

# Tiles of Space: Typology and Morphology in Action Genealogy and Legacy of the Project for the Neue Stadt in Köln by Oswald Mathias Ungers.

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*Typology, Morphology, Neue Stadt, Space, Dwelling*

## /Abstract

The article studies, through interpretation and redrawing, one of Ungers' least studied works, the project for the Neue Stadt in Cologne. In fact, it analyses two projects: the first, competition, more experimental and a second, the executive, of realisation. The first project, known for its application of the principle of solids and voids, matter and spaces is more experimental and seminal; the second, completely different from the urban point of view, transforms fragmentation into compactness. The aim of the research is to place this work within a broader reflection on the residential cell, identifying how the compositional principle of fullness and emptiness, of volume and space, already originates in some of Le Corbusier's projects and is a widespread theme in the critical reconstruction of the residential house in post-war architecture. Through Jean Prouvé or Alison and Peter Smithson, but also Hejduk or SANAA, a genealogy and inheritance is traced, which finds its full relevance in contemporary design. Indeed, the legacy is evident in more recent contemporary housing, as in the projects of the cooperatives in Zurich or Barcelona. All the topicality of the process of typological variation and transformation, in relation to morphology, seems in fact to be well gathered in the intermediate spaces, the potential of a collective and now, shared project.

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Orsina Simona Pierini is full Professor in Architectural and Urban Composition at Department of Architecture and Urban Studies at Milan Polytechnic. After taking a degree in Milan in 1989, she completed her PhD in Architectural Composition with Giorgio Grassi in Venice (IUAV) in 1995. Honorary Research Fellow at Liverpool School of Architecture. In 1998 she received a study grant for research with Carlos Martí Arís at the ETSAB, where she focused on Spanish architecture of the 1950s, curating with Josep Quetglas the exhibition on Josep Maria Sostres arquitecto and the publication of *Passaggio in Iberia*, Milano 2008. During a sabbatical year in 2012, with Bruno Reichlin she investigated the notion of architectural critique, at the EPFL. Her research activity is based on an idea of architectural design that interprets the architecture of the city in its historical experience as material for contemporary design: she has published the book *Sulla facciata, tra architettura e città*, Rimini 2008 and *Case Milanese 1923-1973, Fifty Years of Residential Architecture in Milan*, Milano 2017 and recently *Nelle case. Interiors in Milan 1928-1978*, Milano 2023. In continuity with this experience is also the participation in the Venice Biennale 2018, co-editor of the catalog *Everyday Wonders*, the *Corso Italia Complex* and the installation by Cino Zucchi on Luigi Caccia Dominioni. She has addressed the importance of the role of housing in the urban design of the contemporary city in *Housing Primer, le forme della residenza nella città contemporanea*, Rimini 2012 and recently in *Housing Atlas - Europe 20th Century*, London 2023. She has lectured at many universities in Europe and elsewhere, including TUDelft, ETSAM Madrid, EAT Toledo, KIT Karlsruhe, Beijing University of Technology, ETSA Barcelona, Henry Van de Velde Instituut Antwerpen, Bauhaus Universität Weimar, CEPT Ahmedabad, Hochschule Luzern, Düsseldorf Kunstakademie.



Among the splendid plaster models that Oswald Mathias Ungers surrounded himself with in his studio is the 1:70 scale model of Federico II Castel del Monte [Fig. 1]. Governed by geometry, the angular towers complement the growth of the central volume, emptied by the courtyard. Between each tower, to bind them together and create tension, runs the continuity of the main body. Ungers often spoke of it as an idea, an idea of space.<sup>1</sup>

