

# BRUSSELS Housing

Atlas of Residential  
Building Types

This book was made possible with the support of Urban Brussels, Cellule architecture de la Fédération Wallonie-Bruxelles, Vlaamse Overheid, Ville de Bruxelles – Stad Brussel, Faculté d'architecture, d'ingénierie architecturale, d'urbanisme (LOCI) de l'UCLouvain & Louvain research institute for Landscape, Architecture, Built environment (LAB).



We would also like to express our thanks to Philippe Demoulin, Peinture Fraîche, Brussels.

Graphic design, layout and typesetting:  
Silke Nalbach

Copy-editing:  
Tadzio Koelb, Ria Stein

Proofreading:  
Ian McDonald

Project management:  
Ria Stein

Production:  
Anja Haering

Paper:  
Magno Volume, 150 g/m<sup>2</sup>

Printing:  
Grafisches Centrum Cuno GmbH & Co. KG, Calbe

Lithography:  
Repromayer GmbH, Reutlingen

Library of Congress Control Number: 2022951078

Bibliographic information published by the German National Library  
The German National Library lists this publication in the Deutsche Nationalbibliografie; detailed bibliographic data are available on the Internet at <http://dnb.dnb.de>.

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ISBN 978-3-0356-2550-9

e-ISBN (PDF) 978-3-0356-2553-0

© 2023 Birkhäuser Verlag GmbH, Basel  
P.O. Box 44, 4009 Basel, Switzerland  
Part of Walter de Gruyter GmbH, Berlin/Boston

Printed on acid-free paper produced from chlorine-free pulp. TCF ∞

Printed in Germany

9 8 7 6 5 4 3 2 1  
[www.birkhauser.com](http://www.birkhauser.com)

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Building Types

Foreword by Jacques Lucan

Photography by Maxime Delvaux

BIRKHÄUSER

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# Foreword

With *Brussels Housing*, we have before us an exceptional work, constructed around two research directions.

*Brussels Housing* is a publication that presents information about a large number of buildings or projects over a very long period of time, in the tradition of comparative anthologies initiated in France by Jean-Nicolas-Louis Durand's *Recueil et parallèle*.<sup>1</sup> Here, however, the comparative anthology has been historicised and is devoted to the sole issue of housing. Gérald Ledent and Alessandro Porotto have selected 108 case studies for which meticulous documents, plans, sections, and elevations have been drawn up. These enable us to understand the typological and distributive layouts.

The second research direction is a history that outlines the changes and evolutions of housing programmes and types. It is divided into three main periods: before the First World War; from 1914 to the end of the 20<sup>th</sup> century; and since the year 2000. This history of course needs the above comparative anthology to be “concrete”.

Before 1914, the dominant type, i.e. the most widespread in the Brussels area, was the row house. It gave its physiognomy to many of the city's streets and districts. From the beginning of the 19<sup>th</sup> century, the row house became what Gérald Ledent calls a “referential type”, the bourgeois terraced house, i.e. a type of which there are many specimens, all of which, to varying degrees, are similar and different: similar in that they share the room layout, a distribution method and the same principle of urban embedding; different in that they respond to variations in the programme, specific local situations and particular architectural treatments. From this typological perspective, we are dealing with what I have called a vernacular production.<sup>2</sup>

*Brussels Housing* is thus the very example of an analytical and typological effort that produces real knowledge and enables comparisons and

contrasts that are never liable to be superficial or arbitrary.

It should be noted here that the book can only make one regret the disappearance or dismantling of some of the cases presented on the basis of archival documents and graphic reconstructions. There is no doubt that many of these buildings, if they had been preserved, would today be witnesses to the heritage of Brussels, which should be protected and valorised. This is to say that the way in which we look at a city and at what makes the city does not remain identical from one era to the next, but also that we must show caution when assessing architecture (and real estate).

After the long history of the row house, which did not end after 1914, the years following the First World War saw housing develop in two main directions, given that Brussels, like other European cities, went through a period of growth. The first direction was the construction of rather suburban single-family houses or villas, ranging from exceptional cases to programmes aimed at the general public, among others in the form of garden cities. The other direction is that of collective housing, in which field some architects wanted to apply the principles of modern architecture and urban planning. However, this would only happen, on a large scale, after the Second World War. The field of collective housing is where what I call new “forms of housing” were trying to define themselves. These forms were not so much concerned with the typologies of the housing units themselves in their “internal” layout, but rather with the way in which these units were grouped together to form complexes. However, in the development of collective housing, certain “internal” typologies tended to take root, each with their own interpretation and variation, depending on the architect. Here again, in the final analysis, we are dealing with the problem of vernacular production (modern and contemporary).

<sup>1</sup> Durand, Jean-Nicolas-Louis. *Recueil et parallèle des édifices de tout genre, anciens et modernes, remarquables par leur beauté, par leur grandeur ou par leur singularité, et dessinés sur une même échelle*. (Comparative anthology of buildings of all kinds, ancient and modern, remarkable on account of their beauty, their grandness or their singularity, and drawn on the same scale). Gillé Fils, Paris, 1799–1801. <sup>2</sup> See Lucan, Jacques. *Habiter: Ville et Architecture*. EPFL Press, Lausanne, 2021.

Like many, if not most, European cities and metropolises, the problems that Brussels has been facing since the beginning of the 21<sup>st</sup> century are numerous and interrelated. They concern both suburban sprawl that is difficult to control and an urban renewal or redevelopment, which must take into account all aspects of construction, particularly from the point of view of sustainable development and social change. As Alessandro Porotto points out, Brussels has become a veritable “palimpsest”, which is what *Brussels Housing* is also analogously, with a succession of case studies that echo each other in a reading that gains by being both synchronic and diachronic.

For someone who is a stranger to Brussels, i.e. someone who has not lived in the city for a significant period of time, Gérald Ledent and

Alessandro Porotto outline a genealogy of Brussels housing, many aspects of which would not be apparent to us if we were to look at the city “from a distance”. The “close-up” view they offer allows us to understand Brussels in all its complexity. It also enables us to highlight specific local urban and architectural characteristics. Because they are discreet, these characteristics might not be perceived at first glance, or might be confused with features common to all contemporary buildings, even in other cities.

Finally, it is worth pointing out that, unlike traditional anthologies of building examples, *Brussels Housing* does not offer models to be imitated, but rather food for thought for living in the city.

Paris, January 2023



City life is challenged by the Belgian dream of a free-standing house in a garden – which might just be an architect's nightmare, as pictured by Hannes Coudenys in *Ugly Belgian Houses*.



Gérald Ledent and Alessandro Porotto

# Brussels Housing: A Typology

«Dans l'art de l'architecture, la maison est certainement ce qui caractérise le mieux les mœurs, les goûts et les usages d'une population; son ordonnance, comme ses distributions, ne se modifie qu'à la longue, et si puissants que soient des conquérants, leur tyrannie ne va jamais jusqu'à tenter de changer la forme des habitations du peuple conquis»

EUGÈNE EMMANUEL VIOLLET-LE-DUC<sup>1</sup>

## Housing

This book sets out to analyse and illustrate the various housing forms that exist in Brussels. This objective is undertaken from an architectural viewpoint by examining the spatial features of housing across the various phases of the city's evolution, from its origin to its golden age at the turn of the 20<sup>th</sup> century, and on to contemporary practice. In addition to documenting the qualities of housing itself, the book investigates the mechanisms that drove housing's evolution and the ways in which housing production has shaped the city.

The variety of housing forms in Brussels is vast, as are the continuing debates and private or public initiatives that have enriched them. Interestingly, discussions about housing quality have been revived in recent decades as a means to address several challenges: the city's growing population, climate change, and social inclusion. In addition, since the 1960s, Brussels' urban housing has developed in competition with that of the city's hinterland, which extends as far as the Belgian coast. The competition between the city and its periphery is fuelled by the tenacious dream many people have of living in a villa on an isolated plot of suburban land, as illustrated by Hannes Coudenys' *Ugly Belgian Houses*<sup>2</sup> project. This unbridled desire for individuality poses a fierce challenge to city living, which in response needs to become more inviting. Housing has a central place in the quest to renew and enhance urban quality of life, and answers to contempor-

ary challenges include introducing new layouts, foreseeing innovative relationships to the public realm, addressing the evolution of the household, or even developing alternative forms of land and property tenure.

If an analysis of housing spaces is central to this book, it is not without reason. Through the study of these spaces, the local lifestyles, uses, and dwelling practices are equally revealed. As David Harvey elegantly puts it, "we make the house and the house makes us".<sup>3</sup> By understanding the places we live in, we also come to understand ourselves. For people living in Brussels, there is an immediate interest in this knowledge. Knowing one's city better means understanding oneself better, while offering tools to help shape one's environment. For those who do not live there, this knowledge promotes a better understanding of a city and its identity, how it is inhabited, and how history is engraved on its spaces. This understanding of identity through domestic space can be compared with August Sander's work from the 1920s, *People of the 20<sup>th</sup> Century*,<sup>4</sup> a collective portrait of German society at that time in which attitudes and clothing indicated what kind of people were portrayed. Likewise, this book aims to give a better understanding of local habits and practices through the study of domestic spaces. In short, tell me where you live, and I will tell you who you are!

<sup>1</sup> "In architecture, the house is certainly what best characterises the customs, tastes and habits of a population; its layout, like its distribution, is only modified in the long run, and however powerful conquerors may be, their tyranny never goes so far as to attempt to change the houses of the conquered." (author's translation) In: Viollet-le-Duc, Eugène Emmanuel. *Dictionnaire raisonné de l'architecture française du XI<sup>ème</sup> au XVI<sup>ème</sup> siècle*. vol. 6. Paris, Bance et Morel, 1863. <sup>2</sup> Coudenys, Hannes. *Ugly Belgian Houses: Don't Try This at Home*. Ghent, Borgerhoff & Lambrigts, 2015. <sup>3</sup> Harvey, David. *Spaces of Hope*. Berkeley, University of California Press, 2000. <sup>4</sup> Sander, August. *People of the 20th Century: A Cultural Work of Photographs Divided Into Seven Groups*. Munich, Schirmer/Mosel, 2013.

## Brussels

In its particular relationship between domestic spaces and local uses, Brussels is unusual. The diversity of its political roles signals this distinctiveness. As the seat of the European institutions and NATO, it is one of the most multi-cultural cities in the world. But it is also the capital of Belgium, a complex federal country where three linguistic communities – Dutch, French, and German – live together, two of which have elected it as their capital. Finally, in this interlocking of political levels, Brussels is one of the three fully fledged regions of Belgium, alongside Flanders and Wallonia, positioned as an enclave within Flanders. This city-region duality makes it a dense city cut off from its hinterland. This feature informs the geographical framework of the book, which focuses on housing in this limited regional territory.

Besides being a politically isolated territory, Brussels is a city of houses. Unlike in many European cities, but as in other capitals such as London or Amsterdam, housing in Brussels has developed around the individual terraced house. This housing form is so common that its locals don't question it, even if foreign visitors are always struck by a capital city of row houses. A fascinating collage by the Brussels-based architecture studio BAUKUNST, *3 Cities – Bruxelles*, expresses this by producing an image of the city as if there were only row houses, erasing any other kind of building. The majority of Brussels' row houses were built at the turn of the 20<sup>th</sup> century and row houses still constitute more than one third of its housing stock. They are not the only form of housing one can find here, however: Brussels at times displays the collage of styles and types typical of Belgian cities.

Tracing the origins of Brussels housing is a difficult task for two reasons. Wars have meant few buildings survived unharmed from the Middle Ages to the present day, but even more important has been a constant remodelling of the city by the people of Brussels themselves. In addition, iconographic resources are limited since city archives prior to the 17<sup>th</sup> century perished in the great fire following bombardment by Louis XIV's troops in 1695. Despite these limitations, meticulous collation using paintings, engravings, valuable assistance from archaeologists, and the similarity of nearby towns have allowed us to retrace a continuous path from the city's origins to today.

