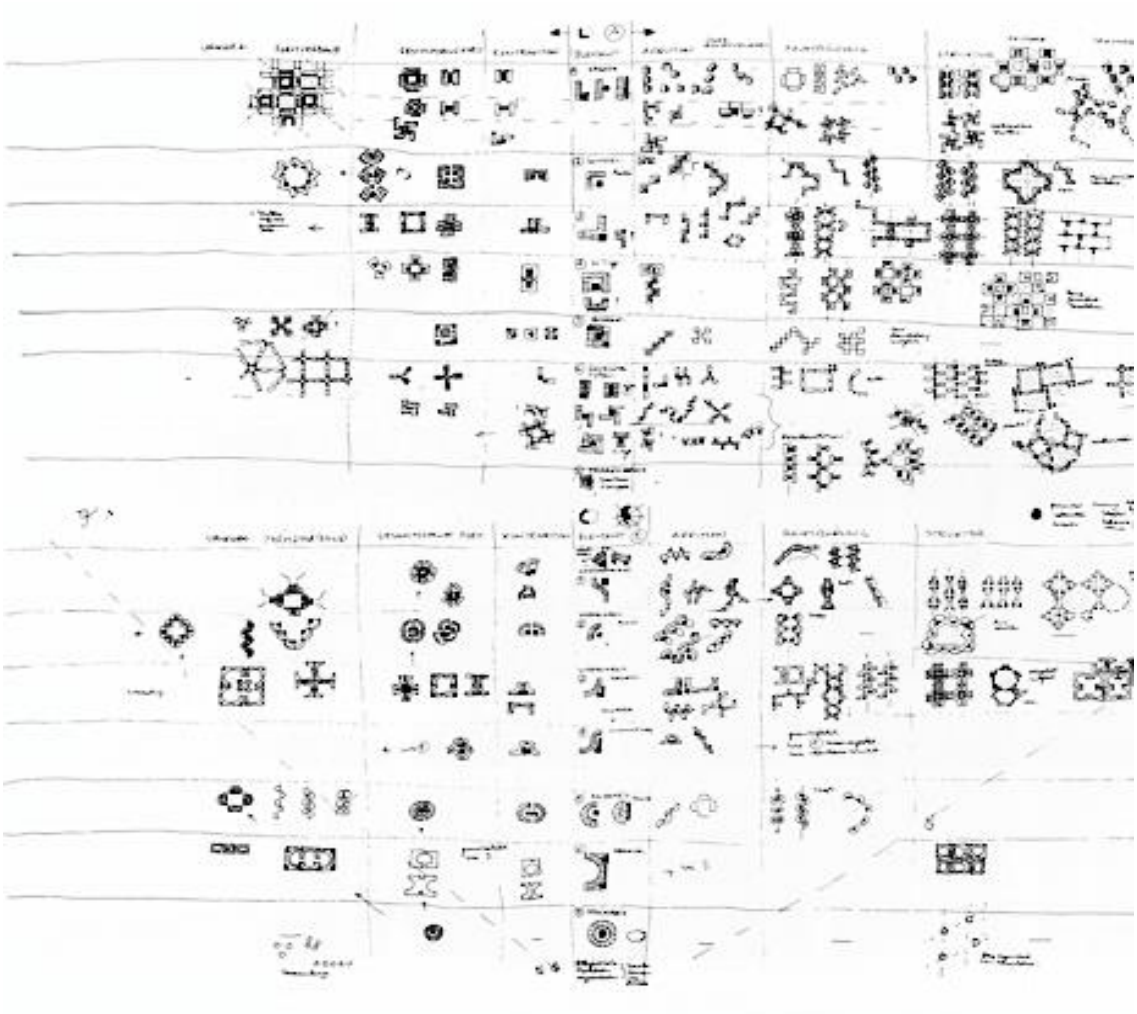


Fig. 8.3 Ungers' search for form; the syntax of morphological possibilities; Ref: Ungers, 1982, also Boehm, 2007, Jacoby, 2013

The plan thereby features very apparent basic figures of geometry applied to both the building typologies and urban spatiality (Fig. 8.4). The contrasted figural images, illustrate a clear definition of typologies merged simultaneously with the composition of the complex spaces bounded by buildings, and suggesting the formal and spatial autonomy of the project. The project's spatiality is also reminiscent of the complexity of the spaces of Hadrian villa and the 'austere architectural grammar' of Durand (Aureli, 2011).

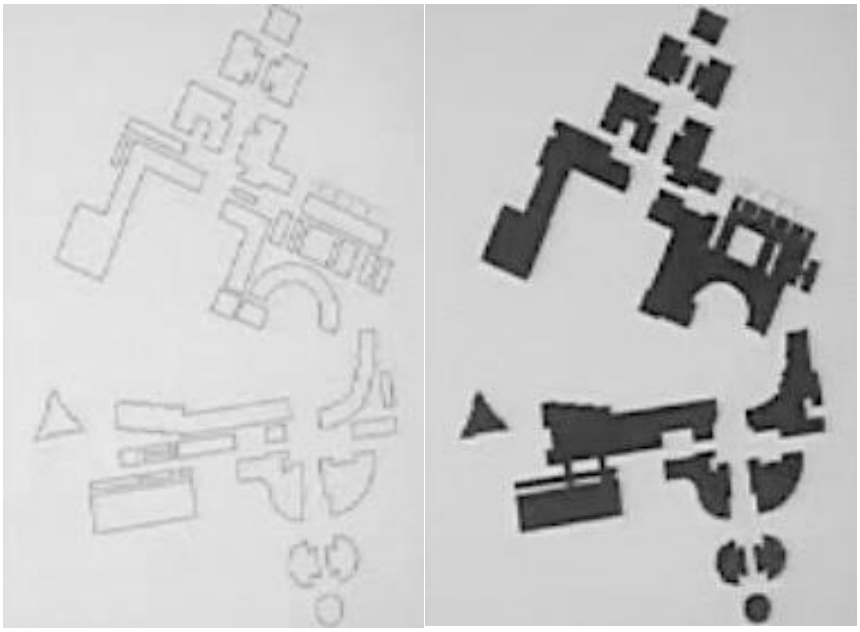


Fig. 8.4 Negative figural images illustrating relationship of void to solid; Ref: Ovaska, 2007

This perspective shows that similar to his post-functional contemporaries Ungers used the forms and ideas from the past in accordance to his own choice and memory. The design was comparable with the ideas from different phases of history: the restricted formal language of Jean-Nicolas Durand, the spatiality of the Roman architecture, and, at the same time the critical design motif borrowed from the 15th century German philosopher, Nicolas of Cusa (1401-1464).

The concept of *coincidentia oppositorium* (coincidence of opposites) is crucial to understanding of Ungers' design thesis. Further described as *variety in unity*, it illustrated an idea of type in a continuous process of development, where through the use of a *dialectic* notion, the resultant new type is realized as a cohesive union. This dialectical type was developed by Cusa in fifteenth century to bridge the contemporary oppositions together: the 'contradiction between an infinite unknowable God and our finite growing knowledge', and was adopted by Ungers to the 'rational types, or ready-made ideas and forms'; Charles Jenks (2002) explained, that in the whole concept it was the 'intuition [which] played the key role in bringing the oppositions together' (Jencks, 2002: 119).

Thereby drawing upon the fifteen century concept, Ungers sees architecture and the city as a unique dialectic of *coincidentia oppositirium*: 'the coincidence or composition of not just different parts but opposing ones, which leads to critical unity' (Aureli, 2011: 25). As Ungers argued, it allowed the architecture to be carried forward (Ungers, 2009).

This aesthetic leitmotif will become a leading design concept at the time of development of his later projects, exemplified by the blocks developed for the IBA and Planwerk Innenstadt, which I discuss in section 8.3. This concept can also be seen as a 'reversed answer' to that pursued by the IBA, and continued by the Planwerk Innenstad notion of urban redevelopment, based on preservation of urban coherence and continuity with history grounded on visual analogies. In counter-position to the practiced at the time and exemplified by the works of Krier, Ungers based his solution on the idea of *coincidentia oppositorium.* The solution lay in 'unity in variety' derived from the diverse urban aspects, and addressed different aspects of dialectical and ongoing processes with the history that depended on intellect.

Furthermore, Ungers adopted the same abstract paradigm for arranging building forms as to organise the space of the city; merely zooming in and out of scales. Thereby similarly to his post-functionalist contemporaries, he interpreted disciplines of planning and architecture interchangeably. Accordingly, for Ungers the connection between the parts of architecture or urban spaces takes place in a manner according to the workings of his abstract paradigm, *coincidentia oppositorium*. In 1998 Ungers explained the mechanism of transformation between varied morphological fragments and their integration:

> At the beginning of the modern age, Alberti asserted the principle of *varietà nell'unità,* diversity in unity. In the same period, Nicholas of Cusa propagated the convergence of opposites. Both paradigms, Alberti's *varietà nell'unità,* and the *coincidentia oppositorum* of Cusa, proceed from the same premise: a basic principle common to everything and its unlimited variation, the essential, unified form and its diverse adaptation to different circumstances. This principle embraces not exclusively, the exclusion of opposites, but their *integration*. It requires not only contrary but also complementary thinking (Ungers, 1998: 9).

For Ungers therefore, the notion described the ‘essential formative factor of an urban ensemble’ (Ungers, 1963: 364), and further illustrated a balanced ‘unified form’. Grounded on a convergence of contradictions and oppositions, the new form was also able to adapt and respond to a number of different situations, which, as Ungers (1963) argued, enabled ’the new spatial connections’ and the architecture that is carried forward as a ‘process’:

> [The form’s] own formal laws, … are grounded in the essence of form. This essence is independent of all functional determination and exists on the strength of its own compositional force as a permanent principle in all epochs and cultures. Neither the building nor the city is a cultural product that is based upon many external considerations. Each has each structure and grows according to internal, not external, formal laws. Today we address this question: how can the most structurally varied forms, which have appeared over the passage of time and only in some cases stand immediately next to each other, be brought together in a unified whole? This question cannot be answered by sociology, traffic planning, or technology - these are just tools – but only by the insights won from the morphological study of form (Ungers, 1963: 364).

This position carries a parallel with Rossi’s functionally autonomous type-permanence and also his approach to history. Similar to Rossi, also in Ungers’ repertoire the ‘set-pieces from various historical epochs projected the past into the future, relating the present to a continuum of collective memories’ (Ungers, 1979: 9).

Yet, whilst the continuity with the past for both architects depended on the ‘collective memory’, in the passages above Ungers transpires that for him the city is not a single, coherent whole. It rather projects the ‘set-pieces from different temporal periods, and instead could be designed as fragments, each holding its own logic. This proposition contrasted with that upheld by the IBA and Rob Krier, promoting restoration of the city as a unified and coherent whole.

To Ungers, the post-functionalist city and architecture were function of heterogeonous spatial and formal conditions that can only be resolved by his abstract paradigm -the *unity in variety*, which underlines his whole urban theory. As in his Enschande project the method explained the binding of contradictory and opposing forms with complementary structures and spaces. Accordingly, Ungers based his theory of the city on the dialectic strategy of 'the city within the city', and the 'city as strata', which similarly to his architecture was founded on varied contrasting and complimentary forms and spaces (Ungers, 1982).

Thereby Ungers' design framework strongly points to the importance of differentiation and variety. Like his contemporaries, Ungers confronted the Modern Movement's design methods with its regressive 'standardisation, which promise[d] at most a limited multiplication and a simple concept of repetition, and functions as a stumbling block on the way to a purely functional and material-oriented technology'. Inspired by the Renaissance theory, Cusa's *coincidentia oppositorium,* and Alberti's paradigm of variety and diversity, Ungers posited his transformative and dialectic type. As 'a fundamental doctrine of humanism' this type contradicted the modernist 'law of series' (Ungers, 1981: 22). Yet for Ungers, as a result of this typal transformation, the new structure was not a function of mere dissimilarities, it rather represented the diverse formal variation on that chosen by the architect's 'common' theme. Yet, whilst it guaranteed the cohesion of the project, it also illustrated the complexity of Ungers' thesis based on the conceptual design aesthetic.

As such, we may therefore see this approach as a highly 'autobiographical' method to spatial order that holds similarities with Rossi's method. In 1983 Ungers admitted his fascination with the transformation and abstraction of the 'common theme' in his design:

> the art of architecture is initiated through a more or less abstract concept of distributing and ordering differently shaped volumes and objects in space, and conceptualizing – abstracting visions and systems of spatial order […] When architect envisages his creation, an image of building, he cannot be just interpretative and descriptive, but must search for forms of abstraction to represent his naturalistic visions (Ungers, 1983: 36).

Ultimately Ungers' type involved abstract concepts that were for him 'the very nature of architecture' (Jencks, 1983: 36). Yet also, as shown in Enschende project, the arrangement of 'differently shaped' forms and voids required thinking in metaphors, analogies, allegories and transformations. This typology, as Ungers (1983) admitted later involved the new concept of *Gestalt,* for which he found inspiration in works of Johann Wolfgang von Goethe (1744-1834). The idea, based on the understanding of relation of the whole to the parts allowed him to see the enclosed space of architecture as represented either by the 'igloo', or Stonehenge. Like in Enschende, the open, or 'deconstructed' space is delineated by solid and fixed forms. This conception offered new possibilities in creating defined urban spaces existing in a larger spatial organisation, and will be also used in the block schemes developed in Berlin during the IBA.

It therefore seems that Ungers' typology based on the abstract principles depended on transformation, repetition and differentiation of formal elements and analogical interpretation to derive a vast number of new interpretations:

> Take a path, a wall or a structure: each of these elements permits of series of interpretations. Not every path is the same. A path can be a playing path, an alee, an arcade or a gallery. ... There are any number of possibilities. Numerous interpretations can be found to fulfill one and only one function. It is procedure by means of which the scope of design can be *enriched*; a wide scale of possible interpretations made even wider, and employed according to the demands of the specific conditions of the pre-existing situation. In the end it is this vocabulary, which is at one's disposal in the production of the design (Ungers, 1981: 21).

For Ungers therefore type is not reducible to a function. It is inscribed with the range of possibilities not only to address that function but also to 'enrich' 'the scope of the design'. For him, the instances of formal variations (or 'vocabulary') exceed the function, and contribute to the new possibilities to expand the design resolution. The infinite number of

variations effects the transformation, and the transformative process becomes the point of design itself:

> When architecture is seen as a continuous process, in which thesis and antithesis are dialectically integrated, or as a process, in which history is as closely involved as the anticipation of history, in which the past has the same weight as looking forward to the future, then the process of transformation is not only the instrument of design but it is the very object of design. At the same time it becomes possible to make reference to the specific reality of each individual site where the architecture will be built…

Ungers (1982) elaborated:

> The principle of transformation is active in all fields of nature, life and art. It is the principle of formation (*Gestaltungsprinzip*) capable of organizing different elements into planned totality. Thus, the principle of transformation – as it can be grasped for example in the historical transformations of the town plan of Tier – converts a given stabilized organization into chaos and eventually, following the laws of chance, into a new order. A differentiated and planned organisation is submerged over the course of time by chance and spontaneity, which in the end produce an organisation that is genuinely different and contrasts with the previous one; an organisation that is, of immediacy and programmatic necessity (Ungers, in Frampton, 1981: 297).

For Ungers, this grounding of typology in the formative principle of transformation was a protest against the functionalism and the Modern Movement. The method indicated the 'transition from purely programmatic approaches to a more creative mode of thinking' and 'a process of thinking in 'synthesis' and 'qualitative values' rather than 'quantitative data' or 'analysis' – as adopted to design by the modernist planners (Ungers, 1976a: 104).
Ungers explored and explained the themes of the dialectic transformation, metaphors and analogies and their use in architecture in his 1982 book *Morphologie=City Metaphores.*

The book was the sequel to the 1976 New York exhibition: 'manTRANSforms'. Ungers (1976a) explained the themes of the exhibition:

> What all that means - thinking and designing in images, metaphors, models, analogies, symbols and allegories – is nothing more than a transition from purely pragmatic approaches to a more creative mode of thinking. It means a process of thinking in qualitative values rather that quantitative data, a process that is based on *synthesis* rather than analysis... Therefore, the cities as they are shown in the exhibition are not analysed according to function and other measurable criteria but they are interpreted on a conceptual level demonstrating ideas, images, metaphors and analogies... There are three levels of reality exposed: the factual reality – the object; the perceptual reality – the analogy; and the conceptual reality – the idea, shown as the plan – the image – the world (Ungers, 1976a: 104).