Just a few years after graduating, the young Ungers participated in the 1960 competition for the development of a part of the new residential district in Cologne, the *Neue Stadt*. The competition brief requires working on an already given urban plan, with diversified residential typologies, which the German architect resolves with a system he describes as the articulation of a positive matter, complementary to the negative space.<sup>2</sup> The theme has been well addressed in a study comparing various projects by Ungers from the same period<sup>3</sup>. Therefore, we will try to study this design proposal and the aggregative principle used, as a piece of a broader exploration of modern housing design, seeking to identify its genealogies and legacies. The models representing the initial design hypothesis are wooden, have a handcrafted and sculptural character completely different from the plaster models, paralysed in the beauty of the ideal. They show a fragment of an experimental city, made up of overlapping and visibly glued together pieces. These are evidently trials, abstractions, where the building is reduced only to the composition of solid elements, the positive ones, which by a scalar estrangement effect, outline a profile of urban towers of increasing height [Fig. 1]. In the most published model, it is almost impossible to recognise the more complex layout of the project: a wall of houses closing towards the busy street to the east, clusters of block houses organised to form public spaces, and lower houses in the Southern part of the sector. Different typologies, resolved with the same idea of a cell made of matter and space. Ungers describes it clearly:

The plans for the *Neue Stadt* are based on the idea of placing individual autonomous volumes in relation to each other in such a way as to create new spatial relationships between them. The positive form of the matter and the negative interspace are brought into correlation. This interrelation between matter and space expresses a characteristic of architecture, which consists in the fact that two spheres of action - the interior and the exterior - are simultaneously organised for a final purpose.

The phenomenon of the double goal, which Sörgel calls the Janus face of architecture, is the essential factor in configuring a city.<sup>4</sup>