## A Typology

Typo-morphological analysis was used to examine the multiple housing forms found in Brussels. This tool combines investigations into the urban form and the layout of housing. In addition to being a device for analysing built spaces, it is also a tool for inventing new designs. The two books, both entitled *Typology*, by Emmanuel Christ and Christoph Gantenbein<sup>5</sup> are a prime example of both approaches, as they inventory housing from various cities around the world to serve as a possible basis for new housing designs. This book has the same objective.

The terms “type” and “typology” sound familiar to architects, but their definitions are often unclear. While vagueness may be valuable in certain circumstances, these concepts require clarity in a book revolving around *Typology*. A *type* can be defined as a collection of qualities common to objects of the same nature, grouped according to a specific criterion. Based on this definition, a *typology* is a classification of different types. The obsession with inventories in Diderot & D'Alembert's *Encyclopaedia*<sup>6</sup> is at the heart of this notion of typology, offering classifications of just about everything, ranging from birds' beaks to shoe soles, human anatomy, flower forms or music instruments to padlocks. The *Encyclopaedia* presents architecture in the same way, arranging buildings according to their styles, construction methods, or spatial layouts. Spatial layout is precisely what can lead to misunderstandings, because architects refer to it as typology as well, using “housing typology” to designate the composition and articulation of spaces in a building. The present book lies at the meeting point of these two definitions. It aims, on the one hand, to classify the housing forms present in Brussels, and, on the other hand, to analyse their spatial compositions.

The spatial ingredients of a housing type cannot be dissociated from social practices. While space supports social interactions, it is also influenced by them. Within this particular interpretation of type, it is interesting to note that most cities have a dominant type. It is usually the residential type commonly built during a demographic boom and largely spread across a city's territory. Its pervasiveness makes it identifiable, and linked to the identity of the city itself. Paris is identified with Haussmannian buildings from the 19<sup>th</sup> century, Naples with its 18<sup>th</sup>-century *palazzi*, Amsterdam with the 17<sup>th</sup>-century *herenhuis* along the canals, Bath with its late-18<sup>th</sup>- to early-19<sup>th</sup>-century crescents, or Berlin with its *Mietskasernen* but also *Siedlungen* from 1850 to 1940. In Brussels, the dominant type corresponds to what Victor Horta called the *bonne maison moyenne*<sup>7</sup> of the turn of the 20<sup>th</sup> century.

<sup>5</sup> Christ, Emmanuel et al. *Typology: Hong Kong, Rome, New York, Buenos Aires*. Zürich, Park Books, 2012; Christ, Emmanuel et al. *Typology: Paris, Delhi, São Paulo, Athens*. ETH Zürich, 2015. <sup>6</sup> Diderot, Denis and Jean Le Rond D'Alembert. *Encyclopédie ou Dictionnaire raisonné des sciences, des arts et des métiers par une société de gens de lettres*. Paris, Briasson – Le Breton – David-Durand, 1751–1772. <sup>7</sup> Dulière, Cécile. *Victor Horta, mémoires*. Brussels, Ministère de la Communauté française de Belgique: Administration du Patrimoine culturel, 1985, p. 34.





Like Amsterdam or London, Brussels is a city of houses. The Brussels-based architecture studio BAUKUNST illustrates this character in the *3 Cities – Bruxelles* photomontage by imagining the city of Brussels as if there were only houses.



Understanding a city's dominant type is valuable because, as a reference, it provides valuable knowledge about the city's social and spatial conditions. First, the dominant type sheds light on the socio-cultural identity of a place. Indeed, given the double nature of type – spatial arrangements and social practices – and its referential position, identifying the spatial characteristics of the dominant type opens a window on the socio-cultural identity of its environment. Second, it can be used as a standard with which other housing configurations can be compared. Third, it can inspire contemporary interpretations. For example, types can be interpreted into new forms. These three aspects of the dominant type – socio-cultural definition, housing variations, and interpretations – are the core of this book, providing an extensive overview of housing in Brussels.

## Book Structure

The structure of this book is threefold. First, it traces the origins of housing in Brussels and the formation of its most common and dominant housing type, generating a city of row houses. The implementation of this dominant type coincides with the first large-scale development plan for the city of Brussels at the end of the 19<sup>th</sup> century.

Second, it examines the other forms of housing present in the city by comparing them with the dominant type. This establishes a new genealogy of housing by explaining the reasons for the appearance of other forms of housing through comparison with the dominant type. Rather than a strictly chronological overview, this chapter offers a classification of residential forms according to their spatial and typological features. That is the reason, for instance, why the Cité de Dilbeek from the 1870s is presented in the second chapter together with the garden cities movement from the 1920s (Le Logis-Floréal, Cité Moderne, or Kapelleveld) as they share the same typomorphological characteristics (free-standing low-rise villas set in gardens, built at the periphery of the city). The juxtaposition of these other housing forms sometimes makes Brussels look like a gigantic collage – this is often how the city is depicted in Belgian cartoons.

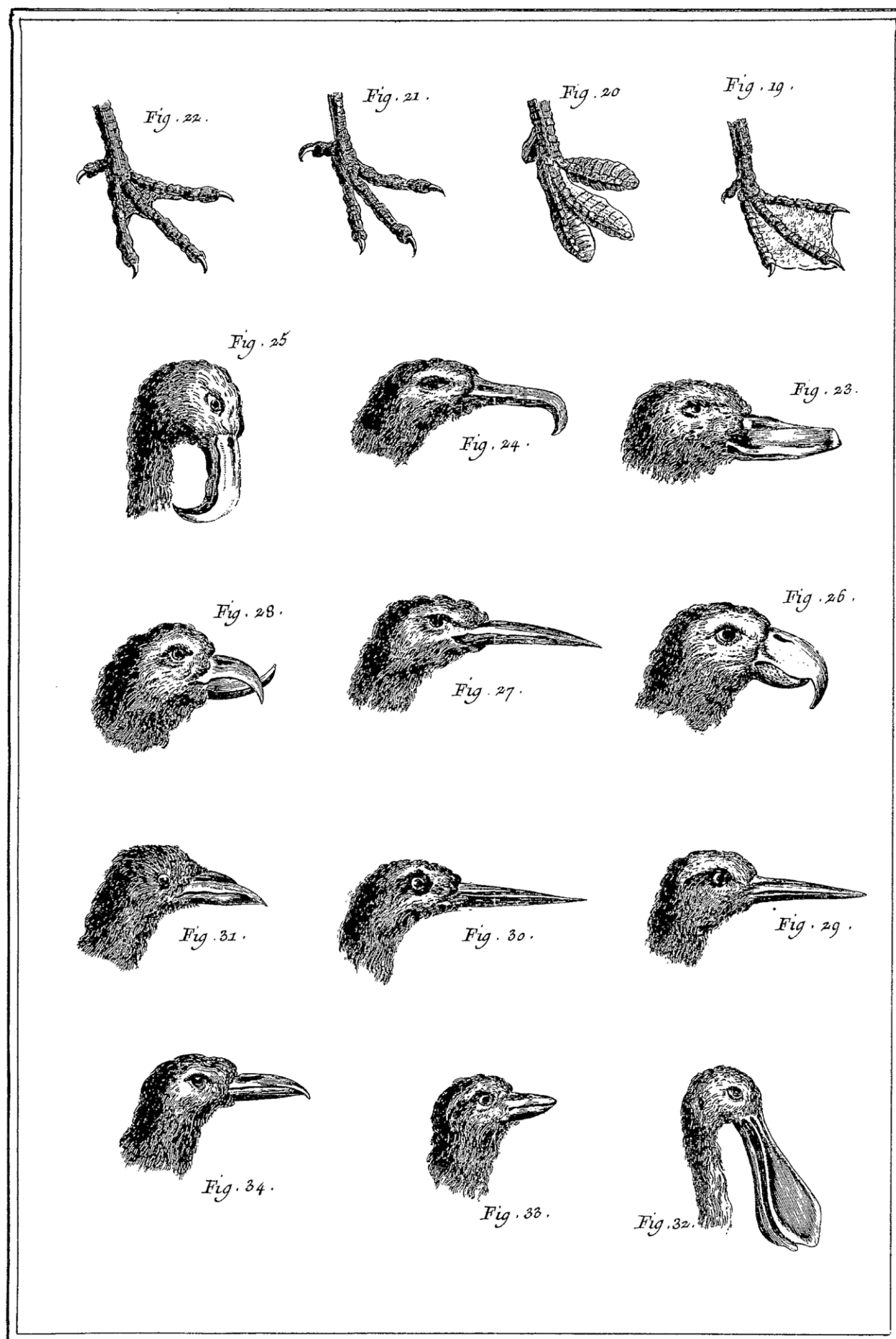
Finally, the last chapter investigates contemporary housing production in Brussels. This investigation sheds light on current social changes and the transitions housing is undergoing to accommodate the cultural diversity that defines the city today.

To narrate these three stages, three media were used: writing, drawing, and photography. All three tell in their own way the story of housing in Brussels and the domestic or urban qualities it contains. The texts are enhanced by

documents from the periods they relate to. An extensive atlas of Brussels brings together more than 100 exemplary case studies, documented in chronological order. They have been selected to illustrate the diversity of Brussels housing typologies from the Middle Ages to today and are characterised by particularly interesting layout solutions. As in Bernd and Hilla Becher's typological work on industrial buildings, a protocol was established to redraw all the case studies in plan, section, and elevation with identical graphic codes and at the same scale in order to enable comparisons. Finally, Maxime Delvaux's photographs tell a story of their own: they convey the atmosphere and quality of the urban spaces created by the buildings selected in various parts of Brussels.

The book offers an insight into the variety of Brussels housing forms over the years. This diversity is extremely obvious as narrow gabled-roof houses stand side by side with modernist apartment buildings or 19th-century mansions, creating an at times surreal cityscape. This typical Belgian layering of housing solutions is a formal poetic chaos, but it might also provide answers to tomorrow's challenges, such as diversifying socio-demographics. May this book be a tool for understanding, perpetuating, and inventing new Belgian solutions!





Goussier Del.

Benard Fecit.

*Histoire Naturelle,*  
*Distribution méthodique des Oyseaux par le Bec et par les Pattes*  
*d'après Barrere.*

A typology is a classification of objects based on distinctive criteria. Diderot and D'Alembert's *Encyclopaedia* used the principle to a large extent. Shown here are birds sorted according to the shapes of their feet and beaks.







Gérald Ledent

# A City of Row Houses: From the Origins to 1914

## From Rural to Urban Houses

In Roman times, Brussels did not yet exist; its territory consisted only of several secondary roads.<sup>1</sup> Three Gallo-Roman villas have been found in the area.<sup>2</sup> Although very little remains of these villas, we can nevertheless make certain observations: rural housing was set on ridges and slopes to avoid floods;<sup>3</sup> single-storey villas were organised around a large central room<sup>4</sup> opening onto a portico; and building materials included bricks, cob, and tiles.

Things changed after the fall of the Roman Empire. Wooden construction re-appeared, re-suming pre-Roman traditions.<sup>5</sup> The 19<sup>th</sup>-century architect Louis Cloquet<sup>6</sup> points out two other evolutions during this period: women were no longer isolated within houses, which now included large openings to the exterior.

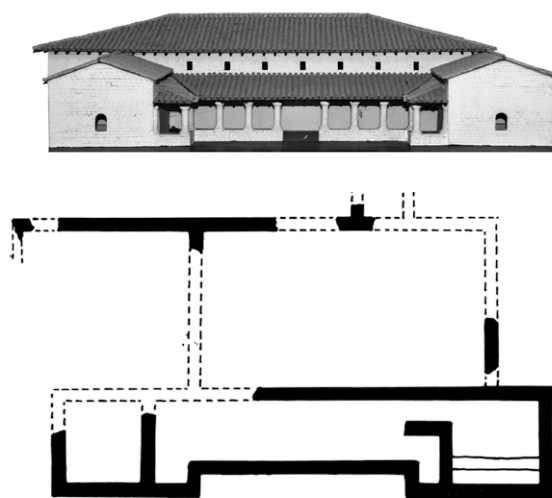
Two forms of housing could be found in Brussels in the early Middle Ages. On the one hand, peasant houses, common across the region, displayed a single large quadrangular space organised around a central family hearth.<sup>7</sup> Their construction was rudimentary, with wooden and cob walls capped by large thatched-ridge roofs.