Accordingly, Ungers implies the analogical notion of his type to a broader organization of the city. The analogy translated as a 'moment of knowledge' and a 'cognitive process' happens between 'form and the form or between concept and the form' (Monestiroli, 2003:100). Therefore it not only involved the transformation of physical structures but also affected different concepts and ideas from history. Ungers explained this through the series of analogical portraits of city plans illustrated on Figure 8.5 to Figure 8.8.
These figures describe urban plans, each juxtaposed with images from nature and science, with each pair given only one single-word description, both in German and English.
Like Krier, Ungers evokes the links between the history and the city through means of visual memory, yet more so like Rossi he illustrates how typological thinking can influence the formal interpretations of the history; for this Ungers finds inspiration not only in the world of forms but also outside architecture. This is the highly evocative notion of typology that generated both his type and method and was developed on the basis of quoting static images from the past (Francescato, 2014), and which supplanted the 'craft architecture' of Krier (Frampton, 2014, Delavoy, 1979).

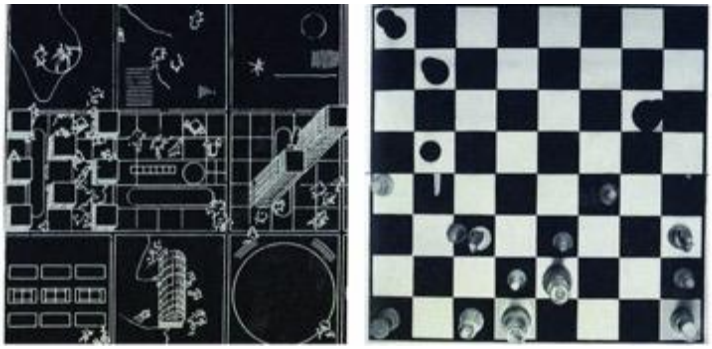


Fig. 8.5 *Similarity-Gleichartigkeit,* in analogy to 1930 plan of Magnitorsk by Ian Leonidov; Ref: Ungers, 2012: 66-67

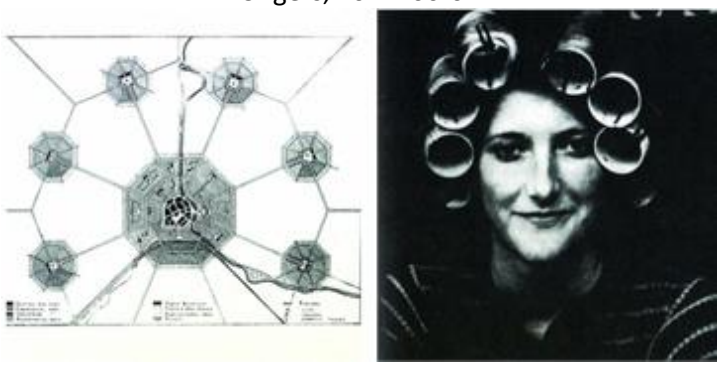


Fig. 8.6 *Appendages-Anhängsel,* in analogy to 1928 Satelite-town by Unwin; Ref: Ungers, 2012: 56-57

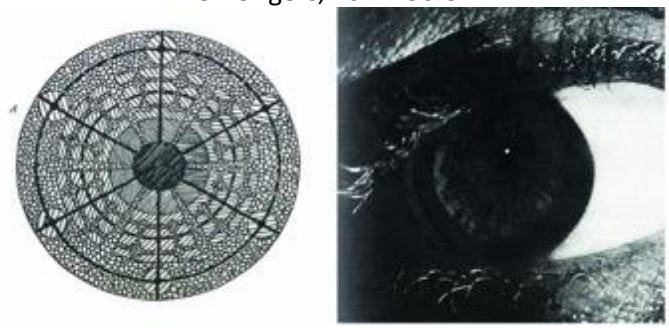


Fig. 8.7 *Focus-Brennpunkt,* in analogy to 1910 Concentric-radial-system; Ref: Ungers, 2012:32-33

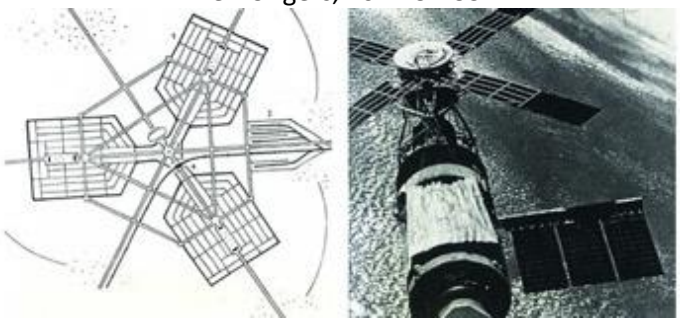


Fig. 8.8 *Communication-Flühlungnahme*, in analogy to 1919 Satelitenstadt by Paul Wolf; Ref: Ungers, 2012: 18-19

The idea of an analogue was elaborated upon in the design proposals from the later period. In the academic exploration of the Kreuzberg district in Berlin, the architect made an analogical reference between the city's fragment – Kreuzberg – seen as an island and layer, and juxtaposed it with the larger urban context of Manhattan. Although, as Schrijver (2008)

observed, these images are not as diverse as in Ungers' *Morphologie=City Metaphores*, they clearly portray a similar *modus operadi* of 'juxtaposition that appeals to more than the urban plan itself' (Fig. 8.9). Here the metaphor between Kreuzberg and Manhattan once again regards the conceptual. Ungers sees the district of Berlin as an autonomous 'island', a 'strata' and a 'layer' - superimposed onto the larger urban plan of the city. With the same effort, the architect will develop his three blocks for the IBA and the *Planwerk Innenstadt*.

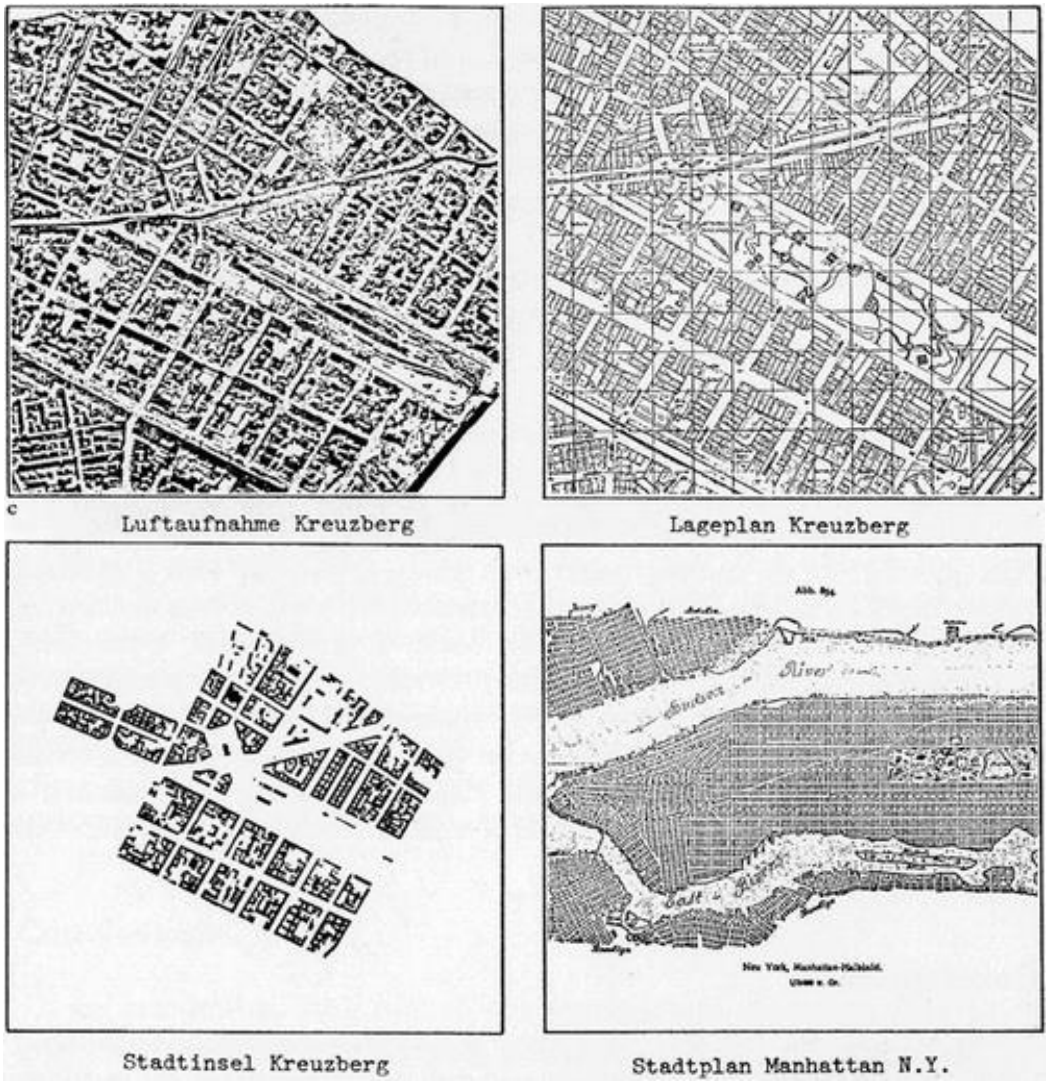


Fig. 8.9 Kreuzberg as an urban 'island' and a 'layer'; Ungers, 1979 :19

In 1977 and 1978, Ungers perfected his ideas in collaboration with the group of students at the Summer School in Berlin TU, and Cornel University, New York. The series of hypothetical

urban projects culminated the themes of type, morphology, analogy, relation type – city, which Ungers developed earlier, and also introduced a new concept of *Grossform* and the *city within the city.*

8.2.1 SUMMER SCHOOL 1977/78; A *GROSSFORM* AND *THE CITY WITHIN THE CITY*, BERLIN: A GREEN ARCHIPELAGO

For the theme of the Summer School 77/78, Ungers chose Berlin as the study object for finding solutions to urban problems. The school was held in four parts; each under a different title: 'Urban Villa', 'Urban Garden' and the 'City within the City'; these three were held at TU, Berlin, whilst the fourth seminar on 'Urban Block' took place at the Cornell University, NY (Riemann, 2007, Ovaska, 2007). All four seminars regarded the new principle of the *Grossform.* This new idea, as Ungers explained would not relate to scale, quantity or volume of a form, and rather to its strategic and 'qualitative' value (Schjriver, 2006, Schjriver, 2007). As such, the *Grossform* could be materialized either as the small house, a garden, an urban block or a city district - thus the four themes chosen for the Summer School.

The exercises stressed the significance of scrupulous urban analysis, the extraction of typologies 'found' in context of the city, and their translation according to the principle of *Gestalt* and *coincidentia oppositorium.* Correspondingly, the drawing studies seen on Figure 8.10 and Figure 8.11, demonstrate the students' search for a new form and their understanding of presented themes, the juxtaposition of complementary and contradicting forms, and superimposition of contrasting forms with the existing context. As seen on these figures, the illustrations of the autonomous villa types, in particular their cubic forms, show clear correspondence with Ungers' later projects in Berlin: the 1979 block at Schillerstrasse, the 1986 Köthenerstrasse, and the 1995 Hallesche Uffer scheme. While I describe these projects in the following section, it is important to note yet another theme that Ungers incorporated in all these later projects and which profoundly surfaced at the time of the Summer School. This theme depicts Ungers' deep interest in architectural morphologies, and in particular his focus on the cubic form. This primary form can be deemed as a 'tool kit'

of his design, and distinguishes many of his projects. As seen on the figures below, the theme of a cube for a development of a building was transformed in accordance to Ungers' motif of *coincidentia oppositorium* to result in many variations of the same cubic theme.

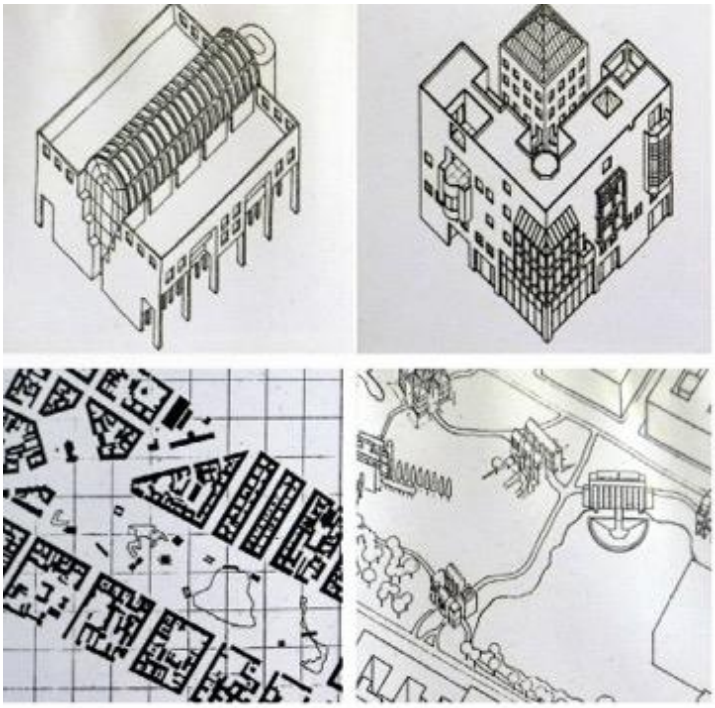


Fig. 8.10 Summer School drawing exercises, Berlin, 1977; Ref: Hertweck and Marot, 2013: 117

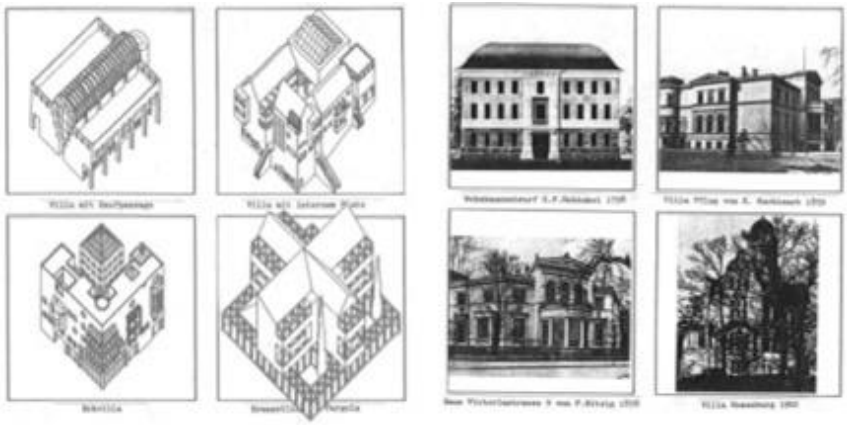


Fig. 8.11 Urban Villa workshop, 1977; search for form closely trailed the existing examples of Berlin typologies, Ref: Hertweck and Mariot, 2013: 113

Speaking about the importance of primary forms Ungers (1998) admitted:

> [G]eometric forms – circle, straight line, sphere, cone, cylinder, cube, and elipse – provide a framework for the translation of a mental and spiritual conception into a symbol. Already the humanists sought for the ideal shape, the perfect form, in order to represent the idea of creation. The essence of art and architecture is number, measure, and proportion. Sublimity is expressed through them alone (Ungers, 1998: 9).

Ungers therefore reinterprets the basic forms of geometry in a variety of formal ways, using them as a tool in his architectural and urban repertoire. Along formal lines, these forms also transcended greatness and beauty, allowing Ungers to introduce variety in a capsule, and to demonstrate his 'idea of individualisation' (Ungers, 1981: 23). Most importantly however, they seemed to offer an alternative to the modernist standardisation and the monotonous forms exemplified by the International Style.

In addition, the drawing exercises undertaken at the Summer School clearly demonstrate the awareness about the formal history of Berlin. As such, the Urban Villa project reinstated this urban type from the city's past – the nineteenth century Stadtvilla (an urban villa). As seen on the Figure 8.11, the series of vignettes illustrate this historic type, which was used by Ungers and his students for analogical reinterpretation.
The study further underlines the total autonomy of the architectural form, neglecting political, sociological or traffic planning reality of Berlin at the time (Boehm 2007). As seen on Figure 8.12, the drawing for the seminar 'The City within the City' by Peter Riemann, demonstrates the studies of morphologies extracted from Berlin's urban and architectural fabric. Transformed according to *coincidentia oppositorium,* the forms were then overlaid onto a plan. Together, they illustrate the 'fragmentary urban strategy' of various heterogenous spaces, which encompassed for the idea of the city that Ungers promoted at the time.



