



CITIES IN TRANSFORMATION RESEARCH & DESIGN

Ideas, Methods, Techniques, Tools, Case Studies

edited by Marco Bovati, Michele Caja, Giancarlo Floridi, Martina Landsberger

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VOLUME I

Cities in Transformation Research & Design

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Marco Bovati, Michele Caja

Giancarlo Floridi, Martina Landsberger

scientific supervision

Adalberto Del Bo, Ilaria Valente

VOLUME I

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RESEARCH & DESIGN

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Living Utopia - Leaving Utopia. Brussels: Modernist Urban Forms Evaluated against Pre-Existing Row Houses

Gérald Ledent, Olivier Masson
Université Catholique de Louvain, Belgium

Introduction

The urban forms in which residential settlements assemble are part of the city that they shape at the same time. Variations in the forms of housing have thus a direct impact on the transformations of cities. Collective modernist housing produced one of these urban forms. Housing slabs or towers that were once the symbols of a progressive *utopia*, often turn out to be a mere *chimera*. Nevertheless, reintroducing such urban forms is at the heart of many debates in European cities, among them, Brussels¹. Their potentials and faults should, therefore, be acknowledged.

In Brussels, collective modernist housing is seen from an exclusive benchmark since it is confronted with a radically different solution, the individual row house. Contrary to other European cities², there is barely any transitional housing configuration linking the traditional row house to the modernist housing solution. In addition, traditional Belgian commitment to private propriety has widened this discrepancy even further.

This paper is organised in three different chapters. Firstly, it expounds the essence of dwelling and how its variations can alter cities. Secondly, it illuminates a specific theme of the modernist rupture: discarding at the same time both material/technical implementation and societal conventions. Eventually, the urban consequences of the modernist housing solution are assessed on the basis of its local comparison to Brussels' traditional housing configuration. Specific dwelling qualities are examined in the light of this comparison.

I. Structures of Correspondence

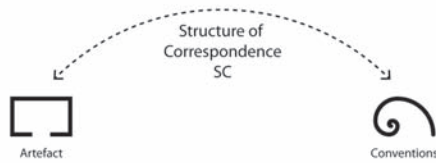
Dwelling consists of two simultaneous realities, house and home. House is the built dwelling artefact while home represents its ineffable qualities. The quality of dwelling emerges from the mutual adequacy of the two dimensions.



¹ Brussels authorities have commissioned various debates and studies on the opportunity of reintroducing such urban forms.

² Such as Haussmanian and HBM experiences in Paris, *Grossiedlungen* in Berlin or Frankfurt, the New Amsterdam Urbanism...

Let us call *structure of correspondence* the reciprocal association between house and home, spatial and social structure. The concept combines space and place.



A *structure of correspondence* is a built artefact fostering human needs. It is a physical support for dwelling.

In addition to being a physical support, a *structure of correspondence* embodies a conventional system which meanings depend on temporal or spatial circumstances. The conventional system – code – is formed by the different meanings shared by a particular group. In order for conventions to be meaningful, members of this group must have the competence to recognize and understand them. Conventions are thus primarily social. Hence, they are a recognition sign of sociocultural positions within society.

Within *structures of correspondences*, considering built artefacts leads to introducing the notion of *relational potential* as the specific qualities of house to support home. *Relational potential* can be defined as the capacity of artefacts to foster socio-cultural conventions.

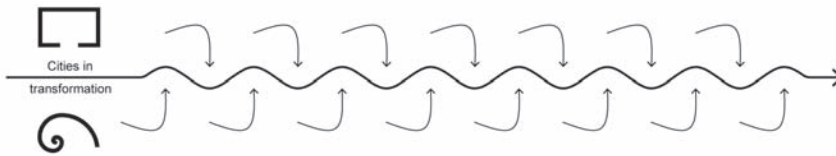


Structures of correspondence can evolve through changes in the constructing of either home or house features. On the one hand, technical developments distort and create new physical artefacts. The new artefacts influence social codes which in turn are modified. On the other hand, conventions themselves can evolve. In return, they affect physical structures that develop consequently.