On the other hand, local lords built stone houses – *steens* in Dutch. In the absence of city walls, these costly houses were designed to protect their residents, as suggested by their stone construction, central towers, and crenelated walls.<sup>8</sup> Such buildings consisted of several floors erected on vaulted basements. Texts mention

various *steens* in Brussels,<sup>9</sup> but none of these noble houses remains today; the last one was destroyed in 1910 during work on the north-south railway connection.<sup>10</sup>

## City Housing

Brussels was officially founded around 979,<sup>11</sup> when its first marketplace developed along the Senne River. The real turning point for housing, however, was the construction of the earliest city walls in the 12<sup>th</sup> century.<sup>12</sup> The aim at the time was to fit as many residents as possible behind the walls; buildings were therefore packed tightly together. In order to be accessible, houses



Reconstruction drawing and model of the Gallo-Roman villa in Jette, third century AD

1 Known as *diverticula*. "The 'Roman road' in Wemmel, the 'Dieweg' in Uccle, the 'Rue Haute' and the 'Chaussée de Haecht' in Brussels would be the distant evidence of this." Martiny, Victor-Gaston. *Bruxelles: architecture civile et militaire avant 1900*. Brussels, J.M. Collet, 1992, p. 12. 2 Remains of Roman villas have been found in the Brussels municipalities of Anderlecht, Laeken, and Jette. Matthys, André. "La villa gallo-romaine de Jette." *Archeologica Belgica*, vol. 2, no. 152, 1972, pp. 7–37. 3 Charruadas, Paulo. "De la campagne à la ville. Peuplement, structures foncières et croissance économique dans la région de Bruxelles avant l'an mil." *Medieval and Modern Matters*, vol. 2, 2011, pp. 1–24. 4 Cloquet, Louis. *Traité d'architecture. Eléments de l'architecture. Types d'édifices. Esthétique. Composition et pratique de l'architecture*. vol. 4, Liège, Ch. Béranger, 1900; Matthys, André. "La villa gallo-romaine de Jette." *Archeologica Belgica*, vol. 2, no. 152, 1972, pp. 7–37. 5 Following the invasions from the north, Gauls resumed their tradition of building with wood. Viollet-le-Duc, Eugène. *Dictionnaire raisonné de l'architecture française du XI<sup>e</sup> au XVI<sup>e</sup> siècle*. vol. 6, Paris, Bance, 1863, p. 214. 6 Cloquet, Louis. *Traité d'architecture. Eléments de l'architecture. Types d'édifices. Esthétique. Composition et pratique de l'architecture*. vol. 4, Liège, Ch. Béranger, 1900, p. 2. 7 van de Walle, Adelbrecht. *Het bouwbedrijf in de Lage Landen tijdens de middeleeuwen*. Antwerp, De Nederlandsche Boekhandel, 1959. 8 Verniers, Louis. *Un millénaire d'histoire de Bruxelles: depuis les origines jusqu'en 1830*. Brussels, de Boeck, 1965, pp. 77–78. 9 Valkenborgsteen, Ketelsteen, Meynaersteen, Machiaensteen Martiny, Victor-Gaston. *Bruxelles: architecture civile et militaire avant 1900*. Brussels, J.M. Collet, 1992, p. 14; Henne, Alexandre and Alfonse Guillaume Ghislain Wauters. *Histoire de la ville de Bruxelles*. Perichon, 1845, vol. 1, pp. 22–23; Millin, Aubin-Louis. *Antiquités nationales ou Recueil de monuments pour servir à l'histoire générale*. vol. 5, Paris, Drouhin, 1797. 10 Martiny, Victor-Gaston. *Bruxelles: architecture civile et militaire avant 1900*. Brussels, J.M. Collet, 1992, p. 14. 11 CERAA. *Morphologie urbaine à Bruxelles*. Brussels, CERAA, 1987. 12 Bonenfant, Paul. "Les premiers remparts de Bruxelles." *Annales de la Société Royale d'Archéologie de Bruxelles*, vol. XL, 1936, pp. 7–47; Deligne, Chloé. *Bruxelles et sa rivièrre. Genèse d'un territoire urbain (12<sup>e</sup>-18<sup>e</sup> siècle)*. Turnhout, Brepols Publishers, 2003. *Studies in European Urban History*.



Wooden rural house as depicted by Jan Brueghel the Elder in *The Adoration of the Kings*, 1598



The stone house Sleeuws Steen, in a hypothetical reconstruction by the antiquary Aubin-Louis Millin in 1797

evolved from *breedhuis* (broadhouses) to *diephuis* (deephouses) by pivoting to offer their shortest side to the street.<sup>13</sup> Housing consequently developed in depth and height on long and narrow plots of land determined by acknowledging previous (agrarian) divisions, finding an optimum width between façade apertures and beam spans to allow as many dwellings as possible within a limited area.<sup>14</sup> Housing inside the walls developed in two stages: wooden houses followed by brick and stone residences.

### Wooden Houses

The first form of urban dwelling in Brussels was the timber-frame house. Although the last example was demolished in 1818,<sup>15</sup> drawings, paintings, and surviving built structures in the surroundings of Brussels give us a good overview of their composition (Duivelshuis, pp. 52–53).<sup>16</sup> As in many medieval cities, narrow streets –

*kattesteghe*<sup>17</sup> – were created between properties to prevent fires spreading between wooden constructions. City blocks were therefore permeable, allowing collective uses (drying greens for household linens, orchards, etc.) in their centres.<sup>18</sup> Gutter walls were organised along these *kattesteghe*, leading to the appearance of gables on the main streets.<sup>19</sup>

The layout of these wooden houses was determined by their reduced street frontage and restricted development in height. Compared with rural houses, urban dwellings had become too narrow for a central hearth, and the constraint of continuous vertical ducts through the different floors led to placing the hearth against party walls. In addition, since light was very scarce in the *kattesteghe*, large apertures were made on street façades. Houses consisted of two to four floors of similar height usually with two additional floors below the attic.<sup>20</sup> Semi-buried basements were directly accessible from the street

<sup>13</sup> Martens, Mina and Victor-Gaston Martiny. *Histoire de Bruxelles*. Privat, 1976; Martiny, Victor-Gaston. “La maison bourgeoise unifamiliale à façade étroite, du 16<sup>ème</sup> siècle à l’aube du 20<sup>ème</sup> à Bruxelles.” *New Approaches to Living Patterns*, edited by Roland Baetens, Anvers, Brepols Publishers, 1991, pp. 109–146. <sup>14</sup> The most common plot width in the Middle Ages was around 6 metres. Cabestan, Jean-François. *La conquête du plain-pied : l’immeuble à Paris au XVIII<sup>e</sup> siècle*. Paris, Picard, 2004, p. 203. <sup>15</sup> Cloquet, Louis. *Les maisons anciennes en Belgique*. Gand, Victor van Doosselaere, 1907. <sup>16</sup> Together with other wooden constructions from Belgium, this house was illustrated by Grabbe and Colinet. Grabbe, Ernst. “Der flämische Holzbau.” *Zeitschrift für Bauwesen*, 1919, pp. 613–638; Colinet, Émile. *Recueil des restes de notre art national*. Colinet, 1872. vol. 1. <sup>17</sup> Viollet-le-Duc also refers to these streets as “ambitus” or “endronne”. Martiny, Victor-Gaston. “La maison bourgeoise unifamiliale à façade étroite, du 16<sup>ème</sup> siècle à l’aube du 20<sup>ème</sup> à Bruxelles.” *New Approaches to Living Patterns*, edited by Roland Baetens, Anvers, Brepols Publishers, 1991, pp. 109–146. <sup>18</sup> As can be seen on Joan Blaeu’s 1649 map of Brussels. <sup>19</sup> Viollet-le-Duc, Eugène. *Dictionnaire raisonné de l’architecture française du XI<sup>e</sup> au XVI<sup>e</sup> siècle*. vol. 6, Paris, Bance, 1863, p. 225. <sup>20</sup> “The very high gable roof represents up to half the height of the building (compared to one third in Paris); there are two floors of rooms opening onto the street through small rectangular windows piercing a vast stepped or curved gable.” Bertrand, Jean-Michel. *Architecture de l’habitat urbain: la maison, le quartier, la ville*. Paris, Dunod, 1980, p. 15.



through a double door and a staircase. In general, the ground floor was very public, used for commercial or work space as well as a room for family gatherings. The upper floors, connected by a spiral staircase located either inside or outside the building, usually comprised two identical rooms laid out in a row. Due to the narrowness of these buildings, a lifting beam with a pulley was placed on the façade to hoist bulky goods to the upper floors. To allow additional light, a courtyard was placed at the back of the building, where a cess-pit and a rainwater tank could be found. Drinking water generally came from public fountains. Within these recurring features, very diverse layouts could be found, usually legible from the outside by the entrance position (centred or not, elevated or not, in the *kattesteghe* or not).

Oak wood was used for the structure, façade, and finishing elements. Structurally, each level of a timber-frame house was independent by virtue of having its own wood panelling. From floor to floor, corbels of around half a metre allowed a lighter structure,<sup>21</sup> increasing the floor surface and protecting the street from bad weather. The roofs were supported by “trussed rafters” or “truss and purlin” and presented their triangular gables to the streets. They were capped with thatch, which would later be replaced by clay tiles.<sup>22</sup> Roofs perpendicular to the streets had a major consequence: in the absence of a *kattesteghe*, adjoining houses shared a common cornice where water and snow accumulated. While wood was the main material, brick and stone were nevertheless used for gutter walls, chimneystacks, cellars, and vaulted basements to protect the wooden structures from humidity. Apertures were split into two registers: glass (when affordable) for the upper parts of the bays and thick wooden shutters for the lower parts.

Timber-frame housing survived in Brussels until the beginning of the 19<sup>th</sup> century. From the 14<sup>th</sup> century onwards, however, it was gradually overtaken by the brick house.

### Brick Houses

Fires and successive bans on wood construction<sup>23</sup> sounded the death knell for wooden houses; brick gradually gained the upper hand in the 16<sup>th</sup> century. This shift was not instantaneous: wood remained common for rear façades.<sup>24</sup> The 1695 bombardment of the city by French troops and the resulting fire<sup>25</sup> marked a turning point in



Timber-frame house with corbels in Brussels' Petite rue des Pierres, aquatint 1875

construction techniques. The Grand Place is a clear example of this trend – although plot divisions remained unchanged.

Three major changes occurred with brick construction. First, façade apertures tended to align vertically to avoid overhangs and traction strains brick cannot bear. This is, according to Viollet-le-Duc, the origin of the bay.<sup>26</sup> A later horizontal alignment of the windows would be for stylistic rather than constructive reasons.<sup>27</sup> The overall predominance of voids over solids remained as it had been in wooden façades (Chapeliers 22–24, pp. 54–55).<sup>28</sup> Second, *kattesteghe* became obsolete and were incorporated in the houses, which became strictly terraced. City blocks were thus rendered impervious to the public realm. Third, sharing a common gutter was a recurring source of problems among neighbours due to water infiltration. Consequently, at the end of the 17<sup>th</sup> century,<sup>29</sup> a local law required rainwater to be collected on the street façade and conducted to the ground. This led to a progressive reversal of

21 Cloquet, *Traité d'architecture. Eléments de l'architecture. Types d'édifices. Esthétique. Composition et pratique de l'architecture*. vol. 4, Liège, Ch. Béranger, 1900, p. 49. 22 Houbrechts, David. “Les maisons en pan-de-bois de la Grand-Place.” *Les maisons de la Grand-Place de Bruxelles*, edited by Vincent Heymans et al., Brussels, CFC éditions, 2007, pp. 25–37, p. 33. 23 1342: ban on thatched roofs; 1465: ban on wooden façades; 1466: ban on maintaining wooden façades, etc. Eloy, Marc et al. *Influence de la législation sur les façades bruxelloises*. Brussels, C.A.R.A./C.F.C., 1985. 24 van de Castyne, Oda. *L'architecture privée en Belgique dans les centres urbains aux XVI<sup>e</sup> et XVII<sup>e</sup> siècles*. Brussels, M. Hayez, Imprimeur de l'Académie royale de Belgique, 1934, p. 38. 25 This date is a milestone for iconographic resources since most of the archives perished in the fire following the bombardment. Martiny, Victor-Gaston. *Bruxelles: l'architecture des origines à 1900*. Brussels, Nouvelles Editions Vokaer, 1980. 26 Viollet-le-Duc, Eugène Emmanuel. *Dictionnaire raisonné de l'architecture française du XI<sup>e</sup> au XVI<sup>e</sup> siècle*. vol. 3, Paris, Morel, 1875, pp. 190–191. 27 Cabestan, Jean-François. *La conquête du plain-pied: l'immeuble à Paris au XVIII<sup>e</sup> siècle*. Paris, Picard, 2004. 28 Gautier, Patrice et al. “Recherche archéologique d'une maison et de son achterhuis sises rue des Chapeliers 22–24 à 1000 Bruxelles [BR392-02].” *Musées royaux d'Art et d'Histoire*, 2018. 29 Eloy, Marc et al. *Influence de la législation sur les façades bruxelloises*. Brussels, C.A.R.A./C.F.C., 1985.