Fig. 8.12 Drawings by Peter Riemann for 'The City in the City' Summer School in Berlin; Ref: Hertweck and Marot, 2013: 164

Corresponding with the 1977/78 Summer School, Ungers developed his urban manifesto titled: *The City in the City, Berlin: A Green Archipelago* (1977); he worked on this scheme in collaboration with Rem Koolhaas, Peter Riemann and Arthur Ovaska. This most renown of Ungers et al's project, propositioned the city 'as a disintegrated perceptual experience rather than a unitary image' (Walker, 2015). The scheme was an important response to the post-functionalist idea of urban as one coherent whole.

The short introduction of the 1977 manifesto which I propose below, does not give justice to the complexity of the themes used in this single scheme. Yet it serves to demonstrate Ungers et al's recognition of Berlin's reality at the time as the city with a fragmented urban fabric. For this 'city in crisis' the authors proposed their solution through exploiting of the problems of West Berlin, like depopulation and urban flight at the time. Following the idea of *coincidentia oppositorium*, instead overcoming the problem and planning for increase in density of Berlin fabric, Ungers et al take measures to work with this new urban reality.

Along with attention to the history of Berlin, this short illustration of the manifest shows the authors' focus on the forms flowing from morphology, varied typologies and facts 'found' within the context of Berlin that together served as a link between history and newly reinterpreted typologies, showing a difference with the methods practiced by Krier.

The 1977 book manifesto describes the city as created out of diverse, individualized forms, envisaged as approximately sixty autonomous interventions, or in Ungers' words: 'islands' of archipelago. Each of these islands consisted of limited typologies imbued with formal facts from particular context and reality; the overall conception represented the idea of the union of fragments or the 'city within the city' (Schrijver, 2006, Mühltaller, 2007, Aureli, 2011) (Fig. 8.13).



Fig. 8.13 Catalogue of proposed islands - typologies, the *Grossformen*, strategically positioned in the urban sea; Ref: Hertweck and Marot, 2013: 50.

Ungers, et al (1977) explained:

> The idea of the city within the city is the basic concept for the urban reorganization of Berlin. It is substantiated by the form of the city as archipelago. The urban islands of this archipelago will develop their character according to their historical premises, social structure, and environmental quality. The city as a whole will be a federation of all these single cities with different structures, which will be further developed in a deliberately antithetical manner. A decisive factor for the decisions to be taken in order to select these islands is the degree of clarity (Ungers, et al, 1977: 86, Hertwek and Marot, 2013).

In analogy to the situation of Berlin at the time, the hypothetical project described the West Berlin as an 'island', surrounded on its perimeter by the bigger structure of the East Berlin. Yet, this metaphorical reading related also to Berlin's single standing blocks, disengaged from their larger organisation due to destruction of war and negligence of the modernist planners. To Ungers these buildings were reminiscent of *islands* forming 'unique micro city' (Aureli, 2011: 193), and thus also paralleled the concept of the city composed of islands. The same theme of the buildings as disengaged but connected with their overall organization, will be exploited by Ungers during the development of his blocks in Berlin.

Despite the recent interest in Ungers' theory (Schrijver, 2007, Mühltaller, 2014, Jacoby, 2013, Ovaska, 2007, Cepl, 2007, Aureli, 2011), the accounts of the theory do not link the complex design thesis with the typological analysis of the blocks, nor do they illustrate the form's relation to the surrounding space. Accordingly, the next section fills such a gap by reassessing Ungers' urban works in Berlin: the 1979 block at Schillerstrasse, Charlottenburg, [1] the 1981 block at the Köthenerstrasse, Kreuzberg and the 1999 scheme at Hallesche Uffer, Kreuzberg.

[1] In May 2017 at the SAH Society of Architectural Historians conference, the Barbican Center, London, I have presented a paper introducing the typology of the block at Schillerstrasse, built in 1979; Section 8.3.1 uses extracts of this paper.

Whilst the study links the complexity of thought with the typological choices adopted to the built works, it in particular looks at the organisation of types in the blocks to illustrate architecture's precise link with the city and history and a different use of typology by the architect, predominantly its use as a 'theme'.

Unlike Krier's well documented Ritterstrasse and Rauchstrasse blocks, Ungers' works in Berlin have not received the same level of scholarly attention. With no studies to describe typal connections between the blocks, the city, and the history, the following section fills this gap in literatures.
Given that within time frames of this research I was unable to locate data illustrating individual transformation of the interior layouts of the block, the next section unravels different understanding of architectural and urban design and focuses on the change observed in the exterior during the four years this research was being conducted.

8.3. THE POST- 1970s BLOCK BY UNGERS

8.3.1. THE TYPOLOGY OF THE URBAN BLOCK AT SCHILLERSTRASSE, CHARLOTTENBURG, 1978-1982

In response to the IBA competition brief, Ungers submitted the scheme for the IBA's favoured urban type - the housing block. Based on the form of the block extracted from the nineteenth century historic urban plan of Berlin - the type 'found' in history - the new building was to infill the empty corner site and re-establish the street frontage. It responded to the contemporary urban and architectural strategy seeking unity and densification of the urban area. In line with the objectives of the IBA, the block was to retain the heights legislated for in the nineteenth century. As seen on the Figure 8.14, the design features the infill block, a new residential structure within the larger organization of the nineteenth century urban block, as consistent with his leitmotif of 'the city within the city'.



Fig. 8.14 Schilerstrasse Block by Ungers; Ref: Author, 2016

The block, precisely corresponds with Ungers' theme of *the city within the city*. Although developed to fill the gap in the existing nineteenth century organization, its form and spatiality are conceived as autonomous. The block mirrors the theme of an 'island' - included within the greater archipelago, and superimposed onto the city's plan.

Corresponding with the Urban Villa projects exercised at the Summer School, the Schillerstrasse scheme explicitly demonstrates departure from the modernist planning and architecture. The block particularly illustrates what Robert Delevoy in the 1978 Brussels Exhibition Catalogue *Architecture Rationalle* recognized as the production of 'an architecture in reverse' (Delevoy, 1978: 21). Accordingly, on one hand the new block visually appears as a counter scheme to the previous modernist planning thought, predominately, as it fills the gap in the historic plan of Berlin. Yet, on the other hand, the typology also illustrates a reversal of the main traits of the nineteenth century form - the model predecessor of the IBA's type.

In a creative answer to the IBA's brief asking for representation of the nineteenth century typology, Ungers clearly adopts a reversal of the architectural features typical for the form of its predecessor adopting his leitmotif of *coincidentia oppositirium*. As seen on the figure above, the street façade of Ungers' block appears almost 'bare' when juxtaposed with the regular 'face' of the nineteenth century block. In this respect, his block's facade is unlike the anonymous fabric and spatially undifferentiated form of the historic block. Looking at the post 1970s form from the street level, one notes that although the block links with the neighbouring forms on the perimeter, its form is audacious and simply stands out.

Ungers also switches the focus to the form's interior where he visually accentuated the inversion of the spatial and organizational principles of the nineteenth century typology. In analogy to the nineteenth century regularity of the façade, the 1978 block features a strictly ordered, highly regular 'check board' façade, which contrasts with the block's front 'face' (Fig. 8.15). Yet this also shows a dialectical approach adopted within Ungers' new addition to the block – the union of contrasted and complimentary forms, and not surprisingly, based on the theme of cube.



Fig. 8.15 The Interior of the block; Ref: Kräse, 1982: 37

Consistent with the application of his transformative paradigm to both thesis and practice, Ungers also analogically translated the morphology of the existing nineteenth century Berlin block. The block is articulated as a single unit that closes the volume around the interior courtyard (Fig. 8.16). Consequent with the application of a transformed cube to his design, and also in line with the IBA objectives for a creation of a 'pocket park' - the four-sided courtyard permits the use of its space as an inner square protected from the noise of the street. Yet, this space of a courtyard, as featured in many IBA's and also Krier's schemes, demonstrates the preprogramed space.

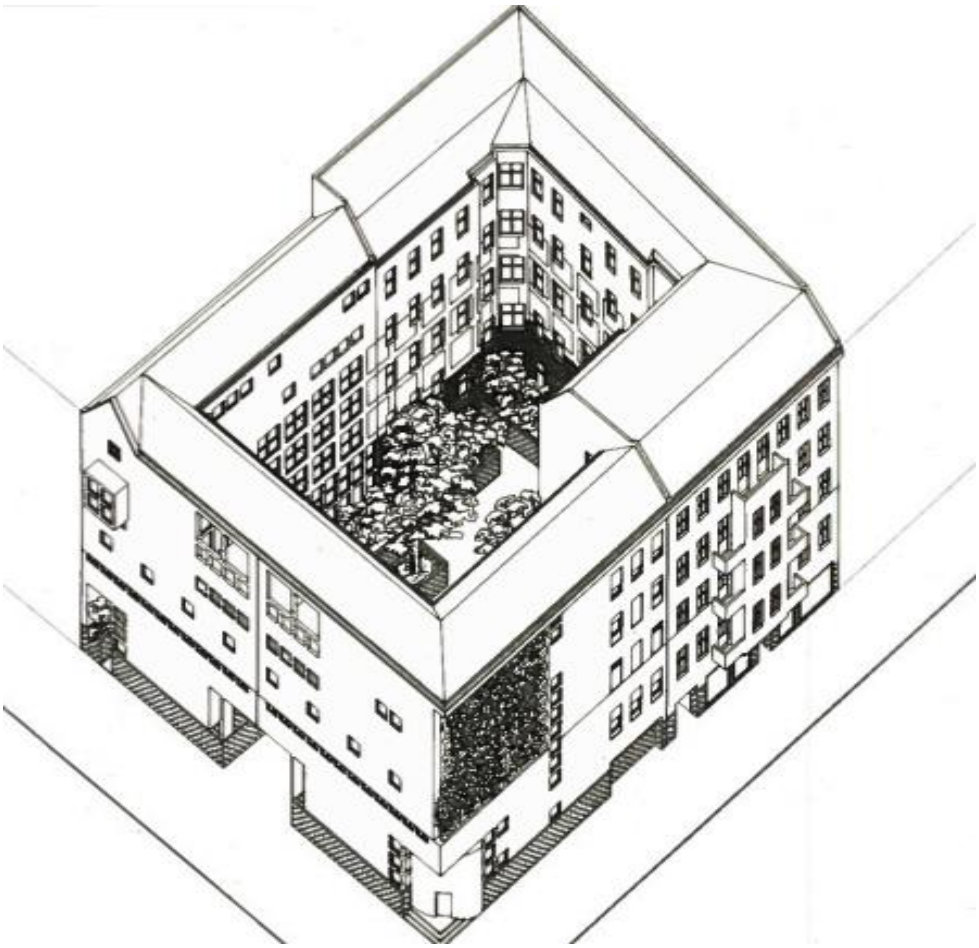


Fig. 8.16 Axonometric form of the block; Ref: Grimaldi, 1982: 41

Ungers builds his block off the exposed nineteenth century boundary walls closing the perimeter of the larger structure at the corner, and arrives with the overall new block conceived as a formally autonomous *Grossform* or an independent 'island'. The figural void

of the corner provided yet another concept for his scheme. The theme of an ‘inhabited empty wall’ (Grimaldi, 1982, Jencks, 1983) regarded the exposed, nineteenth century fire wall and was recognized from the facts about the urban fabric of Berlin. It appears to serve as a link between Ungers’ structure and the history.

The aftermath of WW2 Berlin featured much damage made to the nineteenth century blocks, which were later removed from their larger urban structure. These exposed party walls are still common in the urban landscape of the city, often providing space for the graffiti artists (Fig. 8.17).

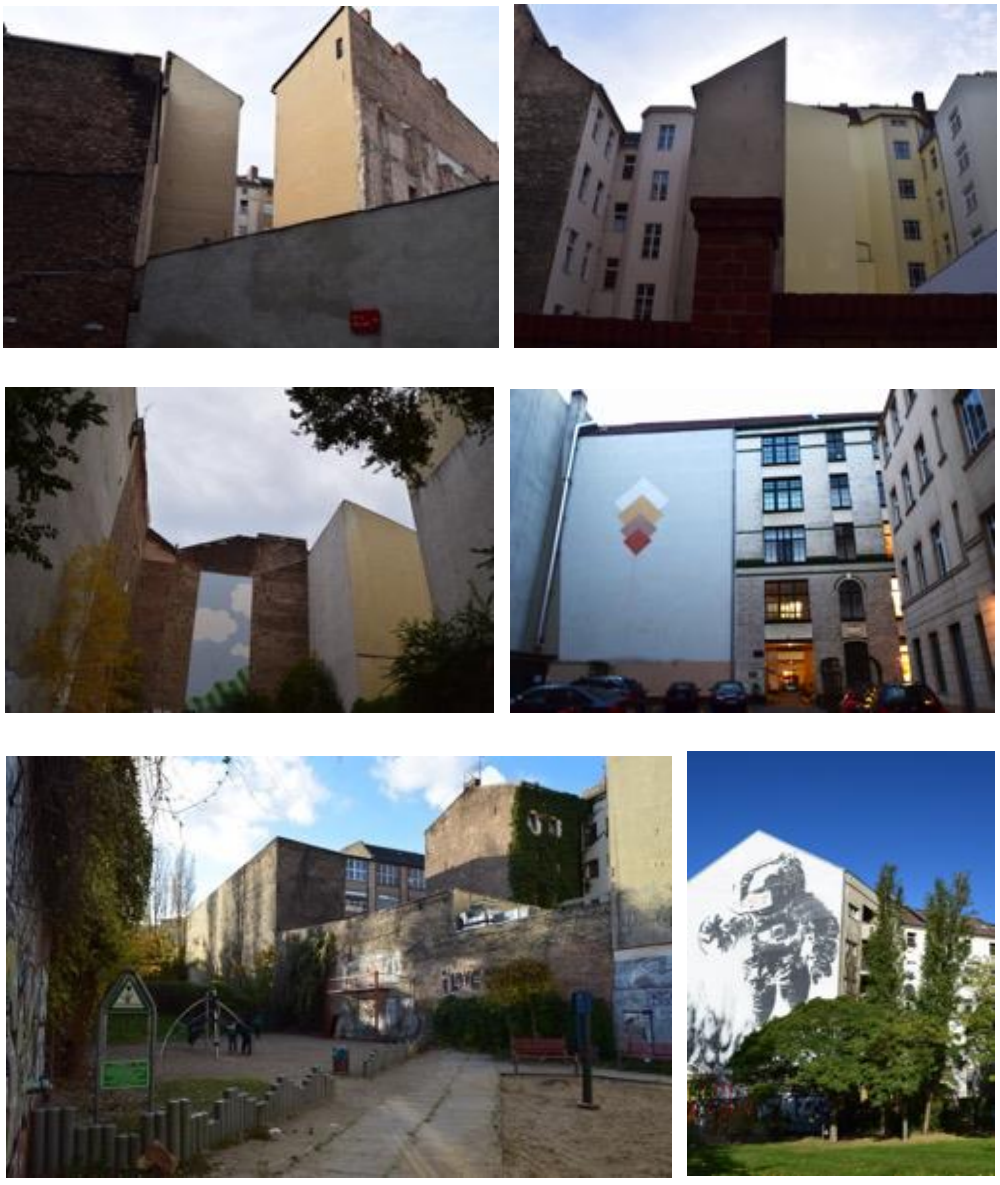


Fig. 8. 17 Blank fire walls of Berlin; Ref: Author, 2015

To Ungers, these walls did not illustrate a mere 'figural urban void'. Their meaning was hidden in the idea of 'absence', which in analogy to Semper's theory of 'absent presence' [3] (Frampton, 1981: 5), indicated the loss of something what was there before memory wise, and now it was absent (Ovaska, 2007). Accordingly, these walls similarly to 'Kafka's Wall', seem to represent a potential for realising a continuum with history. They signified the past that existed, and the past that is possible to retrieve and be carried forward – thus resonating with Ungers' architecture as 'process'.

Visually, the new block can be recognized as an 'island' independent from the city, a self-contained form that meant not only to stand as a mere infill in the larger urban structure. Conceptually, the structure epitomizes also motif of *Grossform* and *Gestalt* – a strategic form that at once creates part of the larger configuration, whilst at the same time is superimposed on the plan, as formally autonomous.
Furthermore, the particularly strident and favoured by the architect module of a square is used for the façade articulation and fenestration, and also as the figure recessed from the façade. This basic element is however included together with other geometries used in the composition of the block: a cylinder form that breaks the volume at the corner, or the triangular hut shaped pediment concluding one of the facades (Fig. 8.18).