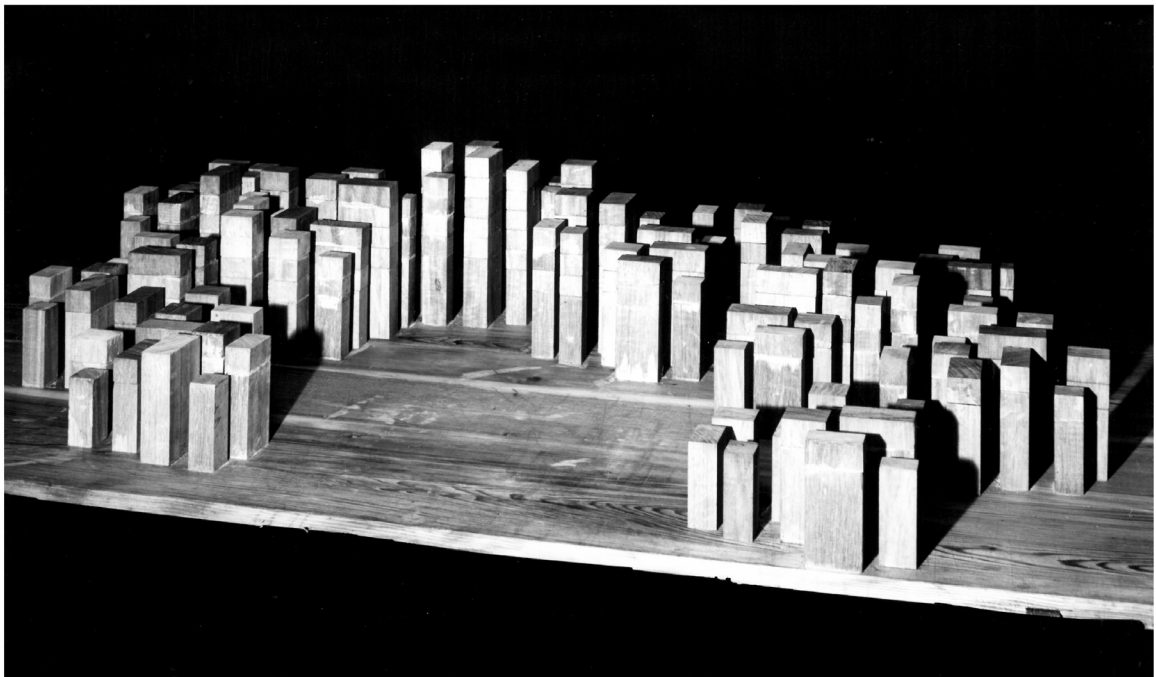
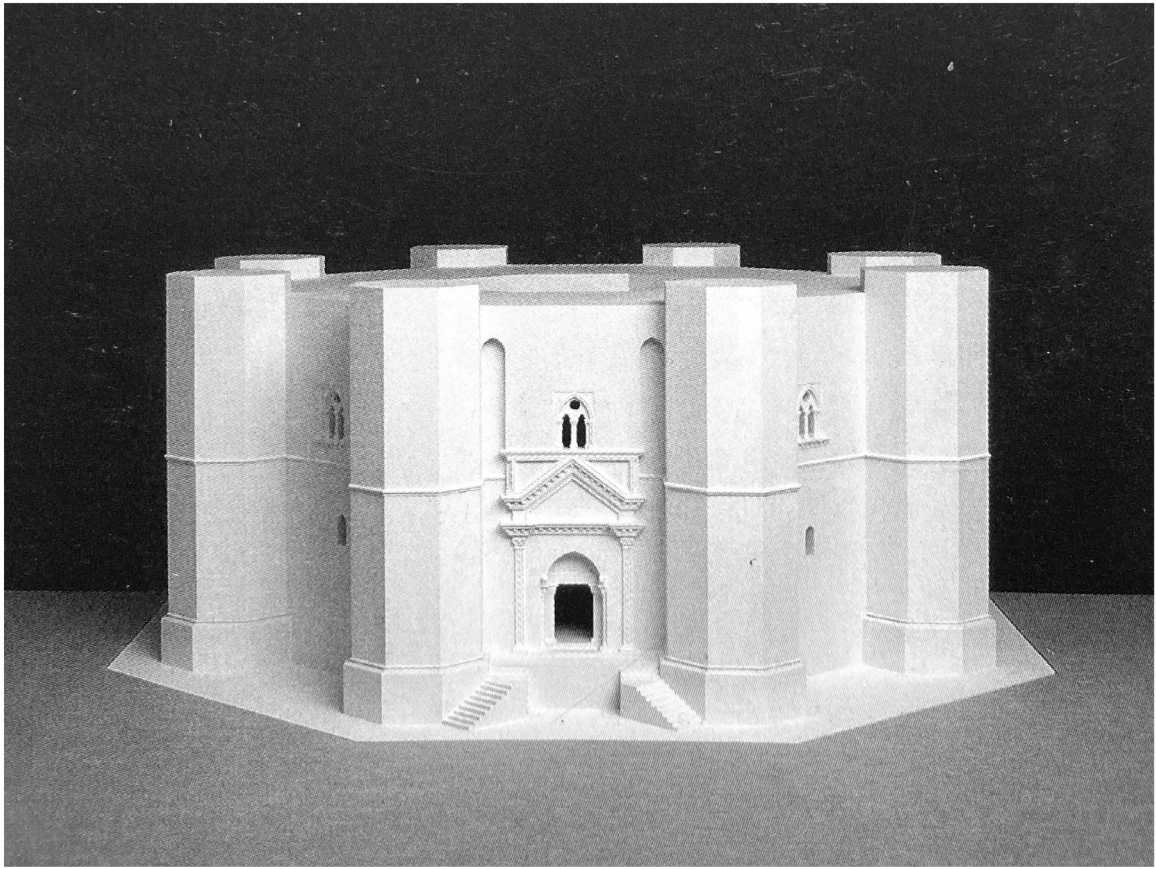
There is a sketch by Le Corbusier of the *Maison Planeix* in Paris, a project

1 Annalisa Trentin, "Ungers come educatore", in *Oswald Mathias Ungers: una scuola*, ed. Annalisa Trentin (Milano: Electa, 2004), 10-22.

2 The concept, directly expressed by Ungers, will be developed historically and critically in the text of Stefan Vieths, *O.M. Ungers: prime case* (Sant'Arcangelo di Romagna: Maggioli, 2015), 15-19.

3 Gilda Giancipoli, "Corpo e spazio. Una teoria compositiva nell'opera di Oswald Mathias Ungers", *FAMAGazine*, no. 36 (2016).

4 Oswald Mathias Ungers, "Zum Projekt "Neue Stadt" in Köln.", *Das Werk: Architektur und Kunst*, no. 50 (1963): 281-284.



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from 1924 whose plan of the upper flat is articulated around a backbone of services. The design innovation consists in the consistency of the articulated and volumetric form of this element, partly distributive and partly technical, and the resulting space in the adjacent rooms, enriched by the arrangement of the volumetric element.