The transformation from timber (left) to brick houses (right) led to vertical window alignment and roof reversal (house transformation by Henri Partoes, Rue d'Accolay in 1819).

Le Muet's possible staircase position on 15-foot-wide (approximately 4.5 metre) plots, exterior (left) or interior (right), 1647

the roofs, modifying the physiognomy of street-scapes.

In terms of layout, staircase position became an important issue in the 16<sup>th</sup> century. While an exterior staircase requires an enfilade between rooms, an interior one provides a landing allowing access to all rooms independently. At a time when the Counter-Reformation promoted prudishness and privacy, this difference in the articulation of spaces was essential. While an enfilade imposes intimacy among household members, a landing – and corridor, in some cases – allows for independence, a solution favoured from then on in domestic architecture.<sup>30</sup> Interestingly, Le Muet's housing manual<sup>31</sup> sheds light on possible staircase positions depending on plot widths. Only on those above 5 to 6 metres should the staircase be included within the house, allowing for rooms to be served independently by a landing. It seems therefore that moral concerns, coupled with technical contingencies, led medieval plots to evolve towards greater widths.<sup>32</sup>

Dwelling types other than these widespread forms of ordinary terrace housing could nonetheless be found in Brussels in this period. For instance, two *beguinages* (housing communities of women living together in closed premises without taking vows) were built in Brussels in the 13<sup>th</sup> century, one – the Great Beguinage – in the centre, the other in Anderlecht. Although

isolated from the city by a perimeter wall, this type of housing was similar to those found elsewhere in town. Two forms of buildings emerged for the upper class. L-shaped buildings,<sup>33</sup> such as the Hôtel Clèves-Ravenstein, pp. 50–51, displayed a broad façade on the street coupled with a perpendicular building.<sup>34</sup> This arrangement allowed large façades on relatively narrow plots with a courtyard in the centre of the composition. Palaces with courts and gardens, such as the Hôtel Vanderlinden d'Hooghvorst, pp. 56–57, appeared from the 18<sup>th</sup> century on. Inspired by French models, the buildings sat between a courtyard on the street side and a garden at the back. Outside densely populated areas, particularly on the “*chaussées*”,<sup>35</sup> where wider plots could be found, buildings – *breedehuis* – developed parallel to the street rather than perpendicular to it.

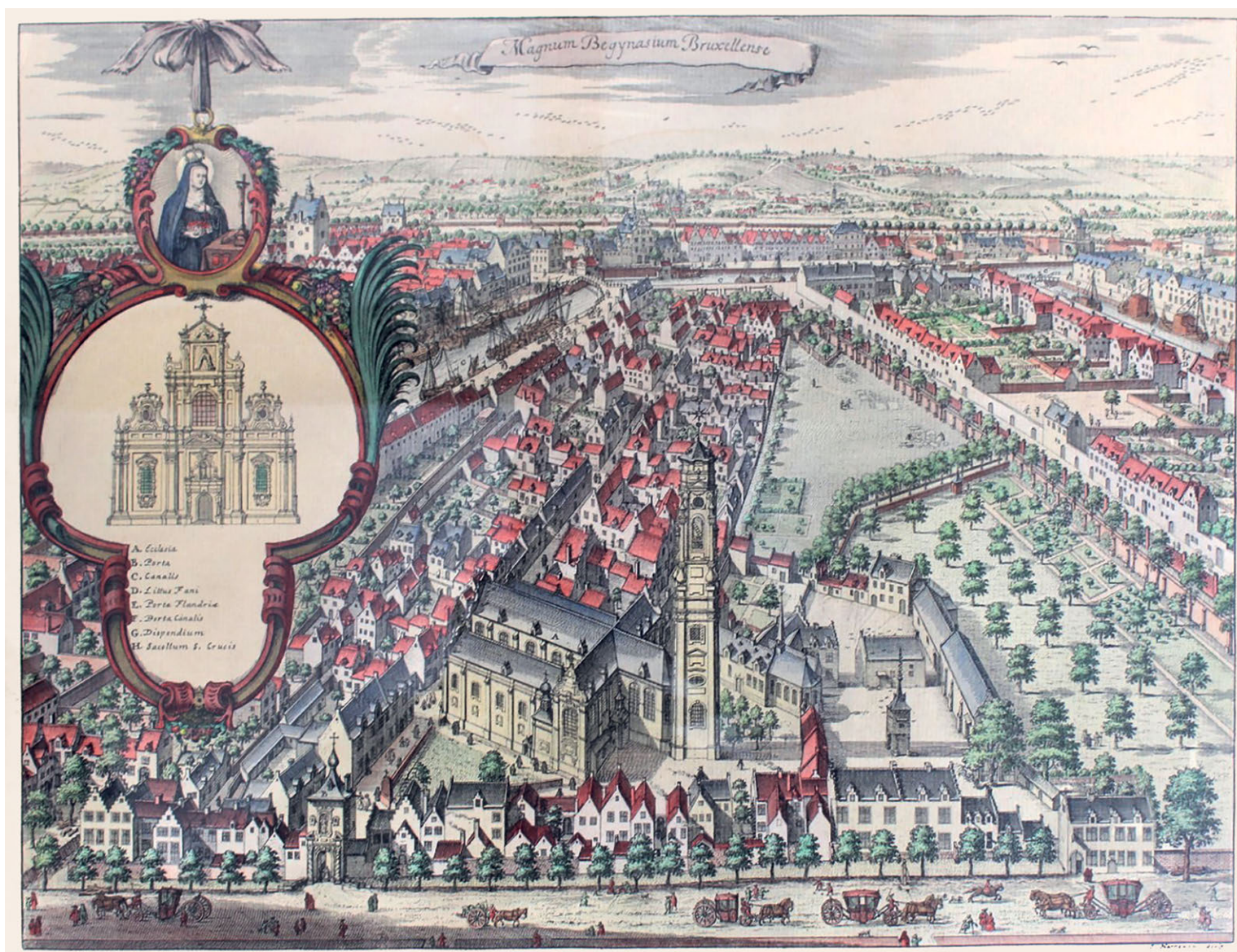
In terms of construction, brick became common in Brussels from the time of the Roman occupation thanks to easily exploitable outcropping clay deposits.<sup>36</sup> It was also the main material for the second city wall built in the 14<sup>th</sup> century. Brick factories operated in Brussels until the 18<sup>th</sup> century.<sup>37</sup> In addition to houses' vertical structure, partition walls were built of brick from the 16<sup>th</sup> century onwards. Stone, usually Gobertange limestone and Belgian bluestone, was used for chiselled elements or fragile edges. Although wood disappeared from the façades, it

<sup>30</sup> Robin Evans expands on the invention of the corridor as a means for household members to be able to avoid one another. Evans, Robin. “Figures, Doors and Passages.” *Architectural Design*, 1978, pp. 267–277. <sup>31</sup> Le Muet, Pierre. *Manière de bien bastir pour toutes sortes de personnes*. Paris, François Langlois, 1647. <sup>32</sup> If 6 metres (three toises) was optimal, most medieval houses were nonetheless far narrower.

Cabestan, Jean-François. *La conquête du plain-pied : l'immeuble à Paris au XVIII<sup>e</sup> siècle*. Paris, Picard, 2004; van de Castyne, Oda. *L'architecture privée en Belgique dans les centres urbains aux XVI<sup>e</sup> et XVII<sup>e</sup> siècles*. Brussels, M. Hayez, Imprimeur de l'Académie royale de Belgique, 1934.

<sup>33</sup> Cloquet, Louis. *Traité d'architecture. Eléments de l'architecture. Types d'édifices. Esthétique. Composition et pratique de l'architecture*. vol. 4, Liège, Ch. Béranger, 1900. <sup>34</sup> Ibid.; Martiny, Victor-Gaston. “La maison bourgeoise unifamiliale à façade étroite, du 16<sup>ème</sup> siècle à l'aube du 20<sup>ème</sup> à Bruxelles.” *New Approaches to Living Patterns*, edited by Roland Baetens, Anvers, Brepols Publishers, 1991, pp. 109–146. <sup>35</sup> *Chaussées*, or *steenwegen*, were major medieval roads linking one city to another. <sup>36</sup> Two types of clay are present in Brussels at the Paniselian and Ypresian layers of the Lower Eocene. Geological map of Belgium, Military Cartographic Institute, 1893. <sup>37</sup> Such factories were banned in Brussels from 1776. Martiny, Victor-Gaston. “La maison bourgeoise unifamiliale à façade étroite, du 16<sup>ème</sup> siècle à l'aube du 20<sup>ème</sup> à Bruxelles.” *New Approaches to Living Patterns*, edited by Roland Baetens, Anvers, Brepols Publishers, 1991, pp. 109–146, p. 130.





The Great Beguinage built at the centre of Brussels in the 13<sup>th</sup> century, engraving 1727



A typical street of stepped gable houses in the beginning of the 19<sup>th</sup> century, Place de la Vieille Halle aux Blés, drawing 1919

was still used for staircases, floors, and roof structures. It nevertheless had a lasting influence on the design of façades, which recalled the floor alignment of timber constructions (corbels, bands, and skirting boards) and on the gable tradition that persisted until the 17<sup>th</sup> century.<sup>38</sup>

As a consequence of the decline of wooden structures, the Sonian Forest at the south-east edge of Brussels, a major supplier of oak, would gradually be transformed into a beech forest from the 17<sup>th</sup> century on.<sup>39</sup>

<sup>38</sup> van de Castyne, Oda. *L'architecture privée en Belgique dans les centres urbains aux XVI<sup>e</sup> et XVII<sup>e</sup> siècles*. Brussels, M. Hayez, Imprimeur de l'Académie royale de Belgique, 1934. <sup>39</sup> Roland, Lee. "Quand les arbres cachent la ville. Pour une analyse conjointe de la forêt de Soignes et du fait urbain." *Brussels Studies*, no. 60, 2012, p. 10.



## Early 19<sup>th</sup> Century

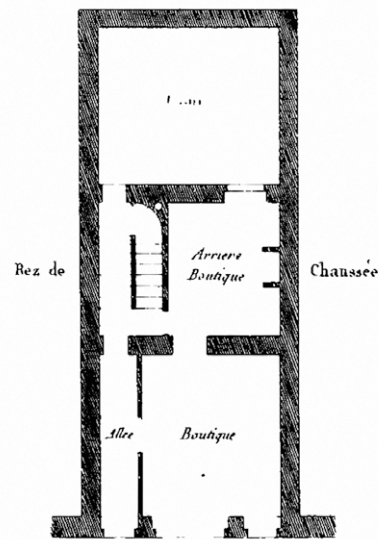
In the early 19<sup>th</sup> century, housing underwent radical changes that would lead to the development of a dominant typology at the end of the century: Brussels' referential type. The referential type can be defined as the archetypal and most ordinary residential type in a particular place. In most cases, it is the residential type commonly built during a demographic boom such as the Haussmann period in Paris or the 18<sup>th</sup> century in Naples. In Brussels, the evolution towards a referential type took place in four stages.