Fig. 8.18 Geometric traits used in the design of the street façade; Ref: Author, 2016

[3] The allegory of the hearth as 'absent presence' was illustrated in Semper, G., in Mallgrave H., F., Herman, W. (Tr.) (1989) *The Four Elements of Architecture and other Writings,* Cambridge University Press, Cambridge.

The square module is a repeated theme, vastly multiplied, recombined, and proposed in the form of a grid laid across the courtyard facade, it is featured on the glass-block tiles, and forms the archway in porticoes. These traits, in accordance to Ungers' design thesis, capture the block as an 'island' and a *Gestalt* in urban context, demonstrating his fascination with geometry. Ungers (1998) explained:

> The formal language of architecture is a rational one, a language of reason. Emotions and fantasy are controlled by *ratio,* which in turn stimulates the imagination. The dialectical process between two polarities – reason and emotion, *ratio* and imagination, idea and reality – is inherent in the creative act and results in the continual development of ideas, concepts, spaces, elements, and forms. It involves the idea of abstraction, the recognition of the object in its elementary form, and appearance in its clearest *Gestalt* (Ungers, 1998: 9).

Thereby in his 1978 block Ungers accentuates contrast from the adjoining nineteenth century typologies, and provides complementing yet contrasting geometric image - his abstracted block. As a *Gestalt,* the new typology stands within the 'sea' of the nineteenth century structures.

Opting for the geometric clarity, the rational, 'logical' and 'mathematical' construction of his architecture (Ungers, 1979a: 307) Ungers uses the reason rather than the nostalgic influences in his treatment of history. In response to the contemporary historicism in architecture based on copying and collaging of forms from the past, he argued: 'The revival of stylistic periods leads to new wave of historicism, which deny [...] the creative aspects and order of architecture. These efforts sooner or later end up in the neighbourhood of kitsch or in esoteric academicism' (Ungers, 1983: 36); and elaborated:

> One cannot think about future without acknowledging the past [...].
> History of architecture should be seen as history of ideas, not enumeration of styles. When one deals with history is not a question of to be eclectic, to take a history as a quarry or a vocabulary that one might to copy.

> When one talks about the history of architecture and one looks at the past, one has to find out the different structures, which might have similarities to our own structures of thinking and of doing architecture. Therefore, it is mostly history of ideas and not artifacts in which case one would have just historical copies (Ungers, 2013).

According to Ungers, such 'fanciful' approach merely offers a 'cheap trick' that 'aimed at giving the project a touch of wit'; it diverts the attention from the 'possibility of a creative design', and the opportunity to 'translate the concept of an image and its replica architecturally, exploiting the idea of reproducibility' (Ungers, 1976: 104).
His block's structure, clearly conceptualized as a 'creative design', was an outcome of the abstract transformative aesthetic *coincidentia oppositorium.* This dialectic can also be recognised in Ungers' approach to history. The perceptual handling of the historical traits illustrates the link and continuity in architecture. Like his theme of fenestration, where correspondence between the nineteenth century form and the new block exists in the aligning of the openings (Fig. 8.19).

However, we note not only the corresponding horizontal lining of windows (both in the nineteenth century block and the post 1970s typology), but also the striking application of the vertical grouping of windows in the new block. This arrangement, as if to underline the regularity of the openings in the nineteenth century block, translates the history on the more abstract, conceptual level. Together, these old and new traits, according to principle of *coincidentia oppositorium* and *Gestalt* meant to be at once contrasting and complementing each other.



Fig. 8.19 Quoting the facts from history of the nineteenth century block; Ref: Author, 2017

The list of the architectural themes from the past continues at length and these are all fascinating themes: the overall abstract rhythm of the façade in the new block contains visual analogies to Le Corbusier's gardens-courts in the air. Proposed as a greening concept (Ungers, 1981), these high 'gardens' are realised as the top floor balcony spaces and are protected from the elements under the block's roof (Fig. 8.20 and Fig. 8.21).

In addition, arranged as the checkerboard interior façade of the block, is reminiscent of one of the late Baroque Josephine courtyard style building 'Wiener Plattensil'. Here, obviously reduced to a smaller scale and geometricized accordingly with Ungers' design thought (Fig. 8.21). The block is further reminiscent of the rational design of the 1912 Vienna's 'Loos House' (Fig. 8.22).



Fig. 8.20 Ungers' garden-courts in the air; Ref: Author, 2017



Fig.8.21 Balcony spaces and checkaboard organisation of fenestration at the interior façade; Ref: Author, 2017



Fig. 8.22 Loos House; Ref: Judt 2010

Accordingly, particularly vocal is the deprived of all decoration, stucco and wooden fixtures, street façade of the nineteenth century block on Schillerstrasse, which Ungers incorporated within his scheme**.** Yet, in analogy with the past, Ungers uses a complementary approach to recreate the wooden fixtures of the nineteenth century eclectic architecture in his block, by means of a large wooden trellis. This feature however, seen on the 1982 photograph of the block after completion (Fig. 8.23), no longer exists. The space of a large square, once envisaged for a wooden ivy support - today demonstrates a void.

Furthermore, Ungers juxtaposes the projective fenestration of the nineteenth century block in his block that turns the corner. Here, the small cubical projective element on the left of the photograph, mirrors the large projective section on the form of the nineteenth century block on the right. This once again underlines the importance of integration of both contrasted and complimentary forms. Achieved in accordance with the *coincidentia oppositorium* the aim was to provide an overall, well balanced design solution.



Fig. 8.23. The juxtaposition of the nineteenth century block with the 1970s form; the 1983 photograph evidences the large wooden feature; Ref: Kräse, 1983: 40

Similarly in the courtyard, the façade of the nineteenth century block, mirrors the arrangement of the square openings in the Ungers' block. Yet, the large squares painted in

light gray, are hardly noticeable; they are more pronounced on the drawings conveying sharp contrast of the ink on paper (Fig. 8.24). Still, the method, once again illustrates the analogical thought of Ungers and integration of history within the design different to Krier's.

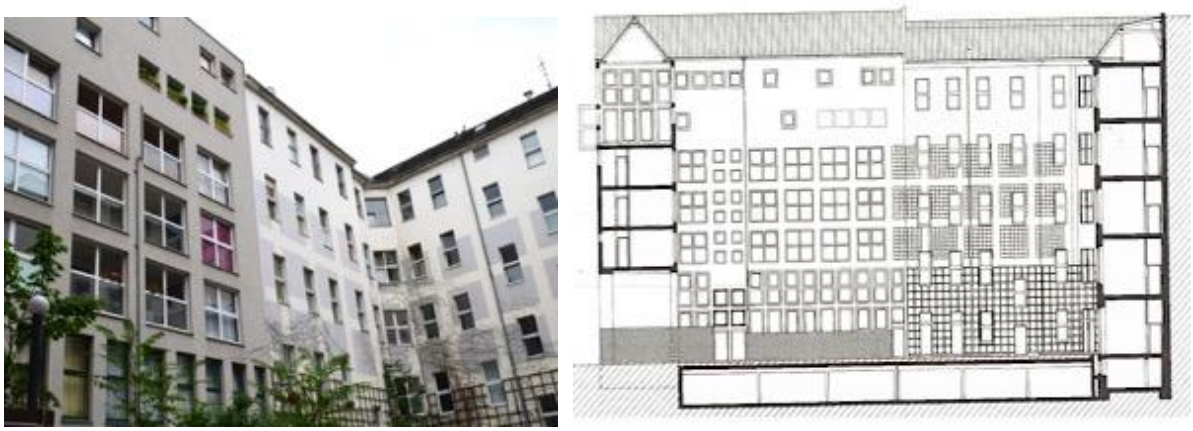


Fig. 8.24 Mirroring the new onto the past; Ref: Author, 2017 (L), Ungers, 1982 (R)

In addition, the sharpness of the white render noted on the 1983 photographs and Ungers' drawings of the block, reminiscent of the regimental materiality of the white walls of Paris' facades, and also underlines the contrast with reality of the nineteenth century Berlin. The city's grey facades still noted in the late 1970s, seem to be purposefully contrasted with the light render of the new block. This underlines Ungers' dialectic response to the past, and suggests the theme of heterogeneity and unity within one whole – Berlin's *variety in unity* and *coincidence of opposites.*

As shown, the use of historical themes differs from Krier's approach. Whilst Krier's uses highly suggestive quotations from the past, admitting to the imitation of 'something 'old' but proven' (Krier, 1979:170), Ungers develops his block as a critical response to history. He transforms the themes of the past, heavily relying on complementing and contrasting analogies and metaphors.

The interior plans of the block illustrate interesting layouts (Fig. 8.25). Quoting historical facts from Louis Khan's works, Ungers introduced in his block Kahn's *service wall*, and located service spaces behind it. The wall demonstrated also the architect's response to the IBA's objectives about environmental sensitivity. Included only at the ground and first floor

of the block facing north (from Schillerstrasse), Ungers simply utilized the space containing the poorest access to light. Yet, like in Krier's deployment of spaces the highly bespoke internal organization in the post 1970s block does not convey the regularity of the nineteenth century internal layouts.

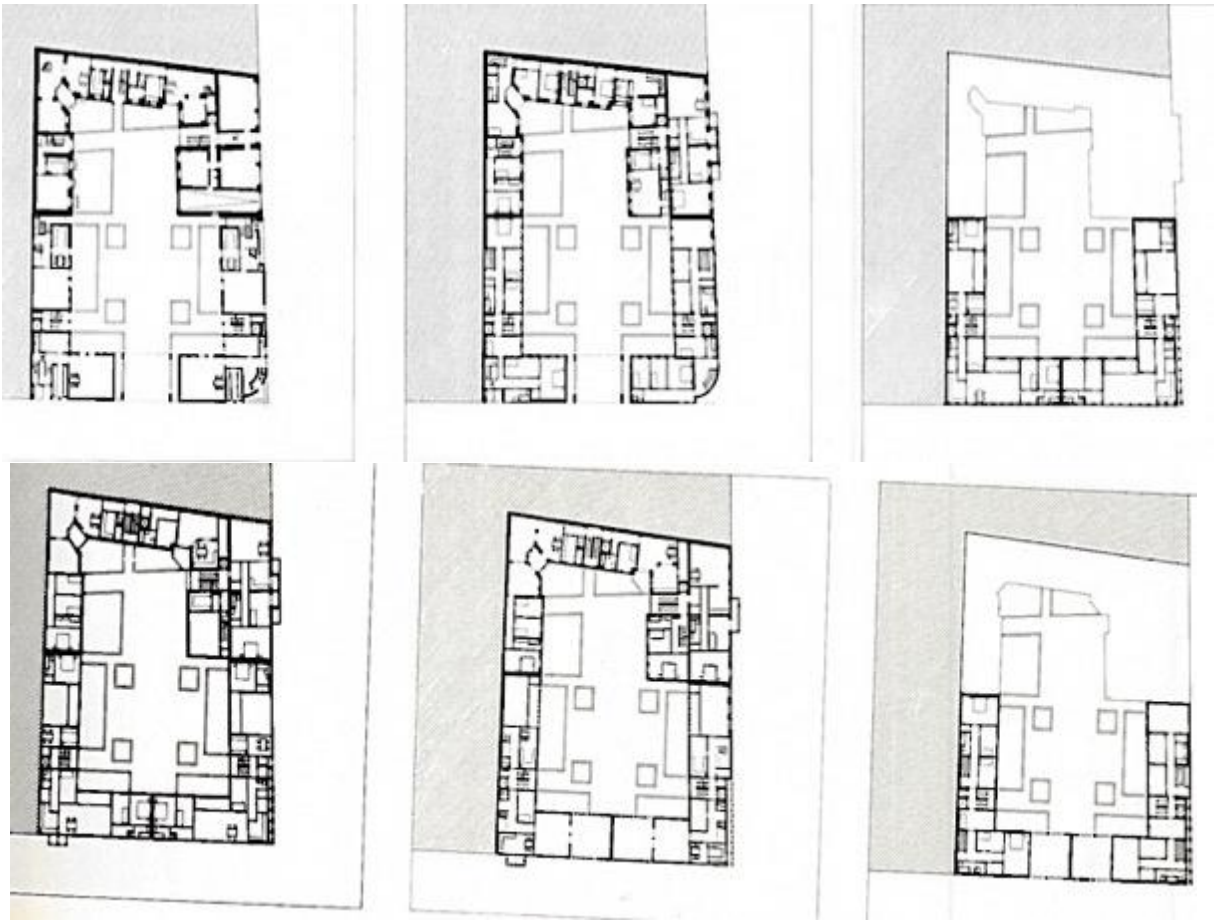


Fig. 8.25 Plans of the Block, Ground to fifth floor; Ref: Grimaldi, 1982: 43-47

The plans of the new block demonstrate reduced thickness of the walls. This arrangement however, although responding to the objective of the IBA for provision of housing with double orientation, stands in contrast to the plan organisation of the nineteenth century structure. As demonstrated on the diagram below, it thereby differs from a single orientation nineteenth century block in which the apartments were focused either on the street or the courtyard (Fig. 8.26).

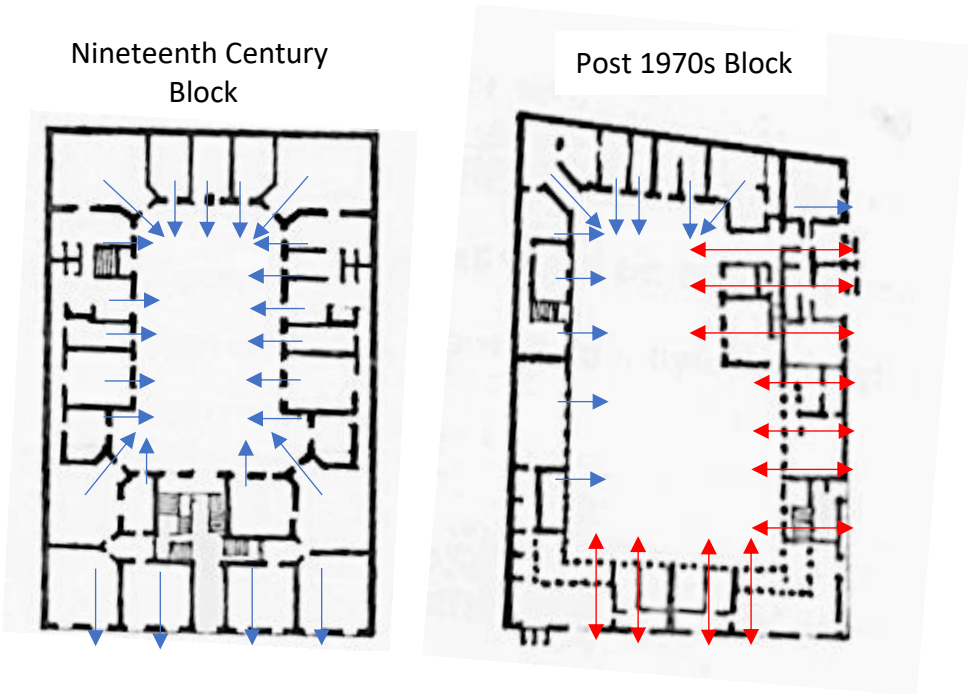


Fig. 8.26 Predominant single orientation (Blue Arrows) in the nineteenth century block versus double orientation (Red Arrows) in the post 1970s typology; Ref: Author, 2018

Furthermore, almost unintentionally Ungers gives testimony to the form of the nineteenth century block highly open to transformation. As seen on the plans of the nineteenth century block included in his scheme, he organises the space of the second and the fifth floor over two levels; thus, achieving the spacious condominium style apartments, and offers a choice of layouts to let or buy. Preprogrammed as housing, this block features a striking monofunctionality unknown from the spaces of its predecessor. The preordained interior arrangement, with many partitions and columns offers variety of modes of residencies: the maisonettes, single-parent flats, the two story terraced apartments. However, such complexity of the plans, known also from the Krier's block appears closed to any further formal or programmatic changes.

Looking at the relationship of the Ungers block with the urban space around it, the form restores the nineteenth century structure, illustrating a 'bounded' space. The new block also re-establishes the street frontage, the familiar quality of the historic typology. However, at the same time, it is a result of a different typological and urban arrangement.