Le Corbusier would return more decisively to this aggregative principle in 1954, when he designed the never realised Governor's Palace in Chandigarh. The plan arranges different elements on a squared plate, including residential nuclei enclosed by curved folded walls. They are solid spatial units, that relate to each other through the space they carve out, sometimes paths, other times lounges or common spaces.

Even the experimental houses that Jean Prouvé designs in the 1950s and 1960s are also often played on the ability to arrange a block, which concentrates the services, within an emptied plan. The precise placement of a solid volume determines the design of the resulting spaces and thus the articulation of the entire house, as can also be seen in the *Maison Seynave* designed in 1961 [Fig. 2].

Also in 1956, Alison and Peter Smithson presented the *House of the future*, a

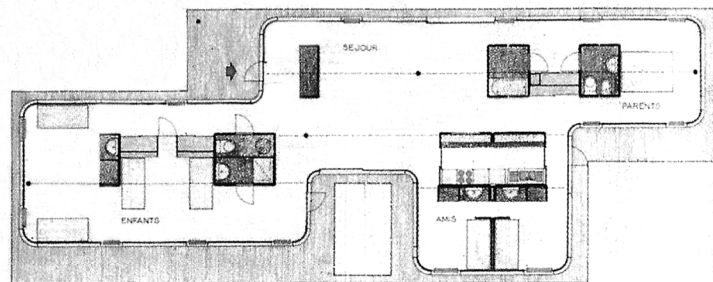
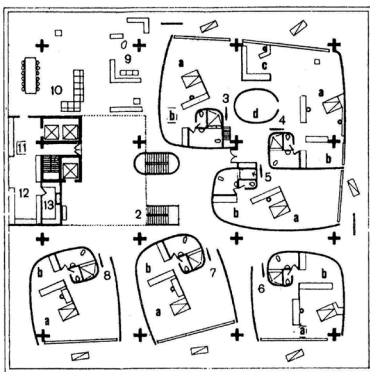
Fig. 1

Castel del Monte and first project models (from Oswald Mathias Ungers: una scuola, ed. Annalisa Trentin (Milano: Electa, 2004) and photo from Ungers Archive).

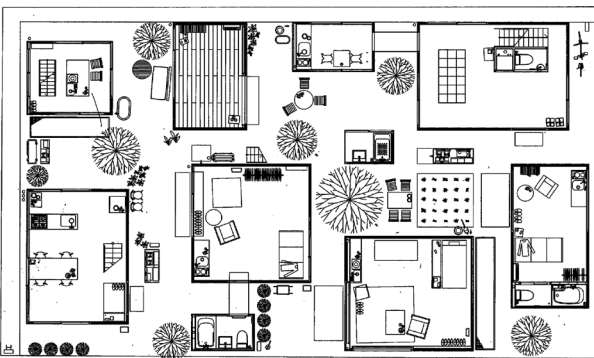
Fig. 2

Genealogy: Le Corbusier, Governor's Palace in Chandigarh, 1954 and Jean Prouvé, *Maison Seynave*, 1961. Legacy: Sejima and Ryue Nishizawa, *Moriyama House*, 2005 and Duplex Architekten, *Hunziker Haus A*, 2015 (from Xavier Monteys, *Casa Collage*, Gustavo Gili, 2014 – Nils Peters, Jean Prouvé, *Taschen 2015 – Lotus International n. 132 – Housing for all*, building catalogue, Paul Andreas, Karen Jung and Peter Cachola Schmal ed., DOM, 2019).

Genealogy



Legacy



daring model consistent with the research for *Appliance house*, and a series of projects, which will be further defined in the 1959 *Retirement House*, where solid and compact nuclei relate to each other, articulating livable and recognizable spaces thanks to their *dispositio*<sup>5</sup>.

This is a research project that is easily recognizable, even though the variations in the functions attributed to the solid volume may be different each time. They are all projects that disrupt the usual sequence of rooms, more or less large, that carve out the spaces in the building block that organise the human home: the compactness that held the building together was its most evident characteristic, often hiding differentiated spatialities behind unitary façades.

Instead, this family of projects introduces a variable to define space, which plays on opposites, as Ungers well explained. Solids and voids in the pursuit of their architectural definition, no longer alternative but complementary. Not necessarily just a two-faced Janus that solves everything, then, but elements where the relational system proves decisive.