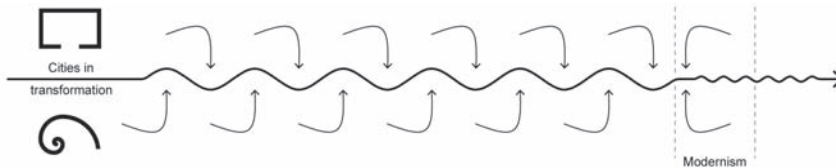
As a consequence, four cases of dwelling evolutions are encountered: from house to house, from home to home, from house to home, and vice versa. Local dwelling evolutions can thus be depicted in the form of a tree diagram. Some branches are abandoned³ and left aside for a while. Usually only one survives, featuring the referential *structure of correspondence*. Such a diagram could be drawn for any human settlement.

Since housing forms the major part of cities, alterations in *structures of correspondence* directly affect cities. Hence, city changes can occur through modifications in physical structures (evolution of construction, transportation techniques...) or socio-cultural conventions (philosophical, cultural and political revolutions...) of housing.



2. Modernism

What makes modernism in architecture unique is the simultaneous unsettling of construction means – materials and techniques – and sociocultural conventions⁴. It is a pivotal moment in the transformation of cities since modernist solutions allow no more continuity in either the house or home dimensions. They disrupt at the same time both constituents of mainstream *structures of correspondence*.



Yet, the *tabula rasa* advocated by modernism is seldom physically or conventionally effective. Therefore, most modernist projects arise in culturally “loaded” contexts since pre-existing *structures of correspondence* do not disappear instantly. Therefore, the wishful disconnection of modernism from local conditions is never entirely successful. Local conditions – conventional *structures of correspondence* – give modernism a new perception, thwarting its universal purpose.

Hence, similar housing solutions carried out in Berlin, Paris or Brussels are not experienced the same way. Therefore, confronting local *structures of correspondence* unveils the potentials and faults of modernist projects. In return,

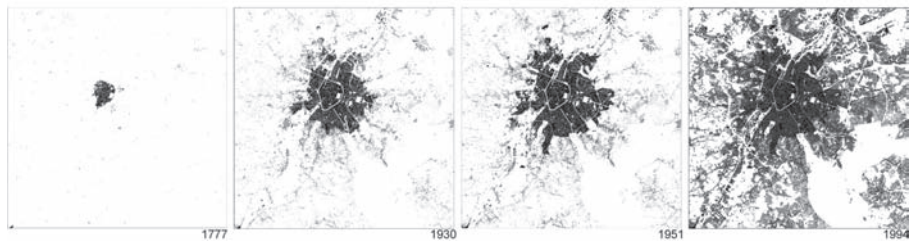
³ E.g. terraced buildings by Sauvage or the *Immeubles Villas* by Le Corbusier are abandoned residential solutions.

⁴ For instance, Le Corbusier’s *Five points towards a new architecture* contradicts, item by item, every housing convention of the time.

collective modernist housing becomes a “seeing tool”, in Daniel Buren’s sense: its serial aspect reveals evidence about its emerging context.

3. Case Study: Brussels

Modernist housing can be questioned in terms of its *relational potentials*. Those *relational potentials* are tested against the artefacts of the local referential *structure of correspondence*. In Brussels, the middle-class row house produces this referential *structure of correspondence*.



Maps Ledent, 2012

Until the end of the 18th century, Brussels remains a minor town, confined within a second belt of city walls. In the 19th century, its role increases⁵ and the city expands rapidly. Many cities in Europe undergo a similar growth. Yet, Brussels is unique since it develops around a specific housing solution: the individual middle-class row house⁶. Individual houses were achievable because of their adequacy to bourgeois lifestyle and inexpensive plots. Today, more than a quarter of Brussels’ dwellings⁷ are built according to this typology. Moreover, it represents over half of the residential ground occupancy⁸. Hence, it is a standard by which all residential solutions are measured.

After the World War I, two different housing solutions are carried out. On the one side, garden cities are built in the suburbs, but remain a limited development both in time and magnitude. On the other side, collective housing is introduced in the social and private markets in the late 19th century. Yet, it only becomes representative starting in the 1930s as a result of the 1929 crisis and the development of the elevator.

⁵ In 1830, Belgium becomes an independent state with Brussels as its capital.