First, at the beginning of the century, foreign treatises such as Jean-Nicolas-Louis Durand's<sup>40</sup> had a significant impact on Brussels' domestic architecture. Moreover, classicism became popular in Brussels, disrupting its medieval image. Several municipal policies tried to unify the urban landscape by whitening and plastering façades.<sup>41</sup>

During the French Revolution, the Great Beguinage was sacked and, along with most religious orders, dissolved. The subsequent remodelling of the Great Beguinage by Henri Partoes illustrated the influence of Durand (Grand Hospice Houses, pp. 60–61). Ordinary housing was concealed behind the regular and sober façades of two urban palaces. Behind these unifying masks, three-window houses followed a layout similar to Durand's *maison à loyer*,<sup>42</sup> dividing the building into two longitudinal bays: the main bay displayed an enfilade of rooms of equivalent size, while the distribution bay included a vestibule, a staircase with a turning flight, and access to the garden. The houses shared twin entrances, giving the impression of larger residences. They were raised 60 centimetres, offering some natural light to the basement. Latrines were located in the garden, in which no well was visible, probably replaced by the public fountain on the small square in front of the buildings. Finally, despite the fact that they were terraced, the intermediate walls between two houses were not strictly included in a vertical plane as the space above the entrances belonged to only one of the two.

This real-estate operation was based on sanitation and modernisation of a poor existing neighbourhood. The same motives led to the transformation in the first half of the 19<sup>th</sup> century of the area around the small Rue St-Hubert close to the Grand Place into the Galeries Royales Saint-Hubert, pp. 64–66, where housing was combined with retail in a classical passage.

Ten years after Partoes, Tilman-François Suys proposed an urban plan for the Quartier Léopold to house the emerging upper class. In its ideal block (Quartier Léopold Ideal Urban Block,



Durand's layout of a *maison à loyer*, divided in two longitudinal bays, 1809

pp. 62–63), its housing displayed similarities with Partoes': raised ground floors allowing direct light into basements, two-floor-high houses topped by a gable roof, and a floor plan divided into two uneven longitudinal bays. There were nonetheless significant differences. Unlike the unitary approach taken in Partoes' beguinage, Suys' design displayed a great variety between corner and centre buildings in terms of plans, size, expression, exterior spaces, and attached service buildings. The terraced houses had three rooms in a row in the main bay rather than two, with a very narrow central room that seemed uncomfortable to use. The façade expression was no longer repetitive, with clear distinctions between the large and the narrow bays. Single-flight staircases also differed from the beguinage, allowing a horizontal coordination of all windows in the rear façade. Finally, all party walls fit in absolutely vertical planes.

Between 1830 and 1870, Léopoldian Houses, p. 67,<sup>43</sup> named after the first Belgian king, Leopold I (1790–1865), initiated a series of evolutions. The ground floor was no longer elevated, which meant there could be no living spaces in the cellars. The kitchen was located in an annex to the main building, an extension of the distribution bay. The staircase featured two flights of steps, creating an intermediate level on the landing – *entresol* – under which one had to pass to reach the annex. In the main bay, a veranda punctuated the three-room enfilade on the garden side. Capped with a skylight, this room provided more light for the central room.

Towards the end of the 19<sup>th</sup> century, façades became more ornamented, reflecting the desires

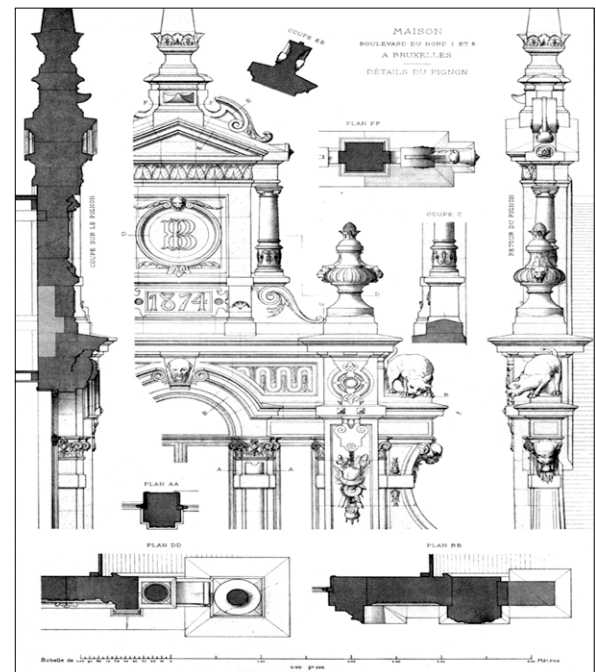
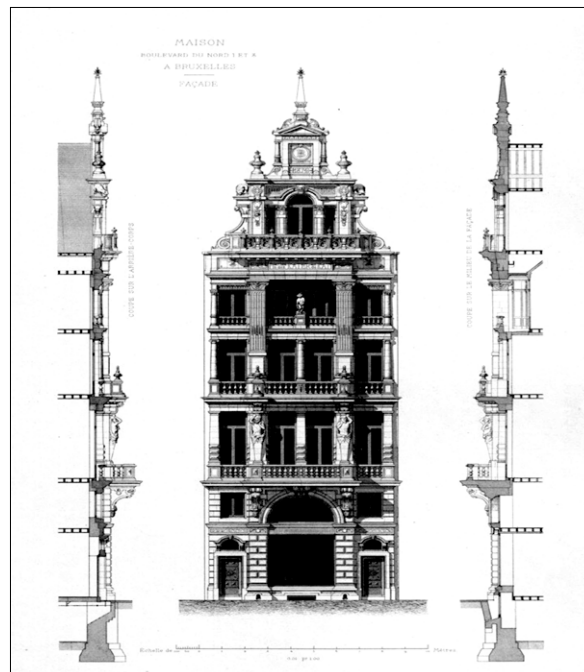
<sup>40</sup> Durand, Jean-Nicolas-Louis. *Précis des leçons d'architecture données à l'école polytechnique*. vol. 2, Paris, Ecole polytechnique, 1809.

<sup>41</sup> Although officially, façades were whitewashed for hygiene reasons, the main aim was to give a unified image to the streets of Brussels. Eloy, Marc et al. *Influence de la législation sur les façades bruxelloises*. Brussels, C.A.R.A./C.F.C., 1985.

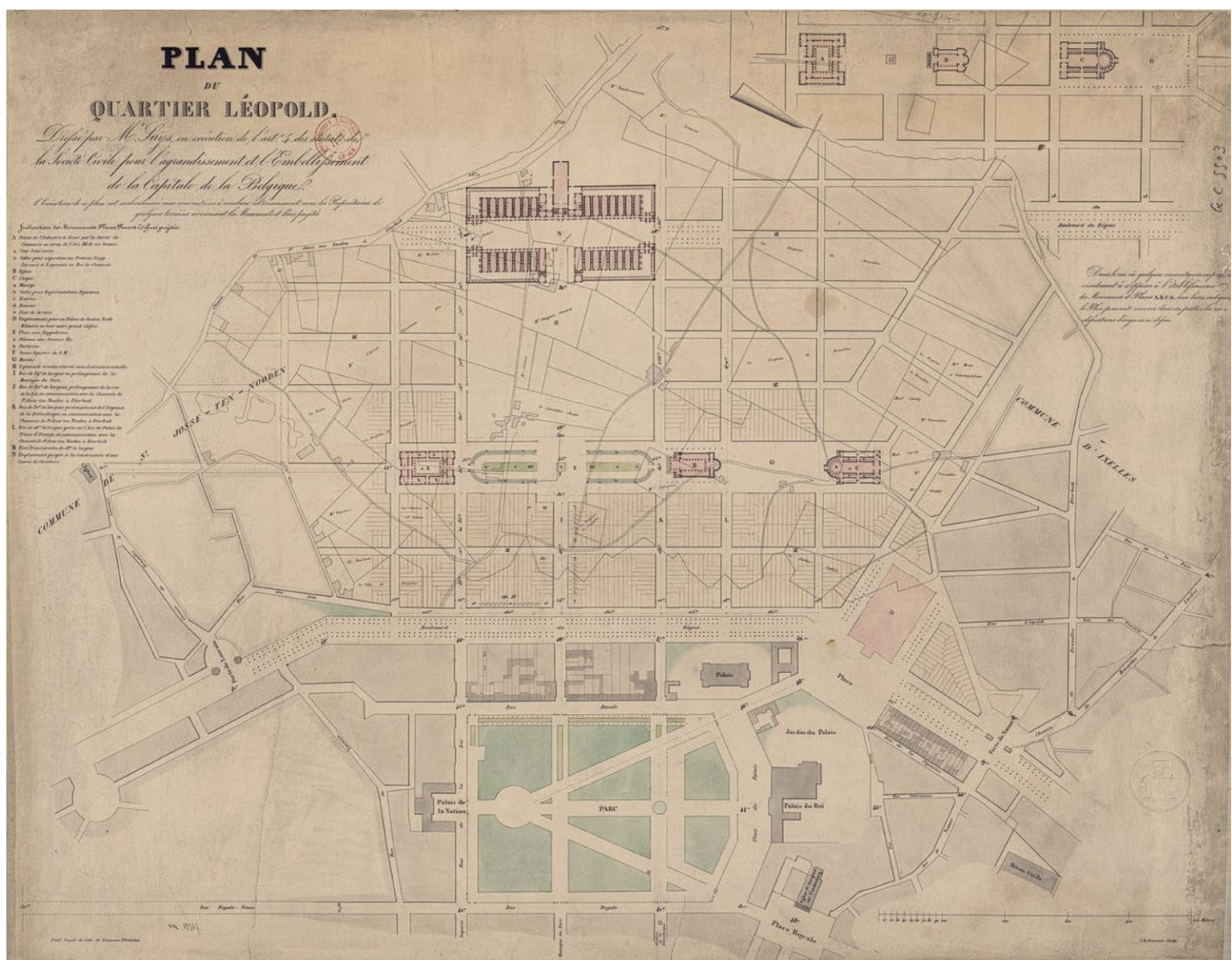
<sup>42</sup> Coekelberghs, Denis et al. *Un ensemble néo-classique à Bruxelles: le Grand Hospice et le quartier du Béguinage*. Institut royal du patrimoine artistique, Ministère de la communauté française, 1983.

<sup>43</sup> Martiny, Victor-Gaston. "La maison bourgeoise unifamiliale à façade étroite, du 16<sup>ème</sup> siècle à l'aube du 20<sup>ème</sup> à Bruxelles." *New Approaches to Living Patterns*, edited by Roland Baetens, Anvers, Brepols Publishers, 1991, pp. 109–146.