In the early years of his career, during the programmatic and experimental phase, Ungers had expressed himself in his work on the house as a system of volumetric modules. This approach is particularly evident, as previously analyzed, in the early single-family houses<sup>6</sup>, and is a recognizable pursuit even in the large residential complexes such as the *Mauenheimer Strasse* in *Köln-Nippes*.

The competition project for *Neue Stadt* is the outcome of this experience and, while still essentially a typological project, it differs from it by being articulated into various urban morphologies. [Fig. 3]

The horizontal section seems to be the most fertile moment: a clustered plan where walls close in solid blocks to accommodate bedrooms, kitchens, and bathrooms. A stairwell generally distributes three dwellings, set on the central void, the *atrium*, which receives light from the various intervals, from the intermediate spaces<sup>7</sup>, as Ungers would define them, between the solids.

This is a decisive attack on the corridor, the functionalist element par excellence.<sup>8</sup>

It is interesting to note that to dismantle the scheme of standardized housing, Ungers employs the revival of ancient models, namely the *atrium*, but also the concentrations of volume in the *plan poché*, where excavated space and resulting space worked complementarily.

Once again, the potential of opposites, so dear to domesticity, so much so

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5 Dirk van der Heuvel, Max Risselada, eds., *Alison and Peter Smithson, From the House of the Future to a House of Today* (Rotterdam: 010 Publishers, 2004), 80-103.

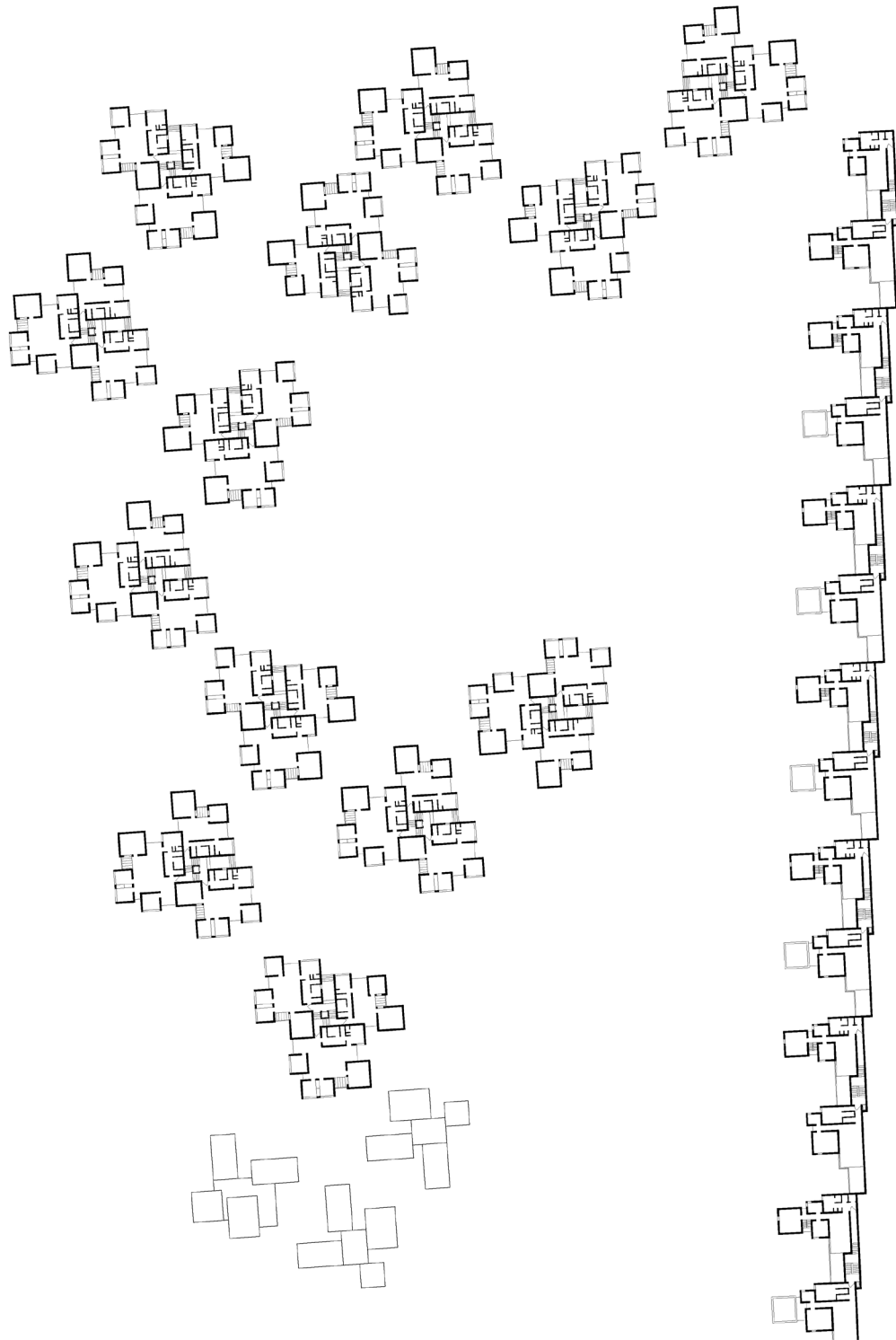
6 Vieths, O.M. Ungers: *prime case*, 15-19.