Visually, a different spatial performance is most evident at the street-block level, where the typology seems ‘disinterested’ in any public engagement. It almost literally appears to turn its back to the city where its ground floor looks and performs like a big wall. As earlier seen on the section drawing (Fig. 8.24), the space behind this wall was designed as a residential car park. This decision organises the dwellings at 2m above the pedestrian level; such spatiality is therefore unlike the permeable boundary line across the nineteenth century block spaces. Instead, in Ungers’ block, it brutally demarcates the sense of closure between the form’s interior and the space of the street (Fig. 8.27). Different to the street organisation in the nineteenth century block, the implementation of the underground carpark underlines the closure of the form for further programmatic changes. It simply disables the use of the ground floor of the block to harmonise with the space of the street.

Thereby, unlike the undifferentiated and ‘one’ with the city form of its predecessor, yet similar to all IBA schemes, Ungers’ block is grounded on the dichotomous realisation of the urban space. It differentiates between private and public and features a particular twentieth century deployment space. As such, it indeed demonstrates a conceptually independent ‘island’ that sits within the larger network of the fluidly conceived nineteenth century spaces.



Fig. 8.27 The block at street level; Ref: Author, 2017

As further illustrated on the Figure 8.28, the line of movement from the street into the courtyard exists through the enlarged entry gate - the only point of entering the block’s

courtyard. The gate exposes a large square-like public space, which consequently also lacks the intimacy of the nineteenth century courts.



Fig. 8.28 Entry to the block; Ref: Author, 2017

The duality is further evident in the courtyard. Programmed as public, its space is separated from the block's internal organization. The block also strictly demarcates the outdoor spaces which are designed for the exclusive use of the apartments surrounding the courtyard (Fig. 8.29a and Fig. 8.29b).



Fig. 8.29a Spaces of courtyard assigned to the apartments; Ref: Author, 2017



Fig. 8.29b Spaces of courtyard assigned to apartments; Ref: Author, 2017

The study of the spatial performance of the block illustrated that the architect's conception for the link with the past was fundamentally founded on the highly complex analogies. It further demonstrated that without the knowledge of the architect's design thesis, the form's continuity with history appears merely ambiguous. These analyses also demonstrated that the block's relation with the urban space around it is based on dichotomy. Its form draws apart the interior and exterior spaces illustrating similarity with Krier's spatiality. Unlike the permeable ground floor spaces of the nineteenth century conceived as one with the city, Ungers' block does not offer possibility of extension across its surface floor; its form is not permeable.

Thus, responding to the objectives of the IBA for the translation of the nineteenth century typology, Ungers, like Krier, rendered the 1970s' typology not as a form that adapts the nineteenth century spaces to the twentieth century dichotomous conceptions, but forms them entirely differently.

The architectural traits discovered in the Schillerstrasse block, were also found in the later executions from Kreuzberg: the 1982 block at Köthenerstrasse, and the 1995 block at Hallesche Uffer. For the reason of scope of this chapter, the next section proposes only a brief description of the project.

8.3.2. THE BLOCK AT KÖTHENERSTRASSE, KREUZBERG, 1982

The IBA's brief asked for the design of the block on an empty plot of land at Köthenerstrasse, neighbouring with the Berlin Wall. Positioned in the most western point of the Kreuzberg at the borders with the East Berlin the block would act as a gate from the East Berlin to the South Friedrichstadt district (Kleihues, 1987). In response, Ungers transformed and deconstructed the idea of the bounded space of the nineteenth century block as a linked and grouped organization. Instead, he proposed the series of singular *Grossformen* – the urban villas, which, with their cubic forms aligned the street, forming the perimeter of the urban block in line with the idea of *Gestalt* (Fig. 8.30). This Design decision seems to also underline Ungers' vision of Berlin as a fragmented city.

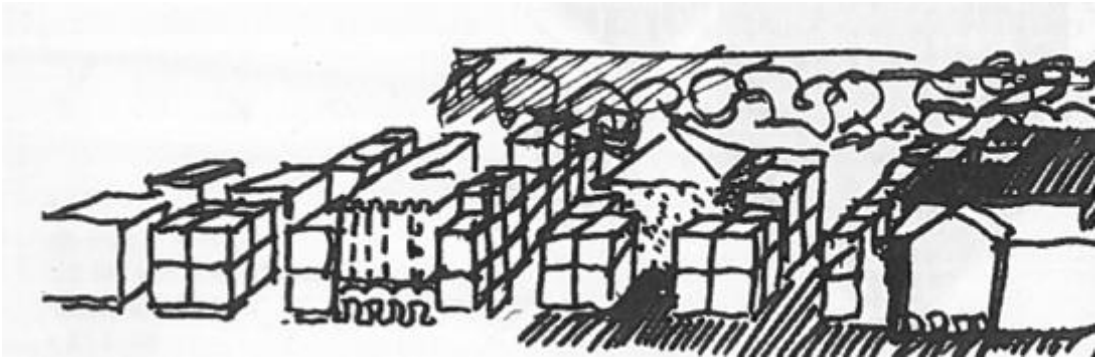


Fig. 8.30 Ungers' conceptual sketch for the development of his 1987 block; Ref: Kleihues, 1984: 131

Adopting his design aesthetic *coincidentia oppositorium* to the simple vocabulary of the cube, Ungers derived with a rich morphological variation of a cubic theme. As seen on the plans (Fig. 8.31) the transformed form, superimposed onto the urban plan of Berlin, became a part in the larger formation of an urban block. This notion, whilst appearing to enhance the heterogeneity of Berlin precisely conveys Ungers' idea of the *city within the city* by illustrating composition of architectural fragments (the cube blocks) included within the overall design.

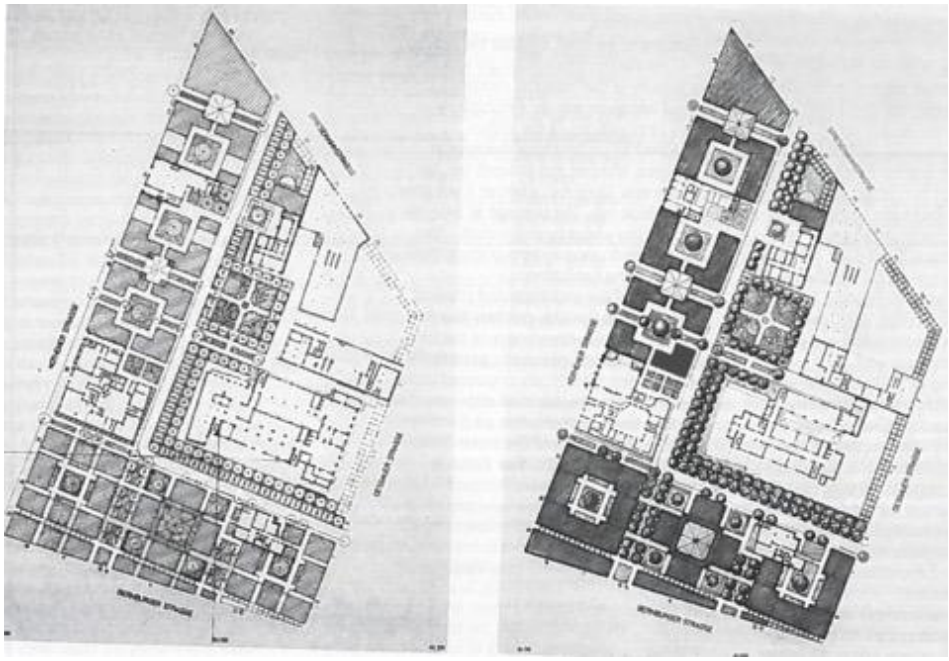


Fig. 8.31 OM Ungers, 1982; a general concept for Köthenerstrasse Block; ground floor (L) and first floor plan (R); Ref: Kleihues, 1987: 130

From the 1982 scheme proposal, IBA decided to develop only one corner block.
Its form strongly conveys the architect's favoured leitmotif, principally the use of the basic geometry of square module. This theme is noted at the strictly ordered façade and the overall structure of the block (Fig. 8.32).



Fig. 8.32 Street view and the bird's eye view of the block; Ref: Landesarchiv Berlin, IBA Archive, LA B rep. 1408

In line with the IBA's recommendations for the block as a gateway to East Berlin, Ungers derived the form that is open on all four sides. The oversized entries to the block consequently allow the public to cross from west to east and north to south (Fig. 8.33).

Seeking inclusion of his form, the design was allegorically named the ‘Torhaus zur Südlischen Friedrichstadt’ (the Gate to South Friedrichstadt), to integrate and open it to the city.



Fig. 8.33 Large entry gates; Ref: Author, 2016

The block set at six-story high, respects the surrounding heights of the nineteenth century fabric. Unlike the individually conceived and grouped blocks of the mid-nineteenth century, the ribbon of unitary façade on Ungers block conceals the design of eight individual buildings organized around the large exposed courtyard. The difference is also seen in the access to the block. Whilst it can be entered through four enlarged gates, on one side the access features a split level (Fig. 8.34). As in other IBA’s buildings, Ungers located an underground carpark within his block.



Fig. 8.34 Split level entry; Ref: Author, 2016

Like in Krier's Ritterstrasse cruciform scheme, the residential access to the buildings is from all four corners of the block. This is also unlike the nineteenth century design, which often reserved the block's corner for the retail activities. Here, the block is strictly proposed as housing, and like the Schillerstrasse project is 'closed' for further transformations at the street level. Furthermore, also unlike the organization of the nineteenth century interior of the block, the courtyard of the 1982 block indeed performs as a passage place. Its exposed and fully paved space includes a solitary tree in the middle that acts as the only greening conception. Yet, the vegetation also appears on the street façade of the block (Fig. 8.35). As demonstrated on the Figure 8.35, the block features no potential for further spatial transformation at the urban floor level. As it includes no space assigned to the ground floor apartments, the threshold between spaces of architecture and the urban space is highly conspicuous.



Fig. 8.35 Courtyard view; Ref: Eggert, 2011 (L), Author, 2016 (R)

Like in other IBA's and Krier's schemes, the block's internal arrangement includes a variety of apartments. The first floor maisonnettes have assigned to them winter-gardens-like balcony spaces, located above the large entries to the block (Fig. 8.36).
The block further features a variety of single-family flats, or the two story apartments with the recessed attic seen from the courtyard side (Fig. 8.35 Left). This differentiation in apartment layouts and individual design, unknown from the nineteenth century block, is characteristic of all IBA's projects and responds to the socio-economic requirements of the time.



Fig. 8.36. Winter garden spaces; Author, 2016

The 1982 scheme conveys the strong relation to Ungers design thought: the reoccurring themes of the cube, *Grossform* and *Gestalt*, and like the Schillerstrasse project, the block

stands as an autonomous 'island'. Here however this *Gestalt* form is intensified by standing as visually and literally detached and dichotomous form from the larger configuration of the urban blocks.

Ungers' significant role in reconstruction of Berlin continued after the IBA when Berlin embarked on the new urban programme, the *Planwerk Innenstadt* - a sequel to the critical reconstruction of Berlin after 1979-1984/87.
In 1995, Ungers was commissioned to design the block at the Hallesche Uffer, at the southern edge of the Kreuzberg.

8.3.3. THE BLOCK AT HALLESCHE UFFER, KREUZBERG, 1995-2001

The block was developed as an extension to the existing Tempelhoffer/Kreuzberg District Court. Conceived as a typologically autonomous structure, once again its form appears as an isolated 'island' overlaid onto the urban plan. It features a large perimeter typology adjoined to the nineteenth century building included within the overall scheme (Fig. 8.37).



Fig. 8.37 The Hallesches Uffer block; Ref: Crespi, 2002

The block lies directly on the Landwehrkanal (the Hallesche Uffer) (Fig. 8.38). To the west and north it borders the strip of park area; to the east its form is delimited by the site of the Postbank Berlin. The brief asked for the administrative use of the block (the Family Court), thus the programme contains courtrooms, meeting places, and cafes, residence for the maintenance warden; the block is also connected to the kindergarten facilities for the court employees. Furthermore, both, the nineteenth century typology and Ungers' form share an underground garage.

The design fulfills the requirements set by the 1995 *Planwerk Innenstadt* for reinstating of the city block respecting the heights limit of the surrounding it nineteenth century structure. It sets the limit at five story, whilst the block's prominent cubic tower fronting the canal, is set at seven story.



Fig. 8.38 South elevation; view from the the Landwerkanal, at Hallesche Uffer fronting the U-bahn line; Ref: Crespi, 2002

True to Ungers' dialectic principles this free-standing monumental form was proposed as a strategic *Grossform*. The block's quality thus does not lie in its size and grandeur. Instead its value depends on the certain combinations and their dialectical relationships encompassing

the whole scheme. Thus, the block's general order partially derives from the order of the existing context; the plan of the new block wraps around the existing nineteenth century block, forming a rectangular perimeter with the large, gated private interior courtyard. On the plan, the new block maintains a reference with the existing structure (Fig. 8.39) Ungers seems to juxtapose the rotated off-the-grid cubic tower with the nineteenth century structure, forming the right-angle relation between two forms: the cubic tower and the nineteenth century block (marked by red arrow). This abstract solution shown on the diagram below appears to manifest the overall composition as conceptually continuous with the history and urban context. Points of connection of two structures are marked by blue arrows.

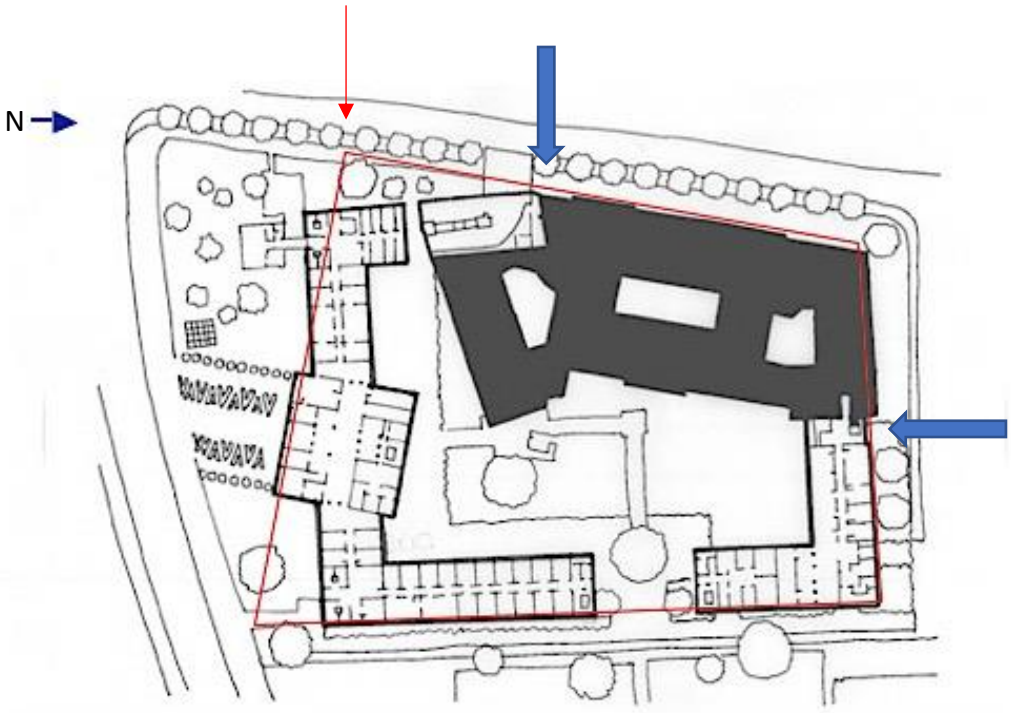


Fig. 8.39. Relation study between the nineteenth century block and the OMU tower; Ref: Author, 2017

The block precisely carries the architect's notion of continuity with the past, here also understood as the union of opposing and complementary forms.

At the point of connection of the blocks, the form demonstrates difference in levels between the old and the new structure (as marked by the blue arrows on the diagram above and Fig. 8.40a and 8.40b). This tension however doesn't appear as coincidental, and conveys the close relation between the contrasting and complementary dualities. Ungers

resolved the discrepancy by the means of stairs, steps, ramps and the lifts for the disabled users. Whilst the levels were reconciled on the inside, they do not 'match' at the point of façade.