The eclectic façade of the row house Hier ist in den kater en de kat by Henri Beyaert, 1874



Quartier Léopold drawn by Suys in 1838



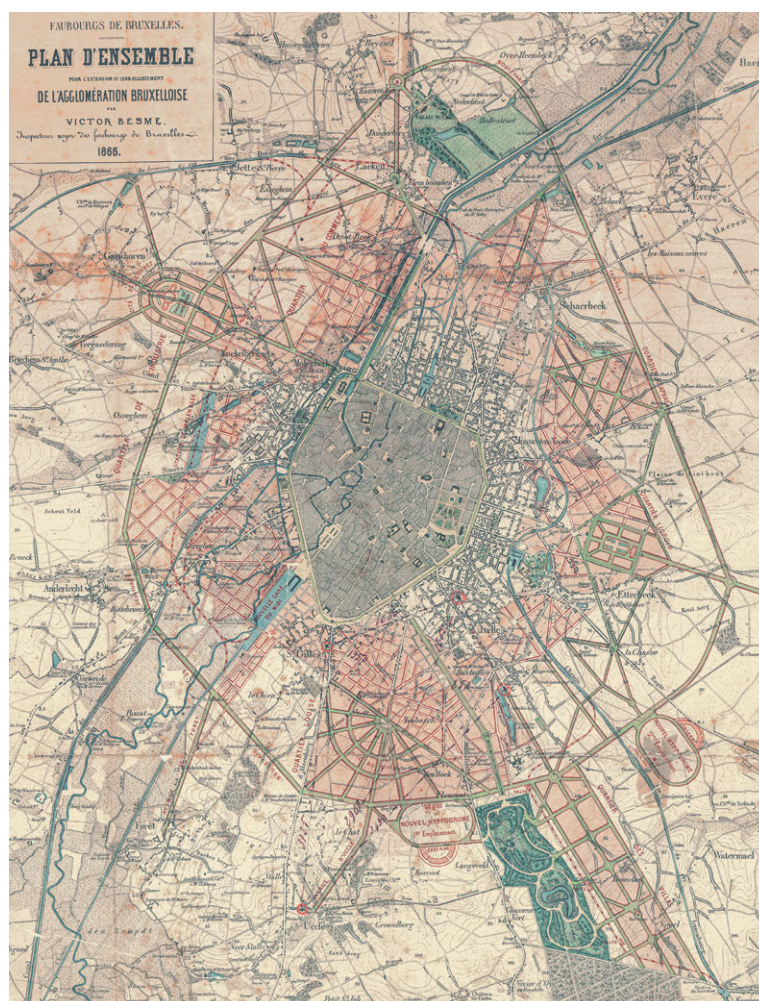
of the newly founded Belgian state's bourgeoisie. Henri Beyaert's design for the Hôtel Marnix, pp. 72–73, was a prime example of this eclectic style – Flemish Renaissance – that evoked the past glory of the low countries.<sup>44</sup> Eschewing the classical canons followed by Partoes and Suys, this trend visibly individualised each house. Façades became more elaborate, eliminating any stylistic unity in streets. Polychromy became more and more pronounced and the use of blue-stone was common for plinths and window frames. Additionally, ground floors were raised by between 50 centimetres and 2 metres during that period. Combined with the mandatory implementation of sidewalks (1846) that protected the bases of the walls, large apertures could now be made at ground level, allowing living functions in the basements, something made possible by Brussels' well-drained sandy subsoil.

## Brussels' Dominant Housing Type: The 1870–1914 Bourgeois Terraced House

From 1870 to 1914, Brussels experienced a golden age.<sup>45</sup> The economy thrived, the population tripled, and Brussels expanded rapidly. Victor Besme, Brussels' road inspector, proposed an urban plan to accommodate the city's expansion. His proposal relied on an intersection<sup>46</sup> of public institutions in the form of peripheral boulevard cared for by the public authorities with private housing built by the rising middle class, around whom this plan was centred. The city beyond "the Pentagon" – the city's second belt of walls – was built according to this arrangement.

In the second half of the 19<sup>th</sup> century, major technical and social changes forged what would become Brussels' dominant housing type, the "bonne maison moyenne".

From a technical point of view, new materials emerged from the industrial revolution: reinforced glass, concrete, metal beams, etc. transformed the art of building. Lighting evolved too, from oil lamps to gas in the 1870s to electricity starting in 1880. From the 1860s, drinking water was supplied directly to buildings via a water-supply network. Subsequently, dedicated pipes and ducts would be installed in houses.<sup>47</sup> This also resulted in a higher specification of the location of water-related rooms such as kitchens and



Victor Besme, in his *Plan d'ensemble pour l'extension et l'embellissement de l'agglomération bruxelloise* of 1866, proposed an urban plan for the city's expansion.

bathrooms, whose furniture had previously been movable. The first sewage systems were installed between 1840 and 1850.<sup>48</sup> With the invention of the siphon and flushing toilets, latrines no longer needed to be located in courtyards; they were installed within the house, where vertical water drainage became a technical constraint that determined housing layouts.

From a socio-cultural point of view, the bourgeois model of the nuclear family spread as a political instrument to tame the working class. Relationships within the household were increasingly codified, among spouses, children, domestic servants, and guests. In this model, intimacy among members of the household was now prohibited, leading to a multiplication of circulation spaces. Social status was now measured by the degree of domestic workers' invisibility. These social codes were spatialised by local architects such as Louis Cloquet.<sup>49</sup>

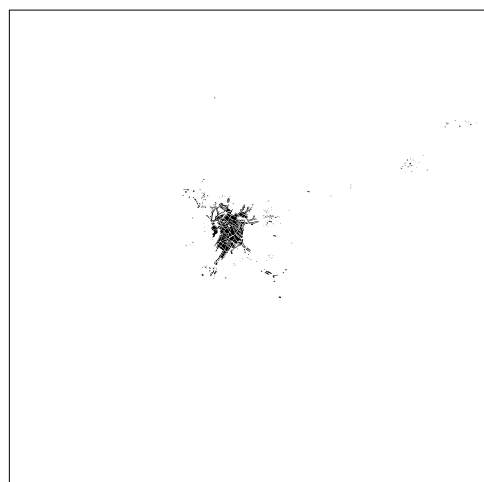
<sup>44</sup> Beyaert, Henri. *Travaux d'architecture exécutés en Belgique*. vol. 1, Brussels, Lyon-Claessen, 1894; Castermans, Auguste. *Parallèle des maisons de Bruxelles et des principales villes de la Belgique*. Liège, Noblet, 1854; Loze, Pierre. *La maison Blondel de Henri Beyaert, 1886: Il rue Potagère à Saint-Josse-ten-Noode, Bruxelles*. Brussels, Éditions A.P.A.-C.I.D.E.P., 1993. <sup>45</sup> Ledent, Gérald. "Genèse de la maison bruxelloise." *Montréal et Bruxelles en projet[s]. Les enjeux de la densification urbaine*, edited by Priscilla Ananian and Bernard Declève, Louvain-la-Neuve, PUL, 2017, pp.127–156. <sup>46</sup> Zitouni, Benedikte. *Agglomérer. Une anatomie de l'extension bruxelloise (1828–1915)*. Maldegem, VUB-Press, 2010. <sup>47</sup> Heymans, Vincent. *Les dimensions de l'ordinaire: la maison particulière entre mitoyens à Bruxelles*. Paris, L'Harmattan, 1998. <sup>48</sup> Abeels, Gustave. *Pierres et rues: Bruxelles, croissance urbaine, 1780–1980: exposition*. Brussels, La société générale de banque, St.-Lukasarchief v.z.w., 1982, p. 29. <sup>49</sup> Cloquet, Louis. *Traité d'architecture. Eléments de l'architecture. Types d'édifices*. Esthétique. Composition et pratique de l'architecture. vol. 4, Liège, Ch. Béranger, 1900.

## The Ingredients of the “bonne maison moyenne”

In the 1870s, a synthesis of past housing forms and new domestic uses and construction techniques<sup>50</sup> generated Brussels’ referential housing type, one that would not be called into question until the First World War. What Victor Horta also called the “*type de la bonne maison moyenne*”<sup>51</sup> remained largely an implicit set of design rules within which architects could produce a large number of variations. These rules can be summarised in four spatial properties.

## Interwoven Relationship with Closed Urban Blocks

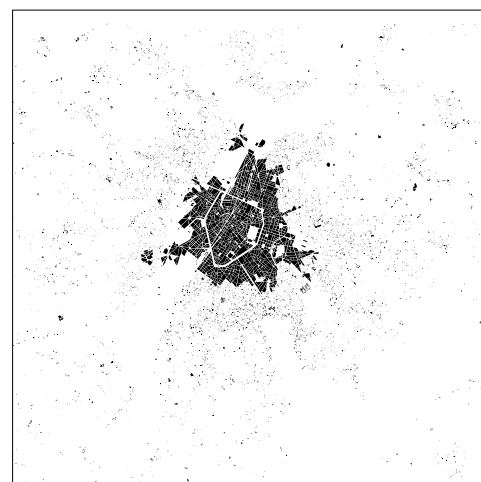
First, the referential or standard housing type was set in a closed urban block. Compared with those of the Middle Ages, these blocks are smaller and more regular, with 10 to 20 houses on each side. Moreover, they are closed off to the street, as undeveloped land had to be fenced. Within blocks, plots were structured in a rational way, as perpendicular to the street as possible. If the average plot width stabilised at around 6 metres, social hierarchies could be read in the built structures: plot widths ranged from 5.8 to 7.2 metres on normal streets and 12 to 16 metres on avenues. In an interwoven relation-



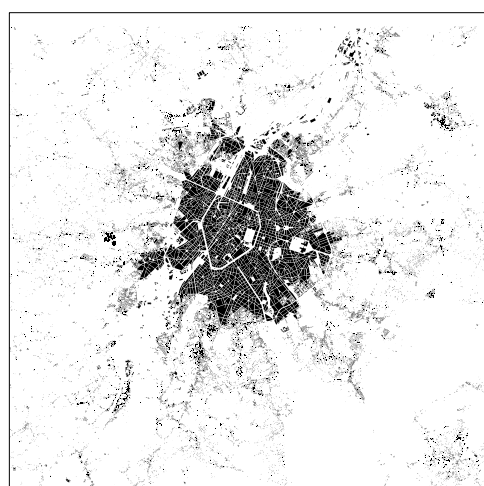
1554



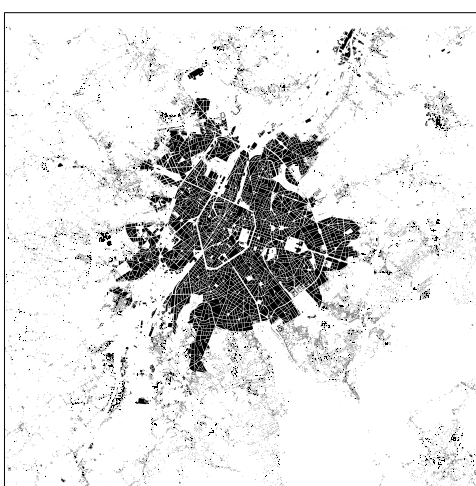
1777



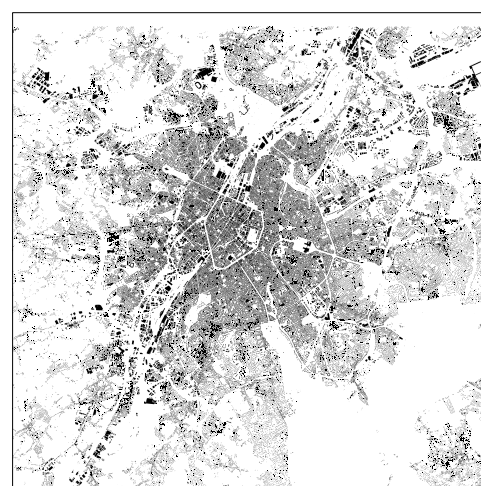
1880



1930



1951



2019

City blocks’ evolution from the 16<sup>th</sup> century to today

<sup>50</sup> Devillers, Christian. “Typologie de l’habitat et morphologie urbaine.” *L’architecture d’aujourd’hui*, vol. 174, 1974, pp. 18–22; Ledent, G  rald and Olivier Masson. “Living Utopia – Leaving Utopia. Brussels: Modernist Urban Forms Evaluated against Pre-Existing Row Houses.” *Cities in Transformation – Research & Design*, Politecnico di Milano, 2012. <sup>51</sup> Duli  re, C  cile. *Victor Horta, m  moires*. Brussels, Minist  re de la Communaut   fran  aise de Belgique: Administration du Patrimoine culturel, 1985, p. 34.

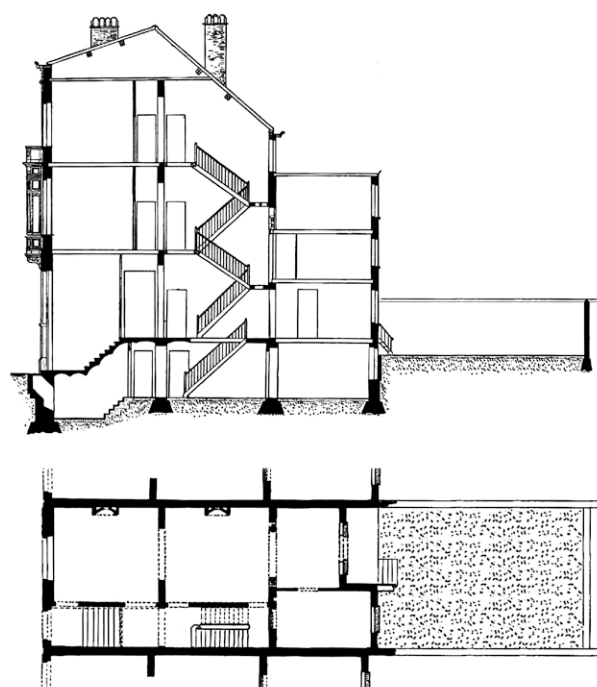
ship, terraced houses formed the perimeter of the blocks, to a depth of 10 to 15 metres. Their party walls extended outdoors to delineate private gardens that form an interior compound, shared visually by the block's inhabitants.