⁶ In Europe, only London is similar, in V. Heymans, *Les dimensions de l'ordinaire*. Paris: L'Harmattan, 1998, 16.

⁷ Out of 546,118 housing units, 195,831 are located in row houses (approximately 140.000 houses built before 1918). Sources: IBSA, 2011 and V. Heymans, *Les dimensions de l'ordinaire*, cit., 10.

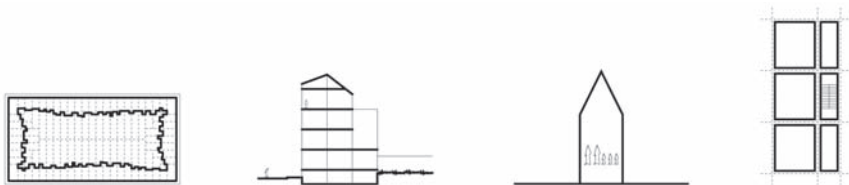
⁸ Numbers based on residential ground occupancy maps. Maps Ledent 2010-2011 and C. Des-souroux, *Espaces partagés, espaces disputés. Bruxelles, une capitale et ses habitants*. Bruxelles: Direction Études et Planification (AATL), 2008, 111.

Modernism develops in Brussels after World War II. A new urban form arises: collective detached high-rise housing. Belgian authorities massively support this kind of large scale collective housing in the social and private sectors. It develops into a major urban form in the “second crown” of the city but also within the ancient urban fabric. 15% of the Brussels dwellings are built according to this housing solution and it represents 7% of the residential ground occupancy⁹.

3.1 The Bourgeois Row House



The bourgeois row house develops from a long sedimentation of techniques and uses. In the 19th century, it can be considered as a *structure of correspondence* since it is both a spatial arrangement and the reflection of Belgian socio-cultural conventions. Its spatial artefact can be typified by a limited collection of physical characteristics. Although conventions evolve, specific *relational potentials* are harboured in these physical characteristics.



The first feature of the bourgeois row house is its unwavering connection to the urban block. It produces a clear boundary defining public space. Individual dwellings are fostered in the depth – ten to fifteen meters – of this boundary. Housing contiguity is governed by party walls that are, on average, six meters apart. They extend outdoors to delineate private gardens. Cumulatively, the gardens form an interior compound, shared only visually by the inhabitants of the block. As a result of the clear block boundary, two *relational potentials* are developed. On the one hand, every housing unit takes part in constituting public space. On the other hand, front and rear positions are created within the houses.

The maximum height is the type's second characteristic. Row houses culminate at a height of ten to fifteen meters, in direct proportion to the width

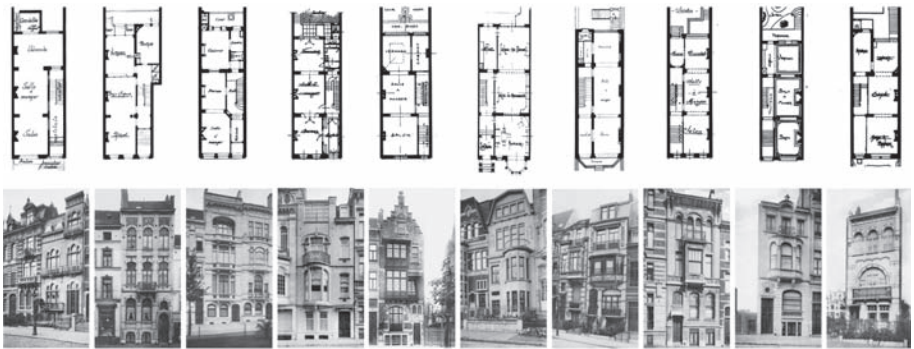
⁹ G. Ledent, *Une forme urbaine à l'épreuve des pratiques domestiques de l'habiter*. Louvain-la-Neuve: UCL, 2011, 14-15.

of the streets. This height is a threshold above which sensory relationships are no longer possible¹⁰. Regarding height, the *bel étage*, the first inhabited floor, is raised by a half to two meters above the street level to enhance privacy.

The third feature is the type's fierce individual aspect. It sustains individuality (or family community). If the house was designed for single families with domestic staff, the individual character is not lost when it is inhabited by several households since they are always limited in number.