Fig. 8.40a Point of connection of the post 1970s addition to the nineteenth century block on site from the north; clearly visible difference in levels; Ref: Author 2017



Fig. 8.40b Point of connection between the blocks from the west; once again the levels do not 'match'; Ref: Author, 2017

The block's volume and external qualities portray Ungers' continuous fascination with the elementary forms: the cubic and square leitmotif. As seen on the Figure 8.41, the tower

includes the conceptual implementation of the square module, created out of two columns of 3x3 windows, two columns of 2x3 windows and one column of 1x3 windows, which together purposefully add up to one large square. This composition exposes *Gestalt* and strategy of arranging parts in accordance with the imaginative, transformative theme of *variety in unity*.



Fig. 8. 41 Front façade facing the canal site; conspicuous Gestalt organization of elements; Ref: Author, 2016

The 1995 typology further reflects Ungers' strong influence with the basic geometries. The elementary forms are clearly noted as the grid and square module; presenting almost mathematical rigour and applied in many variations, they illustrate possibilities of transformation across scales, on plans, elevations, sections and structure, such as the uniform stone cladding or fenestration (Fig. 8.42), or the cube structure implemented in the form of a brightly rendered kindergarden building fronting the block, this form is repeated at the large courtyard locating the Court's services (heating , electric, and underground heat pipes boards) (Fig. 8.43). This illustrates Ungers' search for the union within his overall design on the one hand, and on the other, the integration of the block as an independent

'island' with the larger whole of an urban plan of Berlin. This self-contained *Grossform* creates thereby a part in the urban archipelago (8.44).

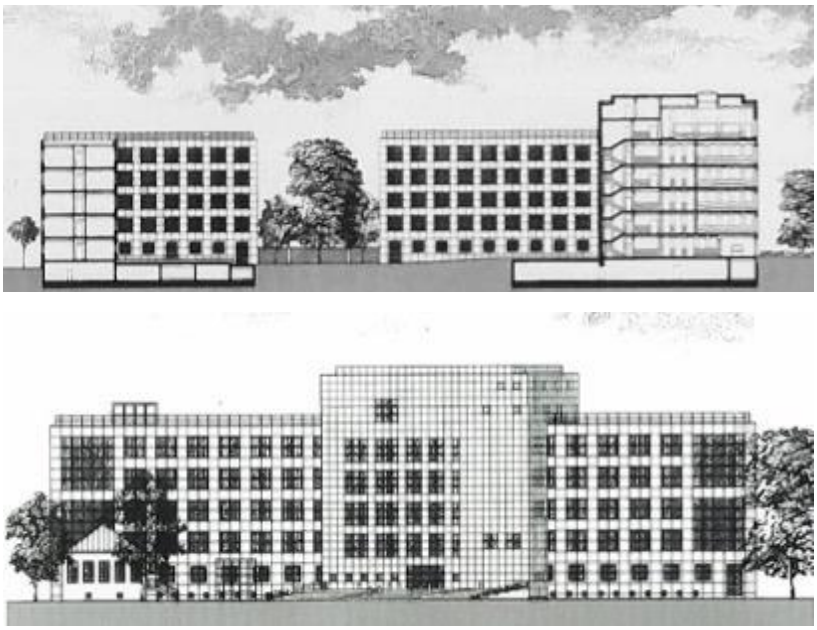


Fig. 8.42 Geometrical rigour of sections and front elevation; Ref: Crespi, 2003: 196, 198.



Fig. 8.43 Cubic red structure of the kindergarten fronting the block (L) and repeated form of the service building in the courtyard (R); Ref: Author, 2017



Fig. 7.44 Independent element within larger urban network; Ref: Author, 2017

Spatially, Ungers offsets the form of his block from the street level. This spatiality recalls characteristics of the late nineteenth century typology developed in the prominent location, and off-set from the street. These late nineteenth century block typologies can still be found in Kreuzberg today, and their outdoor green spaces function as beer gardens and cafes, or safe areas for children to play. In analogy, Ungers proposed the front of his block as a landscaped public garden, and located there kindergarden facilities.

The space of the garden carries further analogies to the figure of square: the form of the kindergarden, a large cubic sculpture by Sol LeWitt, and the cube-inspired federation of outdoor lighting and hedges (Fig. 8.45).



Fig. 8.45 The view of the front garden emphasising favoured geometry; Ref: Author, 2017

References to square geometry continue within the internal spaces of the block; similar to his urban villa block at Köthenerstrasse, Ungers used the corners of the block for circulation between the floors. Not surprisingly, the staircases also carry the strong motif of a square (Fig. 8.46).

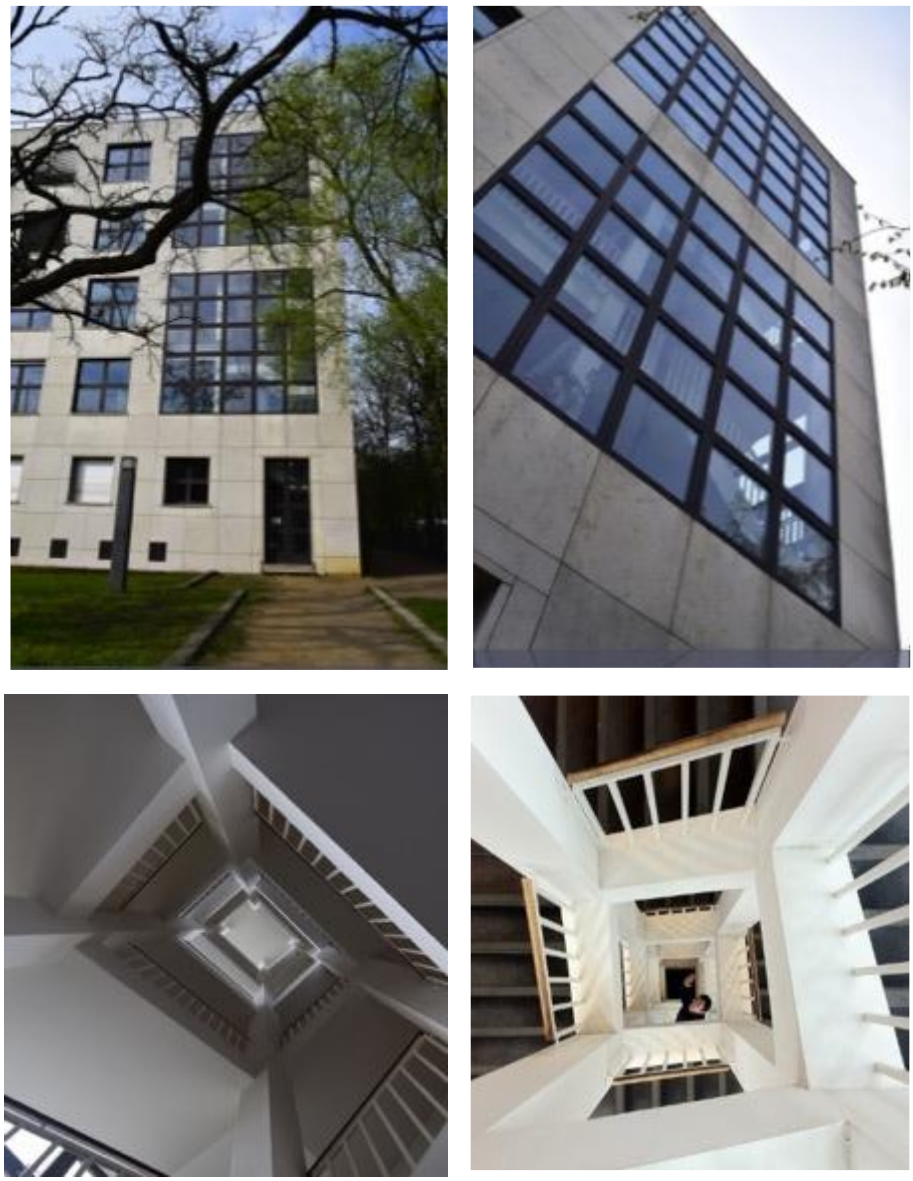


Fig. 8.46 Square geometry; Ref: Author, 2017

Ungers' dialectic and complementary type also transports to design contrast between the darkness of the void entry and the brightness of the light of the courtyard (Fig. 8.47).
The same tension can be noted in the chosen materiality: the dark glass panes opposing the light coloured stone elevation, not surprisingly, achieved through the square paneling.



Fig. 8.47 Contrast of darkness and brightness; the view into courtyard from the west; a solitary bench invites you to take a pause; Ref: Author, 2016

Yet, as in his earlier schemes, this form also features a spatial and programmatic performance different to the nineteenth century. Most profoundly, Ungers' block demonstrates this at the point of the grandeur courtyard, where its large, exposed space is fully landscaped and clearly undergoes regular maintenance; it is also strikingly empty and features further discrepancy in floor levels (Fig. 8.48).



Fig. 8.48 Monofunctional and highly landscaped interior of the block; the arrow marks mismatched levels between the nineteenth century and the post 1970s block; Ref: Author, 2017

Although, the organization of the first floor plan (earlier seen on the diagram Fig. 8.39) appears in majority undifferentiated and features regular partitions – this regularity is a

result of a specific programme incited within the block from the beginning: the numerous court rooms, client meeting spaces and administration offices, have all dictated the necessity of regular arrangement. Unlike the first floor however, the ground floor of the block (Fig. 8.49) features largely open space inclusive of reception, waiting areas, register room and the building's access to the car park and kindergarden.

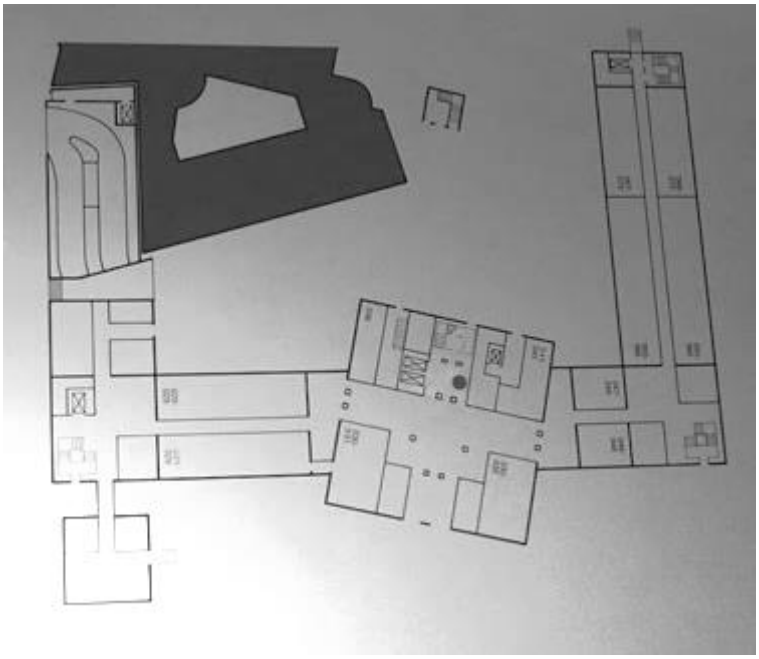


Fig. 8.49 Ground floor of the block; Ref: Author, 2017

The block parallels IBA planning objectives, and clearly defines urban space (Fig. 8.50); it allows the line of movement into the large block, however from only two sides: the small dark void of the gate and the large gated vehicle entry. This is not the permeability and fluidity known from the spaces in nineteenth century block. Here the elevation creates the threshold between the external and internal spaces; the blocks' structure was built with a programmatic purpose of a court, and thus unlike the flexible and not too closely prescribed spaces of its predecessor. A lack of intimacy of courtyard, the highly programmed internal arrangement, and the monitored entry to this block underlines the fact that also this block was realized in accordance to the same dichotomous spatiality that since the late nineteenth century dictates the urban design of the city.
In this respect Ungers' block spatially performs like Krier's forms.



Fig. 8.50 Spatial performance of the block - defining the site; Ref: Author, 2017

More so, the typology is characterized by the lack of strong imagery; despite its highly analogous execution, it features no striking visual clashes noted by the passer by. This is most certainly due to the chosen materiality of the block, the calm light limestone. It is this language of stone, which in line with the objectives of *Planwerk Innenstadt* resulted in harmony between Ungers' typology and the nineteenth century form. In this block, like in other blocks developed by Ungers for the IBA, the continuity with history and the city exposes the three layers of reality that Ungers talked about: formal, perceptual and conceptual. Accordingly, Ungers' block projects the future while still is being concerned about the past (Fig. 8.50).



Fig. 8.51. The view from Ungers' block onto the nineteenth century formal legacy of Berlin

8.4. CRITIQUE OF UNGERS' THEORY

After introduction on the pages of *Casabella* in 1960, the works of Ungers were described by Rossi as 'exemplary for a new post-war generation continuing the legacy of the Modern Movement, but with a new attitude that is neither romantic nor rationalistic, neither traditional nor modern, but rather tend to express the new reality of Europe' (Rossi, 2013: 276); still, this unique yet ambiguous approach was also widely criticised. Ungers' contemporaries deemed the method as 'disconcerting' and 'controversial' , and further seen it 'unfashionable', and 'unimportant' (Aureli, 2012, Owaska, 2007, Turan, 2013). According to critics, the typology grounded on the workings of the allegoric and dialectic type, resulted in strongly contextual and analogous solution, possessing an 'artful essence' (Dal Co, 1998: 6).

Such method, although gave Ungers higher degree of control over the formal type through the dialectic transformation of *coincidentia oppositorium*, appears as based on mere assumption that the full range of the contrasting and complementary morphological types indeed can be obtained. In this respect Ungers' approach illustrates similarity with Krier's premise. Typology founded on the 'highly creative mode of thinking' (Ungers, 1981:21) explores, as the historian Dennis Mann (1991) observed, 'the opaque' and 'uncharted waters'; it conveys a difficult and hard to extract believable system and consequently also opens the form to broad interpretation (Mann, 1991: 131). It's reliance on intellect deems the architect's typology as highly 'autobiographical' thus similar with Rossi's understanding of the formal organization and links of architecture with the past that Ungers further exports to the future.

It is perhaps why Aldo van Eyck in the 1979 open letter titled 'Message to Mathias Ungers from a Different World' harshly criticized Ungers' approach to history, fuming that it 'is not a warehouse for memories, but a gathering body of experience'. The critic further blamed the architect for 'tying history into knot, ... bending over backwards ... [and] ... twist[ing] architecture into something which it simply is not'. This consequently, according to van Eyk, led to 'cheating' with architecture's autonomy and history altogether' (van Eyck, 1979 in Ockman, 1993: 361, van Eyck 1979).

On the other hand, the 'provocative logic' of OMU is deemed by Vittorio Aureli as going 'beyond modernist and postmodernist references' (Aureli, 2011: 180, Aureli, 2012), can be seen as opening the profession towards more 'evocative' typology (Francescato, 2014). Accordingly, the student and collaborator of Ungers, Rem Koolhass, also argued about the 'unrecognizable implications' of Ungers' works that demonstrates potentially new path for discussion about the relationship between architecture and the urban environment (Koolhaas, 2006:18).

Despite the polar opinions of the critiques, the typological reading of Ungers' urban projects provide grounds for revision of his concepts.

8.5. CHAPTER CONCLUSION

This section illustrated that unlike Krier's approach to typology relying on the images from the past and copied from elsewhere, Ungers' meticulous urban analysis of historical and morphological facts from Berlin, reflected on him as an 'architect interested in continuity with the history and past manifestations of urban form, rather than historian working directly from the archives' (Brown-Manrique, 1981).

The method led Ungers to recognition of forms of the urban structures from the past. Thus, in the Schillerstrasse and Hallesche Uffer projects adjoined and contrasted with the nineteenth century typologies, the new blocks represented the cluster of adapted and interconnected forms. The schemes consequently delivered a union of the well-known nineteenth century blocks juxtaposed with the abstract forms of Ungers. Together rather than a group of isolated parts, the complex spatiality was envisaged as a balanced whole and the 'unified image' (Ungers, 1979).

Furthermore, the formal variety achieved through transformation of a type 'found' in context, allowed the city and its architecture to be reconnected with Berlin's history. Here the nineteenth century block served as a link that became a base for 'a new expression that

is not to be found in the original' (Ungers, 1976: 115). Through his blocks, Ungers confronted the 1970s reality of the city, seeing 'the contemporary town … not [as] one but many places', and 'a morphological whole made up of many different relations' (Ungers, 1982a). Thus, as his city, so his architecture demonstrated 'a complex, many-layered, multifarious structure, made up of complementary and interconnected ideas, concepts and systems' (Ungers, 1982: 33), conveying Ungers' 'history of ideas' (Ungers, 2013). Once again, this take on typology and history is unlike the nostalgia-driven historicist methods of Krier.