## Polyvalent Interior Layout

The house contained all the spaces necessary for daily bourgeois life, organised according to three modes: reception, family, and domestic service.<sup>52</sup> To accommodate them, the internal layout was based on a double division already seen in Durand's scheme (Lambermont 73, pp. 86–87; Trooz 12, pp. 96–97). The plan was divided longitudinally in two uneven parts ( $\frac{1}{3}$ ,  $\frac{2}{3}$ ), creating a main bay of 3 to 4.5 metres and a small bay of 1.6 to 2.1 metres. The house was also partitioned parallel to the street into two to three equivalent adjoining rooms. Their depth, around 4 metres, related to the usual span of wooden beams.<sup>53</sup>

These divisions produced rooms of two distinctive kinds in terms of dimensions. Main rooms had high ceilings, wide windows, and numerous connections to service areas. They were organised in an enfilade. Secondary rooms occupied the narrower bay on either side of the staircase. Within these divisions, a precise hierarchical principle applied, namely a spatial progression from public to private: the deeper, higher, and smaller the space, the more intimate it was.

The circulation space was designed to allow for the independence and differentiated uses of these rooms. For instance, the dining room was accessible from the living room for receiving guests, from the corridor for daily use by the family, and from the pantry for service by domestic servants. This circulation was located in the narrow bay. It started with one or two exterior steps leading to the door, which opened into a very high entrance hall of generally more than 5 metres. This vestibule sorted two kinds of traffic. Hidden behind a side door, a wooden staircase gave direct access to a sunken basement where domestic staff were based. Family members and guests used the main staircase, commonly made out of marble on vaulted bricks. It led to the landing of the raised ground floor – *bel étage* – which was often closed off from the vestibule by a glass door for thermal reasons. On this landing, a moulded portico marked the limit between reception and family life. Before the portico was a door to the reception room, while crossing the portico gave access to the dining room or the staircase to the upper floors. As in *Leopoldian Houses*, p. 67, this was a two-flight staircase. The first two flights were asymmetrical, however, to allow passage under the first



Brussels' standard housing type in section and plan. The layout is characterised by two to three adjoining rooms and a lateral staircase.

landing. On intermediate landing levels, *entresol* rooms could be found, which were characterised by lower ceilings; these were naturally used as service spaces. On the upper floors, the landings were ingeniously centred on two adjoining bays to directly serve all rooms.

A closer look at the levels of the house reveals first a half-buried basement that takes direct light from the low windows enabled by the implementation of sidewalks. This floor was the domain of the domestic staff. It housed several functions: in the main bay, a kitchen was connected to the upper floor by a service stair and, often, a dumbwaiter. A coal, wine, or beer cellar and storage and laundry room can be found in the narrow bay. On the rear side, the floor opened up to a courtyard below the garden, whose soil was retained by a rainwater tank. Latrines for the domestic servants were located in this lower courtyard. The long and narrow gardens were flanked by brick party walls that provided privacy from the neighbours.

The *bel étage* was raised  $\frac{1}{2}$  to 2 metres above street level to enhance privacy on the main floor and to admit light into the sunken basement. Reception and family living areas were found in its main bay, with ceiling heights that ranged from 3 to 5 metres.<sup>54</sup> Large mantle pieces against the party walls indicated the centres of the rooms. Given its position on the street side, the living room was naturally the place for receiving guests. This led directly to the dining room, the

<sup>52</sup> Cloquet, Louis. *Traité d'architecture. Eléments de l'architecture. Types d'édifices. Esthétique. Composition et pratique de l'architecture*. vol. 4, Liège, Ch. Béranger, 1900, pp. 40–44. <sup>53</sup> Burniat, Patrick. "Le type de la maison urbaine bruxelloise." *Bruxelles Patrimoines*, vol. 3–4, September 2012.

<sup>54</sup> For these rooms, Julien Guadet and Louis Cloquet recommend a minimum width of 4 metres. Cloquet, Louis. *Traité d'architecture. Eléments de l'architecture. Types d'édifices. Esthétique. Composition et pratique de l'architecture*. vol. 4, Liège, Ch. Béranger, 1900; Guadet, Julien. *Eléments et théorie de l'architecture*. vol. 2, Paris, Aulanier et Cie, 1904, pp. 13–14.



heart of the family house, while a veranda often concluded the *enfilade*. This late-19<sup>th</sup>-century invention can be seen as a direct extension of the garden into the house. It was made possible with the invention of skylights thanks to the iron and glass industries, and the pronounced taste of the bourgeoisie for botany, greenhouses, and exotic plants. Verandas usually had a lower ceiling, enabling direct light to enter the dining room. Beside the veranda, a lower-ceilinged room, the pantry, created a hinge between the sunken basement and *bel étage*.

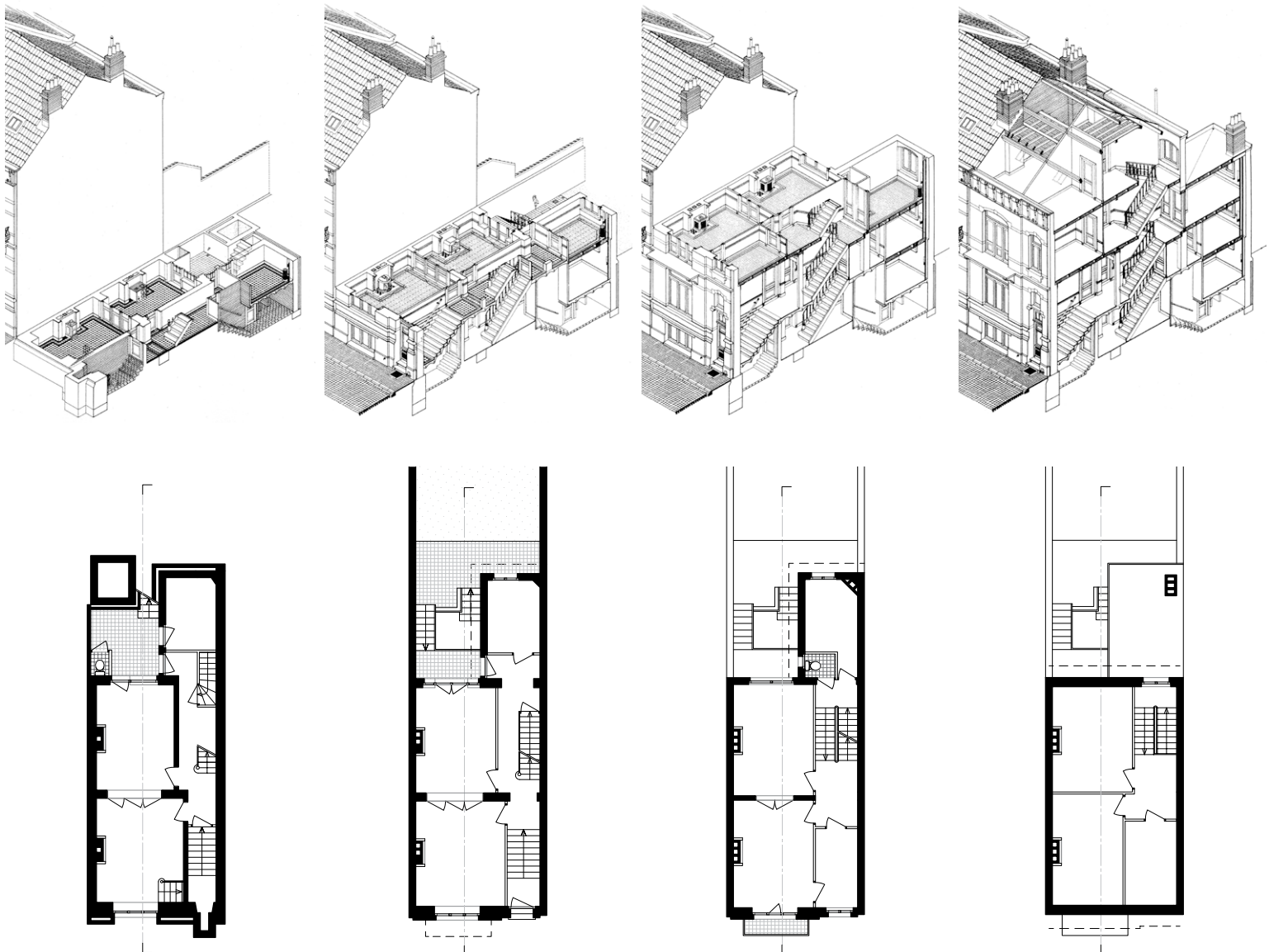
The upper floors were the domain of family intimacy. In these rooms, ceiling heights remained high for reasons of both hygiene and light. In keeping with the hierarchical organisation of the house, the main bedroom faced the street. It opened through a double door into a second room on the garden side. In the narrow bay, a smaller room was typically used for daily

washing. With the advent of running water, however, bathrooms and toilets would gradually migrate to the *entresols*.

In the garret, the hierarchical principle distinguished three more spaces. The main room was for guests, in the wide bay facing the street. The narrow room parallel to it was reserved for servants, while an attic occupied the garden side.

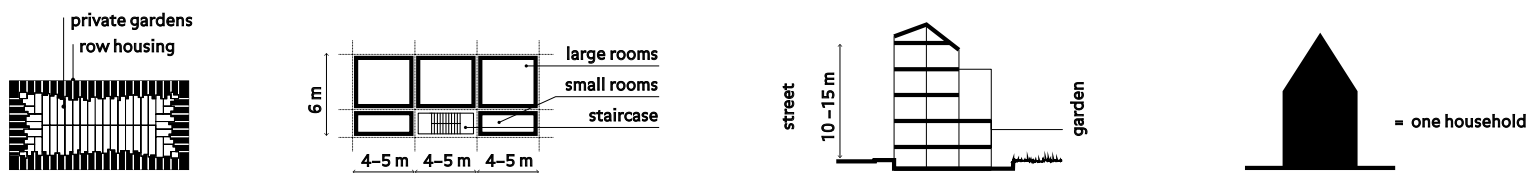
## Limited Heights and Façades

City blocks bordered directly on streets. Local regulations therefore limited cornice heights to 12 to 14 metres, in direct proportion to the width of the streets.<sup>55</sup> With this limited height, the building volumes were defined by four walls. Two blind brick party walls were built on property limits. On the interior side of the block, the rear wall was not considered a façade in its own



Axonometric views and plans of a traditional house, with sunken basement, *bel étage*, first floor, and attic

<sup>55</sup> Eloy, Marc et al. *Influence de la législation sur les façades bruxelloises*. Brussels, C.A.R.A./C.F.C., 1985, p. 4.



The four features of the standard type: relationship with a closed urban block, polyvalent layout, limited height, and individual character

right and was subject to the contingencies of the internal layout.

Conversely, the street façades were remarkable for a profusion of decoration consistent with eclecticism. Façades' designs responded to internal hierarchies: wider windows marked the noble bay, echoing the openings of the longitudinal enfilade. Given the very repetitive floor plans, the façades became the main challenge for architects. Instead of floor plans, they enticed clients with a series of façade variations – *cartons*.<sup>56</sup> To address the question of associating two very different longitudinal bays as well as different floor heights and the openings of the semi-sunken basement, a set of architecture elements was developed: projecting bands, plinths, copings, balconies, glass transoms, bolt holes, skylights, downpipes, French windows, oriels, spies, letter boxes, façade numbers, cornices, railings, etc. Those playful elements could be picked out of catalogues<sup>57</sup> or designed by the architects themselves. The bow window was a characteristic feature of the 19<sup>th</sup>-century façade. It marked the social status of the building while allowing light and side views on the street. Curiously, it was rarely a part of the *bel étage*, the building's most imposing floor, as was the case in the English house. This anomaly can be explained by local regulations on protruding elements as well as the overall balance of the façade. In terms of materials, craft and industry mingled, with polychrome composite and relief masonry, natural stone, richly sculpted woodwork, elaborate ironwork, prefabricated cast-iron elements, etc. The façades became the place for all kinds of extravagance, as shown by the competitions organised at the end of the 19<sup>th</sup> century, leading to an incredible diversity of cityscapes.