Finally, the last physical constituent is the function-free internal layout. It is based on a double division. The first one is longitudinal, dividing the building into two uneven parts (1/3, 2/3). The second division is parallel to the street. It partitions the house in two to three equivalent segments, creating adjoining rooms. Those divisions produce an implicitly shared layout with two distinctive kinds of rooms in terms of proportions that have no predetermined functions.

Personal variations are built around those common ingredients. They vary in terms of style, uses and measures, yet sustaining identical *relational potentials*.



Collage on the basis of *Album de la maison moderne*, 1908-1913

3.2 Modernist Housing



¹⁰ "At three or four stories, [...], you can see details in the street [...]. From three stories you can yell out, and catch the attention of someone below. Above four stories these connections break down". C. Alexander, S. Ishikawa, M. Silverstein, *A pattern language: towns, buildings, construction*. Oxford: Oxford University Press, 1977, 118.

Several criteria define the majority of collective modernist housing in Brussels¹¹. Obviously, they fulfil residential functions. Secondly, they display a minimum height of six floors. In addition, they are independent from the constituents of the traditional city (streets, blocks and parcel divisions). Finally, their shape is clearly circumscribed (towers and slabs).

Collective detached high-rise housing is set in a specific context, Brussels. Therefore, it challenges pre-existing *structures of correspondence* which, in return, give it a particular perception. The two housing configurations diverge on the basis of the four constituents of the traditional row house. The discrepancies and their modernist resolutions reveal the specificity of the modernist housing structure in Brussels, highlighting its *relational potential*.



While the bourgeois row house is intimately entwined with the urban block, modernist housing discards the block. The public realm boundary is dismissed; hence inhabitants no longer directly participate in generating public space. In addition, they are permanently exposed, as front-rear oppositions disappear.

Regarding greater heights, modernist housing no longer focuses on sensorial relationships. Different positions with regards to exterior articulations are now made possible. New heights enable inhabitants to enter into abstract relationships with distant neighbourhoods. As a consequence of height, many housing buildings become (monumental) landmarks in the cityscape.

Modernism no longer believes individuality can be a sustainable solution. Collective solutions are proposed. They unveil questions such as how to apprehend the dimensions of one's dwelling. Furthermore, where individual housing was firmly rooted in the ground, the collective nature of this modernist configuration makes it impossible. In return, communal living is a unique opportunity to create shared spaces.

Finally, interior layouts are poles apart. While individual houses were designed according to conventions, modernist housing relies on functions. Row houses are customized from common ingredients. Modernist housing allows no variation in repetition. In addition, a diverse range of floor plans is created that span from open spaces to precisely designated areas, creating no equivalence around a shared spatial layout.

The variety within the discrepancies of the modernist models accounts for their novelty and fumbling nature, thwarting the recognition of a unique and recognisable *structure of correspondence*.

¹¹ G. Ledent, *Une forme urbaine à l'épreuve des pratiques domestiques de l'habiter*, cit., 25.

3.3 Urban Forms

Regarding the transformations of cities, the dismantling of the urban block is the major distinction between the two urban forms. First of all, the configuration of the row house is central and inseparable from the city's development. Modernist housing solutions are exceptions and never drove the city's expansion¹². Furthermore, as mentioned, modernist solutions create new urban conditions. No more perimeters are created by buildings. Hence interior compounds and front-rear positions disappear. The creation of new configurations unveils *relational potentials* that can foster new urban conventions.

The lack of interior domains is replaced by free peripheral spaces. Centripetal spaces are replaced by centrifugal ones.

Two solutions have been developed to respond to this new urban situation. On the one hand, no physical limit separates the public and private realm. Within this scheme, two building arrangements are encountered. The first one lifts the bulk of the structure on stilts in order to free the ground. The second one maintains the building on the ground. In the absence of clear boundaries, no residential function is encountered on the ground floor. This is also the case on the street side of the traditional row house with the elevation of the *bel étage*.

On the other hand, some projects feature a physical boundary between the public and private realm. Some domains are rounded by a border of low walls, hedgerows and fences while a second series of buildings are set on a base, creating a natural setback from public spaces. In these two cases, accesses to the peripheral space are limited. Boundaries can be crossed at a few designated places but never unconsciously. In the presence of clear boundaries, residential functions are found on the ground floor.