7 O.M. Ungers, *Zwischenräume* (Ostfildern-Ruit: Hatje Cantz, 1999), 7.

8 The disappearance of the corridor is typical of those years: in Milan we think of the experiments of Caccia Dominioni or Angelo Mangiarotti, who concentrate on this element and its dissolution all the capacity for variation and transformation of the typical dwelling. Thus, we can find in Joe Colombo's latest works, such as the Total Furnishing Unit presented in New York in 1972, a concentration of living functions within a single piece of furniture, to be cleverly placed in empty space.

Fig. 3

O.M.U. Neue Stadt, First project, Typological plan (drawing by O. S. Pierini and C. Mazzola).



First project - Typological plan - Scale 1:500

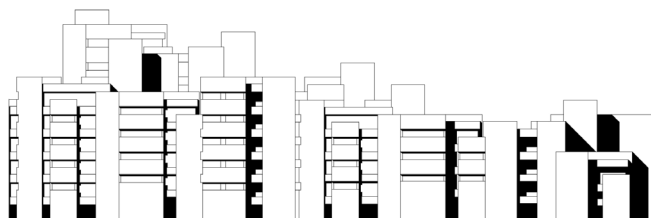


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that we have complementary *oikos* and *oikía*: a place of staying and moving, of closed and open, of permanence and mutations, for the masculine and the feminine, as Hestia and Hermes tell us.

The central space of the house loses the form of a room, closed on all four sides, its dimension is generous and articulated in multiple places of dwelling, while simultaneously gaining the openness of air, accommodating at least one loggia, an external extension of the internal space between two volumes. The floor plans are repeated identically on all levels, creating the verticality of tower elements that impart a fragmented effect to the entire structure.

To understand the architecture envisioned by Ungers in this initial design hypothesis, we have, in addition to photographs of models, few study drawings of elevations, where individual residential units are hardly distinguishable, all playing on the tension between the verticality of the towers and the horizontality of the openings. [Fig. 4]



First Project - Elevation  
Scale 1:500

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The façades are designed by the repetition and articulation of only three elements: closed blocks, volumes carved by thin continuous horizontal windows, and finally windows with parapets or loggias in the intermediate spaces. All the windows run along an entire side of the wall volume, never holes, but horizontal cuts.

The challenge of giving three-dimensionality to a hypothesis designed for voids is apparent; the compositional expedient of mediation and gradualness seems to harmonise the modules while simultaneously restoring them a scale.

As in fractals, the different residential blocks arrange themselves to form concentrations of public space. Even in this morphology, there is no mechanical repetition, but rather an adaptation and various openings to interpret a layout that tends to close towards the West, protecting the collective space of the neighborhood.

Despite the use of the block type and the audacity of the layout, the project takes on the characteristics of an ancient city, moving away from the character of more recent urbanity, perhaps due to the turreted stance that the system accentuates.

Fig. 4

O.M.U. Neue Stadt, First project, Elevation (drawing by O. S. Pierini and C. Mazzola).