Yet also, such image of the city and architecture is unlike the picture of the built world realized through the linear evolution in architecture and urban focused on the succession of forms. A keen supporter of links with the past, Ungers saw the new design solution in the form's creative element, which he called: 'the idea of the building'; paralleling Rossi's stance Ungers argued against the functions that simply 'adapt themselves to the type of building'; and instead favoured the 'idea' or 'memory' of the building that makes the form's typology 'clearly prevail[...] over its functions' (Ungers, 1979a: 307). Correspondingly, Brown-Manrique sees Ungers forms as 'suited not only to singular function required for the present situation but various programmatic requirements' (Brown-Manrique, 1981).

Although Ungers' transformative method of history holds similarity with Rossi's collective memory, it is also distanced from Rossi's approach. Upholding that the memory of the past is applicable to all 'primeval images and ideas, which are said to be generally inherited and to be common to all men' Ungers like Rossi argued that memories 'are meaningful at all times and for all epochs …[they] are passed on like instinct, and they can be seen reappearing' (Ungers, 1979: 9). Yet, at the same time unlike Rossi's typology and his reductive search of type-permanencies from the past, Ungers enriched his formal typologies by transforming them through the 'morphological series'. His augmented forms when transformed, each time offered a new 'tool' for further formal interpretation. It is in this sense that we may see Ungers' 'process' architecture as carried forward in a dialectical manner. This continuous method, as Frampton (2014) observed makes transformation itself an object of Ungers' design, which by defining an abundant world of morphological transformations illustrates great 'evocative' and formal potentials of typological continuity.

For that reason, it can be said that Ungers' design approach reinforced the post-modern language of autonomous architecture. In light of the excessive external influence of 'packaging and consumption' and politics that replaced what is 'conceptual and rational' in the discipline (Turan, 2013: 191), his method explored instead the formal qualities of the type through morphological and analogical articulation. Seeking continuity between the existing and new forms, Ungers' typological method avoided nostalgic references to previous historical styles. They were ruled out purely by the architectural concepts, construction, and the 'space it stamps upon' (Ungers, 2002). Accordingly, as Ungers argued, the discipline is 'not a function of something else. It is no substitute, and can solve neither economic nor social problems' (Ungers, 2002: 9); it indeed can 'only solve architectural problems' (Ungers, 2009: 83).

Standing strongly against the standardization, he supported instead concept of 'individualization' of architecture, conceived as a formally autonomous and completely self-sufficient project. Indeed, his forms as exemplified by the typology of the 1970s block were conceived as *Grossforms*, the self-contained 'islands', which until today appear untouched by neither formal, spatial or programmatic changes. Furthermore, consistent with the dichotomy that underlines the urban spatiality since the third decade of the nineteenth century, Ungers' forms demonstrate different spatial values when compared with their formal predecessors. The illustration of the spatial performance of the post 1970s forms renders therefore similarity with the organizational and spatial performance of the blocks developed by Rob Krier and the IBA.

Seen as the method of urban design, similar to the form of their predecessor the post 1970s blocks are responsive to different scales. They also allow for rich mix of urban typologies, in the case of the post 1970s block – the 'housing'. This observation is particularly vital today, as we observe the banal and predictable real estate developments vastly produced around the globe. With their repetitive, stereotyped and stylised on historical buildings, Ungers' and Krier's bespoke typologies appear exemplary. Yet, compared with the nineteenth century methods of planning and building, we may also agree that the formally autonomous application continues to undermine the strategic meaning of typology merely illustrating what Panerai et al recognised as the 'impoverished' type.

In addition, founded on superimpositions of forms onto the existing plan, Ungers' and Krier's blocks indeed responded to the objective of a *palimpsest* that IBA promoted at the time. Formed on the particular design aesthetic that relied on the rather unattainable 'architecture of memory', the 1970s blocks until today give testimony to the postmodern attitude to formal and spatial composition, which resulted in the forms made up of fragments set to perform as individual, self-containing projects, superimposed - as yet another urban strata. Such reading may potentially vitalise the method for its formal and conceptual potentials, demonstrating a different approach to history and a different relation of architecture and the city.

Instead, rather than focusing on the past as the repository of static forms distilled from morphology and themes of architecture, I sought to highlight that we may draw upon the spatial and organisational specificity of the previous architectural solutions to address the urban problems of today; the study of the blocks' spatial performance, precisely illustrated the possibility of a continuous typological reading that demonstrates architecture's precise engagement with the city.

Chapter 9

CONCLUSION

In the preceding pages I drew the comparison between the post – 1970s block and the nineteenth century ubiquitous typology of the Berlin block. Rather than seeing the form from the historicist perspective, I focused on the block as an element of typology and morphology. I looked not only at different phases of architectural transformation but also explored the possibility of reoccurring typological and morphological relationships. These changes were considered with regards to the alterations in the block's interior as well its exterior, thus illustrated the changing relations between the building and the surrounding urban space and the different approach to understanding typology.

Looking at the graphic account of evolution of the spaces in the nineteenth century Berlin block, the reading demonstrated that each time the form changed significantly, when its parts were arranged differently, we have observed different transformation of the city overall – and the regular distribution of the entire urban fabric. Accordingly, each phase of design illustrated the set of spatial and formal articulations and their interrelation with the practice of habitation. The block as a part of a permeable and fluid system was continuously open for many possibilities and further formal, structural and programmatic development.

Yet, as I have also shown, the transformation of the mid nineteenth century structure was not only based on the linear evolution resulting each time with an 'upgraded' (or 'perfected') form, as earlier suggested by Panerai et al, but was also characterised by patterns of re-occurrence. Looking closely at those changes, (as they appeared and reappeared at local level of the Oranienstrasse Area), this study precisely indicated how the specific spatial reasoning and approach to typology allowed the ongoing modification of the mid-nineteenth century block, seen as a consequence of workings and re-workings of the architecture's material.

Subordinate to the form of the urban plot, the block simply submitted to the rules of arrangement based on regularity of its structure and the common language of its architectural components. Developed as a series of generous and generic spaces, the block's interior could be therefore divided, regrouped, modified and arrayed anew with accordance to the newly arising need; on the other hand it could easily retrace the change and return to

the previous stage. Since the line in movement of people and habitation activities led from the street into and sometimes across the urban block, this enabled a changing, flexible pattern of programmatic intensities, particularly across the block's ground level. The form exemplified a series of interlocked and porous spaces between a building and its urban spaces that enabled the structure to adapt and respond to new programs. It demonstrated a dynamic and comprehensive approach to typology and the possibility of distributing various functions where a change from one function to another happens in 'substitution' terms (Panerai et als , 2005), that is, where one programme could be fluidly substituted for another.

As further shown, this flexibility was also inscribed within the internal spaces of the block that demonstrated interlinkage and adaptability of spaces, inclusion of versatile 'Berlin room', or particular attention paid to the changing pattern of furnishing. These objectives, verified by Assmann in his building atlases, suggested the potential of changing uses over time. More so, the lack of differentiation of the courtyard space allowed for an adaptable extension of inhabitation: it could form an extension to one or several businesses or workshops advertised at the point of the street, it could allow access or change of programmes. As exemplified by the study of the blocks from around the Oranienstrasse Area, it further seems that the block's sectional layering resembling a *torte* (a layered cake), played a large part in the spatial and programmatic performance of the block. We have observed that the ground floor might be residential or it might be inhabited by trades: the tailors, joiners, watchmakers and so on that made the city tick. Similarly, the half-basement floor to the street-front was the realm of workshops, and craftsmen, allowing light industry and artisans to exist in the heart of the city. The generic ground floor was occupied by retail, and again this might spread into the courtyard, with every inch of wall space taken by display vitrines as you enter via the large entry gate. The first floor rooms facing the street had grandeur proportions and were often reserved for commerce: the accountants', lawyers' or publishers' offices but could be also used as high-class apartments. Above these were the more affordable flats.

The ceilings in these dwellings were high making for airy interiors. Service rooms and the less expensive apartments were facing the courtyard. The social and economic status in the

blocks was absolutely clear. The buildings included for instance courtyard entrances to the rear blocks, yet the most important thing was that all social groups lived and worked together in a single structure. The nineteenth century typology simply allowed a flexible or natural distribution according to synergy effects, particularly through its relatively high permeability at ground level and its clear sectional stratification. This changing pattern at different formal or programmatic levels, was later confirmed at the time of the 1979-1984/87 IBA Altbau - the careful renewal in Kreuzberg and Charlottenburg. We observed that as at the time of the IBA also today the densely populated blocks are valued for their genuinely mixed uses and deemed by the city as engines of economic activity. Since the time of their inception into the fabric of Berlin they also proved to be remarkably resilient. I have shown that the spaces of the mid nineteenth century block, both internally and externally, until today are being grouped and redistributed horizontally and vertically, arrayed, linked together and easily subdivided. With an accumulation of generous, undifferentiated spaces, the mid nineteenth century block unceasingly evolves and responds to the new programmatic needs by allowing changing pattern of uses as required over time. Conceived as one with the city, the mid-nineteenth century block continues to perform as one amongst the series of voids spilling into each other with flexibly definable boundaries.

As further demonstrated, the concept of a clear division between public and private spaces did not exist around the time of block's arrival into the nineteenth century fabric of Berlin. Even today the status of the ground surface in the courtyard is only to a degree different from the status of the street, and in turn the series of generous undifferentiated rooms that constitute the block's interior, are not seen as that distinct from the void spaces of the courtyard. These significant qualities of the nineteenth century typology, envisaged as a part of a fluid urban framework theorised by Cerdá, and implemented in Berlin by Hobrecht, until today provide testimony to formal and structural resilience. At present, many of these buildings have seen their spaces converted into architectural offices, IT companies, kindergarden or start-up businesses. As exemplified by blocks from around the Oranienstrasse Area, in many cases these transformations were so successful at the revitalisation of old buildings that they have effectively gentrified the once abhorred

structures and city areas. As in Berlin, as across Europe today, the whole blocks are being brought back to life rather than demolished.

Consequently, we may recognise this ongoing survival of the block as a successful example of a mid nineteenth century planning that projected for spaces of architecture to be synchronised with the city on one hand and planned in conjunction with the broad objectives set outside the discipline on the other.

I have shown, how from the start these projects had qualities such as proximity, permeability and interlinkage that until today credit the 1862 plan with the robust framework of blocks and streets. Yet, it was important to note that such all-encompassing and interlinking solution to development, upgrading the old city from the outdated to the new modernised urban model, was not sudden. The similar method was practiced earlier by Schinkel, Lennè and a number of other less well known authors of the Situations Maps who projected for a certain area only. Through the practice of tracing the graphic evolution of the Berlin form, this study acknowledged the gradual historical account and progressive accumulation of knowledge. It illustrated that the contemporary planning simply incorporated all previous developments, drawing upon knowledge about the city derived from the past. The verification of the ongoing fluid performance of the mid nineteenth century architectural and urban form is a testimony to the persistence of urban rationality postulated by Cerdá in his theory of urbanisation.

Correspondingly, understood through the graphic account of changes seen in the blocks from around the Oranienstrasse Area, this urban rationality continues to the present day. Yet, as I illustrated, from around 1880, gradually, the series of typological experimentations about the form of the block, gave rise to a new typology. The change in architecture illustrated the dwelling as increasingly important and isolated from urban fabric. The new forms began to differentiate between building and urban spaces, and their performance could be characterised by a lack of permeability between the interior and exterior spaces.

As the close relationship between building and planning ceased to exist, so did the city designed as a ‘foundation’ (or ‘platform for evolution’) on which the next developmental stage could be projected, ceased too. The new large perimeter blocks (exemplified by the Berlin works of Mebes’, Messel’s and Goëcke) were spanned across several plots and

amalgamated several courtyards and several buildings. The new typologies were now characterised by a single articulation and dispersion of urban space, and they no longer created part of a 'full' space of the city. Unlike their mid-nineteenth century counterparts that at once provided an object and an instrument of urban design, their forms featured a specified independent fragment – the 'monument' block with internal spaces 'protected' from the city. The new urban typology was based on the strategy of separation, classification and specialization of the block's spaces, and resulted in the opening of the block's interior previously hidden. As such, it allowed the new block to be permeable and its form allegedly provided a remedy to the perceived 'faults' of the 1860 typology: the overcrowding, crime, and poverty.

This new arrangement of parts, unlike the penetrable and dynamic network of mid-nineteenth century spaces distributed in a way to allow their ongoing evolution, no longer demonstrated the structure of a block as promoting an ongoing urban development. Unlike the historic block, the post 1880s typology distinguished a building from the urban space, illustrating static forms of architecture. Rather than permeability recognised at the point of the urban floor and sections, the new blocks were constructed according to the dichotomous urban logic and featured largely monofunctional 'housing' with amalgamated plots, characterised by the inflexibility of its spaces.

In PART 1 I therefore illustrated the changes seen in architecture from the mid nineteenth century deployment of spaces, through the implementation of large perimeter blocks to the urban fabric and inception of the uniform individual forms exemplified by Siedlungen bars and towers of Berlin. PART 2, I moved on to demonstrate the post 1970s forms of the block that sought to emulate the characteristics of the nineteenth century typology. Popularised in Berlin during the 1979-1984/87 IBA and later also during the Planwerk Innenstadt, the resurrected blocks once again became an instrument of planning and design. Yet, whilst in some ways their formal characteristics could be traced back to the urban structure of the mid-nineteenth century predating the dichotomous concept of private and public spaces, the new forms also illustrated some differences.

As I have shown, the point of reference for the post 1970s architectural and city design was outlined by the theoretical principles of the Italian Tendenza – the urban science that mainly focused on the typological autonomy and formal links with the history of the city. To those architects involved in the postmodern city development typology became a criterion for all formal interventions, whilst the formal type rediscovered from the Enlightenment tradition offered rational methodology for precise typological solution to any design dilemma. As a result of this new theory, the postmodern blocks featured a contemporary obsession with the variety of architectural language, standing against the Modern Movement's uniformity of forms. Constructed in accordance to these methods, the new forms of architecture were no longer conditioned by any functional objectives. For the first time since the Modern Movement they featured link between the new form, history, and the city. The postmodern urban environment became an artifact and a structure that sketched 'one piece molded within time' (Güney, 2009).

Typically architects began to extract single basic forms (a building, a part of the building or individual formal element) that would undergo multiple variation and transformation, and then used them in other contexts to visually link their structure with the past. The post 1970s operational mechanisms of typology were therefore based on a two stream approach: the method of Gulio Argan relying on a static relationship to history, limited variations and visual cohesion, and Aldo Rossi's notion of transformative type, which saw the historic form as constant and drew the dynamic link between the past and the present. Rossi's followers were interested in the enduring qualities of architecture that persist through any technological or social changes, and conceived their buildings in accordance to the analogical formal arrangements. The new blocks were designed independently from any outer to the discipline objectives, and upon construction they portrayed the formal link with the past. Yet this link was largely based on the visual impressions and representations, rather than conditioned by the transformative typological values as promoted by Rossi's theory. Therefore, for both groups the elements of architecture became a device of aesthetic preferences that also permitted subsequent multiple functions.

In Berlin, the results of the IBA competition demonstrated many formal and spatial manipulations of the façade focused on image and aesthetic continuity with the past,

drawing upon memory. As shown, similar to the visual variety seen at the point of elevation, the internal organisation was also variegated. Unlike the generic structures of the nineteenth century blocks, the post 1970s apartments complied with contemporary thought. They featured different planning and uses within their spaces, differentiating between the family, work and recreation.

Furthermore, despite the IBA objectives for re-establishment of the 'physionomy' of Berlin – the pre-war ground floor plan and urban typology of the nineteenth century block (Kleihues, 2007) - the new blocks were characterised by a static arrangement of forms and the loss of relation with the urban context. Conceived as formally and spatially autonomous, they were unlike the forms of their mid-nineteenth century predecessors - the dynamic forms, closely interlinked with the surroundings; instead, the postmodern blocks deployed a threshold between spaces of the buildings and urban surroundings. Their spatiality was clearly formed in accordance to the same logic that constituted the city since the third quarter of the nineteenth century. Thus, similar to the post 1880s blocks, also the Neubau blocks stood as autonomous monument structures. They clearly created no integral parts with the larger spatial network, and could be easily extracted from the urban context and placed elsewhere. With no built-in flexibility and potential for diversity, when compared with the blocks rejuvenated by the Altbau IBA - they were evidently different.