In addition, in some cases, the free space is a contemplative one, recalling the character of the block's interior compound.



Front-rear oppositions vanish in most cases of collective modernist housing. They are treated very differently from one building to another. The generic rule is that there is no rear - concealed - façade anymore, leading to new confrontations within the city.



¹² In that regard, the Brussels North District is an exception.

Modernist architects propose various means to articulate buildings with their surroundings.

Redefining an explicit building orientation is one of those means. There is, then, a clear opposition between the two long sides of the buildings. In other cases, buildings are designed as isotropic and do not respond to any exterior condition but that of the sun. *Pilotis* or towers reinforce this feeling of isotropy.



The building orientation influences this stance tremendously. Indeed, North-South oriented buildings usually contain symmetrical mono-oriented apartments. Hence, they display similar façades even though the two positions are experienced differently. Contrarily, East-West oriented buildings generally propose through apartments to avoid North mono-orientation. This creates two opposite building-façade-positions between reception areas to the South and intimate functions to the North.

Contrarily, traditional row houses are not affected in their composition by orientation.



Another means set forth to articulate the inhabitants' intimacy is detected in the façades and their associated exterior spaces. Once again, various solutions are encountered. They range from two separate exterior spaces to none (plain glazed façades). Generally, in the case of two distinctive exterior spaces, different qualities are at stake. While a first exterior space relates directly to the living room and is very much open and light-flooded, the other one relates to the kitchen or another service room. The latter is generally hidden behind permanent enclosures such as shutters and screens. Their proportions are opposite, "service" balconies being narrower and largely perpendicular to the façade. In the case of single balconies and terraces, two options are encountered. The first one combines two different zones within the exterior space, merging the qualities developed in the two-balcony solution. The second solution, probably the most common within collective detached high-rise housing in Brussels, displays single continuous cantilevered terraces. They do not distinguish different areas.



The loss of the block's watertight boundary dismantles urban standards such as the dwellings' positions and articulations regarding public spaces as well as their conscious contribution to the construction of those public spaces. Modernists strive to invent them anew by combining three elements: limits, orientation and permeability. Limits allow distancing; orientation allows differential positions while permeability allows concealment. Yet, no generic solution has been developed that reaches the subtle *equilibrium* of the city block and, often, gimmicks are needed to counterbalance the shortcomings of architecture (canisses closing off transparent railings, prohibition signs, improvised concrete elements blocking out accesses...).

Conclusion

Modernist architecture has attempted to dodge cultural frameworks by rethinking housing in terms of biotechnical needs. Yet, "living utopia" was rarely achieved since no context is ever culturally blank. Consequently, modernist housing experiences are evaluated against pre-existing housing *structures of correspondence*, giving them a particular meaning. This dialogue is a chance to grasp the potentials of modernist housing in shaping cities. For this purpose, the concepts of *relational potential* and *structures of correspondence* are particularly fruitful since they enable us to summarize housing solutions and test them on their minimal and necessary features.

In Brussels, there is barely any intermediate housing solution. Therefore, the contrast is sharp between the two housing configurations. It is such that it stigmatised modernist housing. In response, postmodernists produced low-rise housing configurations.

Modernist solutions differ in all four respects with the *relational potentials* developed by the traditional row house.

With respect to urban features, the modernist swipe of the spatial constituents of the city block has two major effects on housing and the constitution of cities. On the one hand, individual housing no longer takes an active part in producing public space. On the other hand, no retreat position is available anymore.

Those issues are no longer addressed by urban forms but by architecture itself. The comparison around the Brussels block reveals three key features addressing these issues: limits, orientation and permeability. Every arrangement of these features creates a genuine architectural proposal. The balance of this combination produces a *relational potential*, enabling appropriation by its inhabitants. This balance determines the cost of dwelling - the social, cultural, moral, psychic or material effort needed by inhabitants in order to dwell "properly" - by which dwelling should be assessed.

Yet, while conventional *structures of correspondence* have developed over long periods of time, modernist housing was almost instantaneous. It proceeded from unique and diverse experiences to reinvent housing. Their *relational potentials* need to be understood and classified to assess their relevance to specific housing and urban needs. Only then can we "part with utopia" and understand its real benefits for housing.

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