It is thus that some cells are arranged along the large wall protecting from the eastern road axis, creating a new type, stretched in the living rooms along the wall and concentrated in the volumes of the rooms, demonstrating the great transformative capacity of the system. The same principle of articulation between blocks and spaces is no longer central; the axis of the rooms is perpendicular to that of the living rooms, defining a kind of L-shaped typology that repeats in series.

Along the street, there are offsets and serrations of now linear elements, containing the stairs and reinforcing the idea of protection, delimiting a morphological layout devoid of urban references.

The development of the project that will allow its realisation will be very far from the strong experimental character analysed so far, which instead will leave an important theoretical legacy in other authors.

Starting from the concentrations and dilations of space, from the densifications of meaning, as Luigi Moretti would have called them in those very years in his magazine *Spazio*, the legacy of experimentation is easily recognizable in many projects that extend to the present day, with different variations.

At times, the principle is taken up by more theoretical experiments. We do not know exactly how John Hejduk had the opportunity to explore this project, although the American years of teaching by the German theorist certainly allowed its knowledge and dissemination beyond the ocean. However, it seems possible to recognize a similar experimentation in some of his projects, even though interpreted with different curved forms, between compact closed bodies and fluid spaces.

Many projects by Sejima and Ryue Nishizawa, SANAA have worked on this theme, going so far as to fragment the volumes of the house into functional cubes resting on the ground, as in the Moriyama House. [Fig. 2]

Finally, we can find a revival of the theme most recent developments of contemporary collective housing. The principle of compact, closed, and defined nuclei, and of the free space on which these are grafted, seems to be among the most suitable for determining new gradations of privacy and interesting places of collective sociality.

Consider the experience of the Hunziker cooperative initiative district in Zurich, where projects such as those of Duplex Architekten are conceived to contrast, in a plan emptied on the inside to position vertical distribution, compact residential blocks, concentrations of the private that fit into the fluid collective space. [Fig. 6] A planimetric arrangement that seems to be one of the most explicit heirs of the Cologne experience, also considering the social vocation that Oswald Mathias Ungers undoubtedly aspired to when thinking of the atrium as the foundational collective space of the dwelling.

A further, possible development of the principle of the settlement of solids and voids can also be found in the work of some young Spanish architects, e.g.



Peris+Toral Arquitectes, where the “breath” of the building, its thermic life are realised not through mechanical technology, but with the wisdom of tradition in circulating warm and cold air. This is how the principle of voids and solids can be applied, as in the project in Borrassà, in the province of Barcelona, both in the communal space with a thermal greenhouse and in the residential cell, where the blocks of bedrooms seem to float in the adaptable space of the living room. Perhaps it is no coincidence that the authors have given this work the explicit name *Social Atrium*. [Fig. 2]

These are just a few examples of the many pieces of space in a quest that for Ungers had found a halt in the actual construction of the *Neue Stadt* district and the later *Märkisches Viertel* in Berlin. It was a clash with reality, even volumetric reality, perhaps accepted with difficulty.

Obviously even in the final design of the *Neue Stadt*, which was only partially realized, we find traces of the original work on the cell: they are units with an L-shaped living room, an empty space carved out between the staircase, the kitchen and bathroom service block and the volume containing the sleeping area [Fig. 5]. Throughout the volumetric structure, the living room is always connected to the outside by a loggia, making the compositional principle more recognizable on the elevation. [Fig. 6] The blocks, on the other hand, are pierced by windows, as the construction system to which they allude seems to require.

However, something has been lost in this didactic contrast, which in the initial project tended to harmonize opposites in the design of the fronts, thanks to <sup>4</sup> the same horizontality of the cuts. There has been a shift from the model of positive elements alone to build reality, from an aggregative principle to a defined typology.

It is certainly an alternative project, which, above all, addresses urban planning in a completely different way. The residential block composed of three dwellings is no longer autonomous, but is added to the others, arranging on the territory a linear element with perpendicular insertions. Once again, the skilful arrangement of the blocks produces more intimate courtyards to the South and a volumetric cadence towards the street to the North. It is an aggregative work rich in potential, where the morphological result is no longer a sum but gains new spatial articulations, as it was for Berthold Lubetkin’s Highpoint project.