The review of Rob Krier and Oswald Mathias Ungers' IBA projects verified how the new approach to typology shaped several characteristics of the new designs. The analysis of the postmodern blocks indeed demonstrated varied interpretations and adaptations from history, depicting the earlier mentioned two approaches. Yet also within those two formally autonomous methods, the study identified further differences in the understanding of the historical continuity and use of the precedent.

The first approach was exemplified by Krier's Ritterstrasse block that demonstrated visual focus on quotations from the past such as Viena's Karl-Max Hofe, reconstruction of Schinkel's Feilner house, the use of historic spaces taken from elsewhere such as Italian piazza, balconies, columns, which were then copied and placed in the new context. I identified these historic citations as a form of visual imagery and snapshots that were to

pluralise different readings. They could be read as positive and stimulating, claimed by Krier as identity forming, or in contrast, as promoting the loss of history: meaningless decorations (Hoffmann-Axthelm, 1987) or even regressive and unauthentic (Kleihues, 1986). Relying on visual impressions and representation, such use of typology rendered static relation of forms to history. The elements, freely borrowed from the various historic periods and collaged within the new formal arrangements merely demonstrated a nostalgic attitude that resonated with the eclectic pluralism of Krier. More importantly, this approach based on the static taxonomy of form and history, whilst recognized by Kleihues as the valued return of legacy of architecture to urban design 'in both the intellectual and the formal, aesthetic sense' (Kleihues, 1993: 406), still underemphasised architecture' contribution to the city in its organisational and spatial capacity.

Thus, unlike the nineteenth century generic set of spaces that featured regular distribution of structural and façade (i.e. fenestration) elements, Krier's expressive facades indeed may be seen as 'reduced to disjunctive assembly of heterogeneous elements' (Frampton, 1982); and his floor plans as inconvenient and awkward, further closed to change. By rendering the past as a static set of images and a collection of various forms from different time periods and settings, Krier's approach was based on the creation of 'architectural events' that would have made the city memorable and convivial. For some however, this 'craft architecture' (Delevoy, 1978) treated the past as a 'treasure-chest of unprocessed experience' (Achleitner, 1982), thus, demonstrating typology as inauthentic (Hoffmann-Axthelm, 1987).

By contrast, the second approach to postmodern type was exemplified by Ungers, who uses history on a more suggestive level, evoking the past by analogous means and a series of morphological and analogical transformations. As exemplified by the Schillerstrasse scheme, Ungers not only seeks to change the historic form, but also works with the ideas extracted from history, transforming them morphologically by means of his design leitmotif - the coincidence of opposites (*coincidentia oppositorium*). Thereby, in his blocks he uses the themes extracted from the nineteenth century Berlin architecture - the regular façades, the large projective elements, the blank fire walls – and abstracts them. In this process, Ungers like Rossi sought to actively link the past with the present. His typology represents purposefully sized, aligned and organised forms, all in order to provide an active union

between history and his typology. Yet, in this union, the relation of parts to the whole was based on the agency of the abstract paradigm, which without the in-depth studies of Ungers' thesis, made his forms merely incomprehensible to the passer by. This continuity, as unravelled in Chapter 8, can only be recognised at the conceptual level.

Thus Ungers uses his complex yet innovative transpositions based on the reversal of the themes known from history, which can be further recognized as the experimentation with the formal and spatial arrangement. His forms, as we have seen, were set against the unitary image of the city promoted at the time, and also stood in opposition to Krier's static deployment of history - a visually faithful restoration of the past. Instead, through the agency of 'process architecture', Ungers' forms exemplify the transformative value of typology, and each time when transformed, they offered a new 'tool' for further formal interpretation. By being carried forward in a dialectical manner, they made the process of transformation itself an object of design, giving testimony to vast formal potentials of typological design.

Along understanding of varied quests for permanence of the discipline through different design aesthetics, this study also looked at the spatial performance of the blocks. Both objectives allowed to identify the series of typological differences and similarities in distribution of spaces between the post-1970s forms and their nineteenth century predecessors. Yet, more profoundly, these two perspectives exemplified architecture's disciplinary value for use of typology in the urban environment.

Firstly, the study looked at the reinstatement of the principle of historical morphological qualities: the streets and squares bound by blocks, and the sequence of alteration between built volumes and voids. As shown, these qualities exist in the closed perimeter blocks at Krier's Ritterstasse and Ungers' Schillerstrasse and Halesches Uffer blocks. However, I also identified a more open concept of boundedness noted in the deconstructed blocks at the Rauchstrasse by Krier and the Köthenerstrasse by Ungers. In Krier's instance the spatiality was copied from the historic plan of the Rauchstrasse, whilst in Ungers' case, it was deployed on a more abstract level involving the *Gestalt* theory of perception.

It further illustrated that in many ways, Krier's and Ungers' blocks at Ritterstrasse and Schillerstrasse, hold a number of spatial similarities to the nineteenth century form. Like their nineteenth century predecessors they are responsive to different scales, line the street by the means of façade ribbon and clearly define spaces of the building and the street. They also allow for a rich mix of urban housing typologies that in comparison to current, and often banal, stereotypes and predictable real estate construction show a particular vitality. Still, looking at the postmodern blocks from the perspective of the form's ability to change, Ungers' large perimeter typologies can be characterised by the loss of autonomy of the plot. In contrast, Krier emphasised the design of the building block based on the plot organisation. Seen from this perspective, his forms may be seen as more enduring, evoking some principles of historical continuity based on the replacement of parts. This approach, holds similarities with the mid-nineteenth century method of construction.

Still, compared with the nineteenth century typologies, both Krier's and Ungers' forms undermine the well-rounded meaning of typology, impoverishing the discipline of its strategic value. Founded on the superimposition of forms onto the existing plan of Berlin, the post 1970s blocks indeed responded to the objective of a *palimpsest* promoted at the time, and also different urban norms. Yet, unlike the spatiality of the nineteenth century blocks forming one urban framework with the city, the formal and spatial composition of the new typologies was based on dichotomy, and the forms made up of fragments that were pre-set to perform as yet another autonomous urban layer.

The sequence of open spaces in the post-1970s block illustrated a threshold between private, semi-private and public spaces, whereas the original block saw a fluidly defined boundary line across the space of the street all the way to the single room. These aspects of formal re-interpretation of the history led to rather static interior transpositions in the post 1970s block – i.e. bourgeois floor arrangements in Krier's Ritterstrasse, or Kahn-inspired service walls included in interior layouts of the Ungers' block at Schillerstrasse. These spaces will not permit a fluid change except perhaps from one size of dwelling to another.
From this perspective the new blocks are highly unlike the arrangements of the generic and generous interior spaces in the mid-nineteenth century block constructed in accordance to the design foundations calling for practicality, adaptability, flexibility and convenience.

Also, the external organisation of the post-1970s blocks lacks flexibility. Conceived according to the twentieth century deployment of spaces, the blocks do not allow a fluid changing pattern of use over time. Thereby similar to the internal differentiation of the flats' layouts that do not offer an ease of change of uses either horizontally or vertically, so the respective courtyards do not offer a possibility of a different distribution of intensities across the ground floor. These functions are hardly open to adaptation and therefore feature reduced multifunctionality. The spaces of the post-modern block are simply preordained and there is nothing (or very little) dynamic about them.

Consequently, unlike the flexibly conceived spaces of the mid-nineteenth century block making its form a successful example of persisting urbanism, the post-1970s buildings conceived as bespoke housing units and forms of architecture separated from the urban space, are unable to sustain the variety of programmes. With reduced density and no possibility of further 'upgrade', they demonstrate static deployment of elements and remain unchanged since their inception 50 years ago. Their forms as I have shown, demonstrate the same reflective effort, that characterized the planning around the third quarter of the nineteenth century. Seen in this light, the postmodern typology does not simply adapt nineteenth century spaces to the current conceptions of public and private, but forms them differently.

Certainly we cannot return to the fundamentally undifferentiated status of spaces that preceded the distinction of the public and the private, which, as this study has shown - the block itself helped to generate. The new post-1970s typologies composed out of architectural fragments are based on a minimum coordination with the surrounding spaces, making the contemporary city no longer linked across all its scales. These forms simply resonate with the modern idea of planning, which since the third quarter of the nineteenth century organises the city as an agglomeration of parts. Interestingly, this post-modern condition of urban space based on a model of independent fragments, 'neighbourhoods', or 'city of parts' was aptly conceptualised by Ungers, who already in 1977 saw the urban environment as a congregation of autonomous 'islands' in archipelago. With the blocks formed on the particular design aesthetic that relied on rather universally unattainable by

all ‘architecture of memory’, the post-1970s city and its architecture even today gives testimony to the postmodern attitude that sees the formal and spatial composition as yet another strata superimposed on the city.

The recognition of different lines of typological persistence and historical continuity described by this thesis was less an evaluation of the post-modern approach and rather served to identify different ways we may draw upon the legacy of architecture and the different values of typology within urbanism. Correspondingly, in light of the varied understandings of how to deploy forms of the past, rather than focusing on the architectural legacy as a repository of static forms or abstracted imagery, this thesis sought to highlight the spatial and organisational specificity of previous architectural solutions.

By highlighting the workings and reworkings of architecture’s historical material, PART 1 of this study illustrated the mid nineteenth century urban and architectural spaces as fluidly intertwined, and the change after the 1880s, when architecture was moving towards formal independence with a preprogrammed distribution of elements and uses in focus. PART 2 has shown that the blocks reinstated after 1970s resulted in a range of forms, apartment plans, and varied sectional layering in the buildings that were a response against typically restrictive and standardized social housing types known from the modernist era. Seen as such, the post 1970s blocks could be recognised as broadening the variety and choice in the contemporary city.

Whereas the study has shown that the post 1970s typology played a central role in reclaiming architecture as formal and intellectual, it also allowed a decryption of urban typology of the block beyond its external shell. Accordingly, the comparative reading has shown the type as a mode of reasoning that, although based on different mechanisms, can trigger urban transformations on a number of levels. Such comparison sketched typology’s strategic role in reasoning about not only the internal but also the external elements.
The across time perspective, seeing the change in urban environment from one and ‘full’ space of the city to the idea of dividing the city for public and private and primary and secondary urban spaces, had purpose not only to underline the evolution of typological reasoning but also to show the ability of typology to engage with the various (and not only

formal) urban factors. Given, that the mainstream accounts of historiographies base progress in architecture on the break with the past, this thesis instead illustrates evolution in architecture and planning as linked across time. Such fresh typological reading demonstrates the point of departure from which we may rethink the present-day theory and practice of design.

Since the blocks continue to be constructed around the world, and their typology is favoured by the current local planning frameworks, and the future urban development plans as in Berlin (i.e. 2030 Stadterweiterungsplan Berlin) as elsewhere, the form thereby appears to delineate a far-reaching building model and the urban design approach for years to come. As this study has shown, the dense form of the mid nineteenth century block allows people of all backgrounds to rub up against one another; it gives people the opportunity to connect with one another on different levels beyond class. It further makes the space of the street come alive around the clock. It offers mixed use that allows the development of diversity and multiplicity, maintaining an active urban realm that is highly attractive to the urban dweller. More so, the form complies with the more recent urban studies, which project for the success of future urban typologies. These studies promote the forms, which would support mixed use and street infrastructure, and would also be closely linked with the idea of walkability (Forsyth, 2015, Congress for the New Urbanism, 2017). The truly mixed-use blocks, as the study of the Oranienstrasse Area has shown, precisely provide a testimony to these concepts promoting economic, health and environmental benefits.

Yet such a simple idea that sounds rather obvious, is not applied in the same way today. With constant traffic jams, strained water and energy services and rising air pollution cities are very complex and do not offer the easiest places to live and. As the past shows, the lack of well running joined up services is costly and stressful, equally, as also described by this research, the preprogramming, overprescribing and being very strict in the design, do not necessary work or provide a long term solution.
Still, as also illustrated, there is a chance to improve our urban living, work and play. The key seems to lie in the diversity, the flexibility and integration of services rather than isolation. With more that 70 percent of people estimated to be living in the urban areas by 2040 (ibid), it is our responsibility as designers to allow flexibility, integration, contingency and

affordability in the city design in order to better support the citizens, to allow the new spaces to be crafted for the needs of the people who live there. Whilst not long ago we saw companies leave cities for suburbs due to running costs, now we are seeing businesses coming back to the cities because that is where people want to live. As exemplified by the study of the blocks from the Oranienstrasse Area today, multi-use blocks that are residential, institutional and cultural are the future: with a community base, office space and residential parts that are divided into smaller, affordable units, whilst also offering a higher market rate for family-sized units. These are the truly mixed buildings where four, five and even six programmes can coexist in one block.

However, although in 1970s the planners realized that the city cannot progress if the segregation between neighbourhoods and other uses is in place, we continue to see that as in 1970s also today the developers prefer to build on self-contained plots, seemingly enjoying the control over the solely residential schemes. Looking at the new block developments, it is hard to shrug off the impression that their only strength lies in numbers. Huddled together with their own kind, it also appears that only the pressures and demands of planning regulations will prompt the builder to include other than residential uses within their development. These dwellings are certainly built for 'now' without projecting for any future fluctuations. Their internal plans often developed on the 'copy and paste' base, thus support the mindset founded on moving out altogether, rather than focusing on the potential of further changes within the already occupied dwelling.

As the past shows, feasibility, clarity, economy and generic simplicity have driven urban designs, and these values allowed buildings to be interpreted anew. When required, the blocks could easily increase their density or change their current programmes for another use. This demonstrated that the buildings were not only sustainable and resilient from the energy and environmental perspective, but also from the perspective of their performance and use. Yet, I have also demonstrated that by itself the architecture would not be able to transform from the undifferentiated status of its spaces to the prescribed qualities of its interiors. Such change was allowed due to the highly inclusive, operative and organizational logic of the typology, which along with a multiscalar approach to architectural and urban form, is also capable of working with the questions set outside the discipline; to work with

the contemporary local culture, and at the same time to demonstrate strong continuity with the past.

In summary, this study portrayed the survey and spatial analysis of the Berlin urban block and its transformation seen in the period at the specific level. This study relied less on the historicist context and instead focused on the typology and morphology of the block itself. Profoundly, the illustration of the block as the urban form that persists and transforms, foregrounds the contribution of this research to our understanding of typology as a changing way of conceptualizing and understanding architecture.

Although this thesis concludes here, I anticipate further typological studies that stem out of this research. For the reason of scope, I omitted inclusion of data concerning the graphic analysis of the economic development in the Oranienstrasse Area. Displaced across different stages of the planning process, the evolution of use at above location requires further underpinning with history and theory, thus opens a path for future research.
I also plan to revisit my Master in Architecture study on Stettin block - a typology, which has had very little scholarly attention. I am confident that Stettin, due to its geographical proximity with Berlin (50 miles east), may provide another valuable context for the historical and typological analysis. The juxtaposition of Berlin's architectural and planning solution with another European context would provide a contribution not only to architectural history and theory, but also to the practice of urban design, enabling the extraction of key valuable typological elements for comparison elsewhere. Such illustration of typology as a highly integrated and strategic approach to urban and architectural form could further validate the method for the use of design theory and practice today.

This study also has limitations. The time restriction disallowed for a location and documentation of the potential formal and structural changes within the interior spaces of the post 1970s typology. Whilst such documentation could potentially address the changes in the horizontal and vertical organization of the postmodern block, the drawings of the planimetric and sectional experimentations could be only acquired from the architectural

practices individually involved in redesign of those particular spaces in the postmodern block. In the time during this research was undertaken, gathering of this data would prove to be unfeasible.

In closing, whilst the continued rethinking and documenting of the blocks' multifaceted forms and their transformations is of significant value to both architectural research and the changing practice and knowledge of architecture demonstrated in this study, the invaluable quality of fluidity and the structure's resilience must stay in focus. Such practice may show that the logic of architecture is not only about the repetition of forms, which 'look' the same as the past examples, nor it is about the morphological manipulation of forms and displacement of previous concepts. It is also about leaving behind the idea that everything that matters in design has to be invented. It seems that the renewed confidence in closing the gap between the theory and practice of architecture, may arise through acknowledgment of possibilities encompassed within the typology. We then may look at history in order to work with the idea and acting upon it in a fresh way; we may finally get on with the idea that everything we know about the design is really an interpretation of what exists and what can be transformed through another mind and hand. It is refreshing to note that some 200 years ago such perspective was already communicated by Quatremère and Durand at the time of developing their complex theories of type and genre.

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