Among the drawings in the archive, there is a section where a long perspective is represented, only on the ground floor, that holds together and crosses the various parts of the building, where blackened shadows and illuminated parts tell the story of the urban street brought into the project. A friend of Peter Smithson, actively participating in many Team X meetings, Ungers offers his own declination of the theme of the internal street, as well as the idea of a single large linear element crossing the territory, a concept widely practiced in many urban projects of those years.

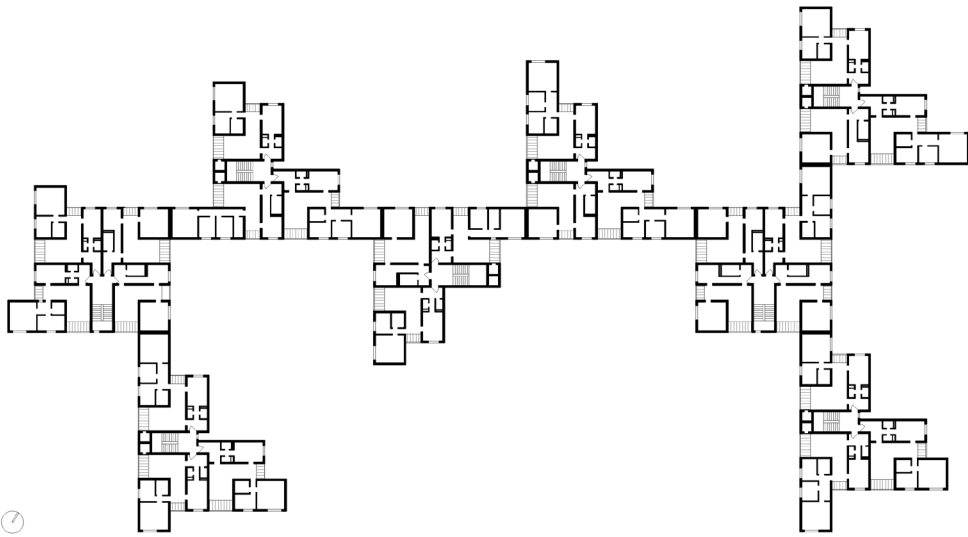
We can say that the competition project undergoes an important transformation, on the one hand a compactness partly due to its constructive feasibility, on

Fig. 5

Hans Scharoun and Wils Ebert, Project for the Hauptstadt Berlin competition (1957) awarded Second Prize. Image source: Helmut Geisert, Doris Haneberg and Carola Hein, eds., *Hauptstadt Berlin: Internationaler Städtebaulicher Ideenwettbewerb 1957/58* (Berlin: Berlinische Galerie, 1990), 35.

Fig. 6

O.M.U. Neue Stadt, First project, type floor plan – as built, type floor plan (drawing by O. S. Pierini and C. Mazzola).



As built - Typological plan - Scale 1:500



As built - Elevation - Scale 1:500

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First project - Type Floor plan  
Scale 1:200



As built - Type Floor plan  
Scale 1:200

6

the other hand a real morphological transformation, which brings it back to its time.

An attempt has been made to reinterpret, both in words and drawings, one of the German architect's lesser-known projects, but one that is seminal in several aspects.

It is a long journey that spans time, in the works and concepts to which it refers, as we have seen for Castel del Monte. A piece that fits into research on space, a term not always easy to handle. An experience that reflects on the home cell, on the fragmentation or compactness of architecture, on its aggregation of elements, in search of a new urbanity.

The drawings presented here were recently made for the volume *Housing Atlas - Europe 20th Century*<sup>9</sup>. They are a graphic reinterpretation based on drawings published in magazines and monographs, as well as from drawings received from the Ungers Archive.

It is indeed through drawing and the comparison in scale of its different design phases that the process of understanding brings this work into the present.

A present where we have tried to trace in the interesting experiments on contemporary housing, where the word "collective" becomes "shared."

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9 Ordsina Simona Pierini, Carmen Espejel, Dick van Gameren, and Mark Swenarton, *Housing Atlas – Europe 20th Century* (London: Lund&Humphries, 2023), drawings by Chiara Mazzola, 15, 212-214.

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