In addition to those challenges were fire-prevention regulations, forbidding the thick brick party walls from bearing the loads of the building. The load-bearing walls were therefore the façades and the partition walls of the enfilade, whose thicknesses were also codified. In terms of uses, this system was contradictory, since façades and partition walls were largely open to let light in and allow people to move around. These openings were made possible by a combination of relief vaults and metal lintels scattered

throughout the walls. Two exceptions appeared, however. The roof structure was made of purlins that bore on the party walls. As such, they were one of the determining elements of the plot width that corresponded to the usual span of northern red-pine wood sections. The ground floor also presented a different structure. Thanks to the reduction of the party walls' thickness between the basement and the *bel étage*, it was possible to lay wooden beams directly on this recess without embedding them in the walls.

## Individual Character

The last defining feature of the bourgeois terraced house was its individual aspect. Initially, buildings were designed for single families with domestic servants. They emphasised Belgian society's individualistic nature and great sense of autonomy. Each house accommodated a single household and the façades expressed this individual character as emphatically as possible, leading to very heterogeneous streets. This feature clearly distinguishes Brussels from other "cities of houses" such as London, Bath, or Amsterdam, where on the façades a sense of collectivism prevails over individual expression.

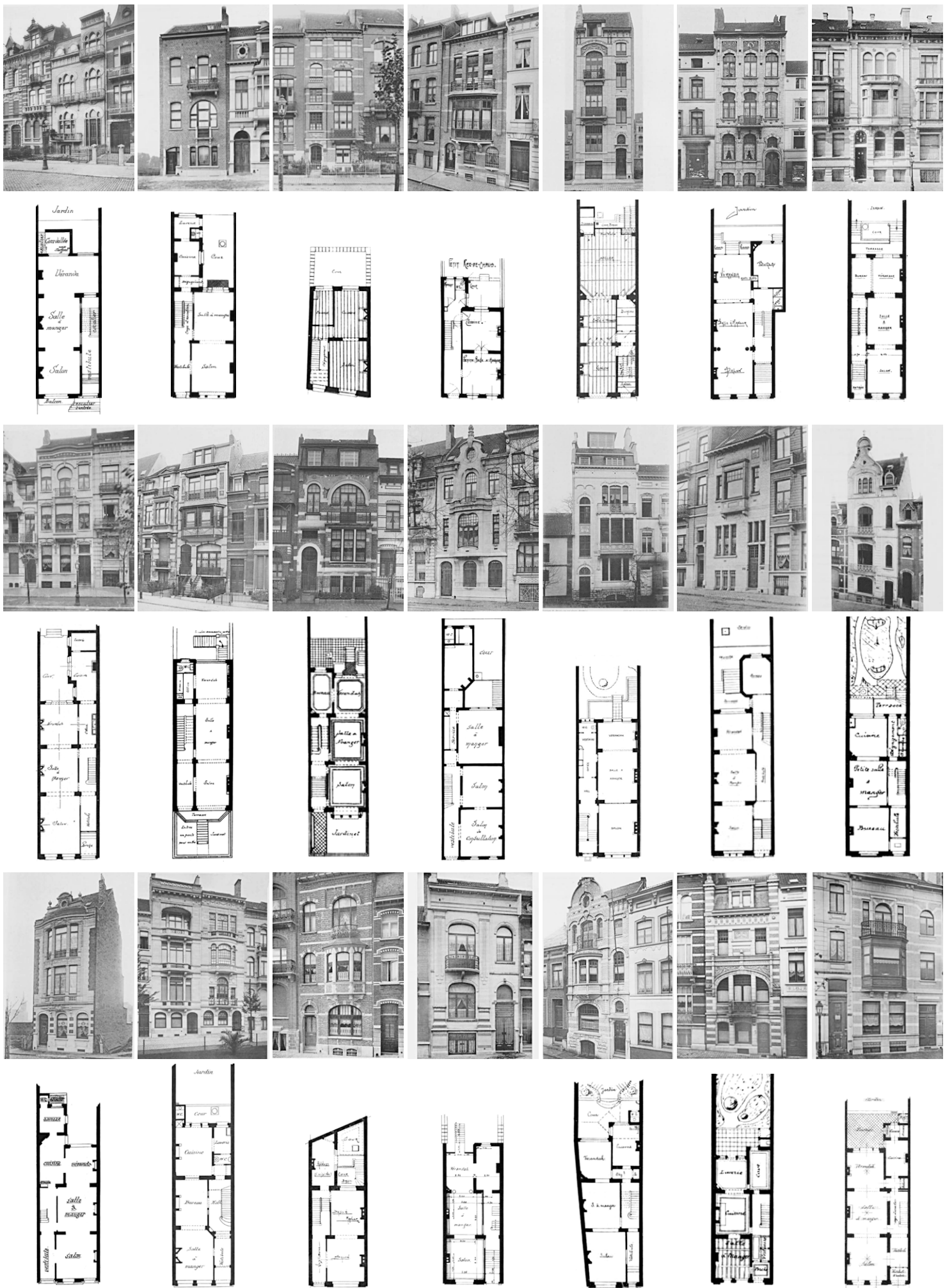
Altogether, these four features – i.e. the relationship with the closed urban block, the polyvalent layout, the height limitation determining the façade, and its individuality – defined the most common housing type in Brussels, its referential type.<sup>58</sup>

## Variations on the Dominant Type

Within these four basic features, there could be variations in plot width, position in the block, and the social status of the residents.

Differences in social status were reflected in plot widths. While the standard type accommodated the middle class, certain variations signalled residents' wealth. More complex layouts were designed for the better-off classes (Molière 112, pp. 84–85). Housing was built on larger plots,

<sup>56</sup> Bastin, Christine et al. *19e siècle en Belgique: architecture et intérieurs*. Brussels, Racine, 1994. <sup>57</sup> Just like IKEA catalogues today, such catalogues were used by architects and clients. Fonteyne, Jules. *Documents pratiques d'architecture*. Brussels, Bourotte, 1876; Herman, Joseph. *Modern Kunstsmeedwerk*. Amsterdam, Ahrend en zoon, 1904. <sup>58</sup> In the *Album de la Maison Moderne*, Fernand Salmain pictures these early-20<sup>th</sup>-century houses, and their great variety, although systematically based on similar plans. Salmain, Fernand. *Album de la maison moderne*. Brussels, 1908–1913, vol. 1–5.

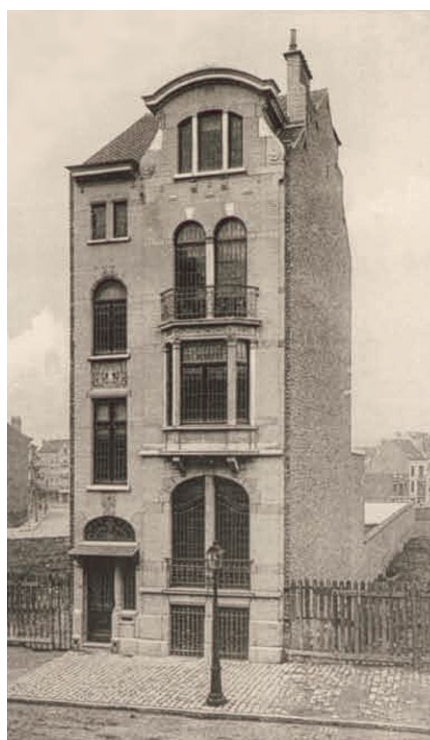


Façade variations on a repetitive plan as published by Fernand Salmain from 1908 to 1913





City blocks in Schaerbeek (Josaphat neighbourhood) with missing corner buildings, 1951



Free-standing Brussels terraced house, a pioneer of further projected development

enabling the service bay to expand with a carriage entrance and service staircase, separating family and domestic service flows even more. For the working classes (Worker Terraced House, pp. 74–75), individual housing was built on narrower plots,<sup>59</sup> offering a reduced version of the referential type deprived of its reception and service functions. This transposition to popular housing<sup>60</sup> reflected the bourgeois desire to dominate the working class by imposing its own way of life through architecture. Isolated in individual housing, workers lost the communal life found in the *bataillons carrés*, a type of housing gathered around a courtyard or a small street that had developed in the interior of old city blocks, accessible only by a dead-end street, such as Impasse Vanhoeter, pp. 68–69. Another variation on the referential type was small-scale private development, with apartment buildings designed on two adjoining plots (Discailles 9, pp. 82–83). These apartment buildings retained the façade design of the individual traditional housing type. Only the respectable image of the type was maintained, however, as each room independently accommodated a family, with shared bathrooms on the *entresols*.

Other differences could be found within the usual 6-metre-wide plot. When shops occupied the ground floor of the houses, they were naturally on street level, precluding any living functions in the basement. The requirement for two

entrances – one for the dwelling, the other for the shop – allowed the façade to be symmetrical. More modest houses were also built on the usual plot width (Perdrix 33, pp. 90–91). They usually did not have a *bel étage*, but at most one or two steps that allowed some privacy from the street. To light the basement, window wells were created in the pavement. Some of these modest houses had only two adjoining rooms and no veranda.

Corner plots had a special status since they allowed little or no access to the interior of the block. Three approaches to the corner location can be observed. The first created an avatar of the referential housing type (Reyers 213, pp. 94–95), with additional openings in the side wall. In some extreme cases, however, the design ignored the corner position by favouring one street over the other by presenting a blind façade, often with walled windows. In other cases, the openings on the secondary street were freer. The plan then combined the typical *enfilade* with a more random composition. Some corner buildings had a garden or courtyard facing the street rather than the interior of the block. In this case, a wall protected the courtyard from the road (Le Bon 70, pp. 76–77). Finally, another approach included a shop on the ground floor and flats on the upper floors (Berkendael 203, pp. 88–89). It is interesting to note that, given their particularities and need for inventive lay-

<sup>59</sup> At the turn of the 20<sup>th</sup> century, Emile Demany produced a manual with standard floor plans for worker's housing in Belgium. Demany, Emile. *Construction de maisons ouvrières: notice, plans, évaluations & conditions*. 2 ed., Liège, Vaillant-Carmanne, 1899. <sup>60</sup> The standard plan recommended by the 1852 Congress for Public Hygiene proposed "an entrance, two rooms and an annex on the ground floor, two bedrooms on the first floor and an attic, sometimes converted into an attic room under the roof". Smets, Marcel. *L'avènement de la cité-jardin en Belgique, Histoire de l'habitat social en Belgique de 1830 à 1930*. Liège, Pierre Mardaga, 1977. Collection Architecture + Documents, p. 51.



outs, corner parcels were the last to be built to close off the blocks.<sup>61</sup>

Other atypical plots could be found in a block. For instance, some were completely closed off on three sides by other buildings, forcing them to get all their light from the street, as in the case of the architect Victor Taelemans' personal house on Rue Ernest Solvay 32, pp. 80–81. Some plots located near block corners gave onto two different streets, allowing two entrances as well as very different atmospheres in the house (Maison Strauven, pp. 78–79; Commerçants 6, pp. 92–93).

## Implementation of the Dominant Type

An unprecedented building frenzy took place between 1870 and 1914. A road network based on Besme's plan structured the city and its buildings. Accordingly, new roads were quickly laid out and put in place even before the first houses were built. It was not uncommon at the time to see free-standing terraced houses in streets that were entirely paved, surrounded by pavements and bristling with lampposts.

In many cases, individuals built their own houses; speculation was nevertheless the real driver of Brussels' expansion. Besme himself supported this movement and did not hesitate to advise relatives to purchase land he knew to be earmarked for development.<sup>62</sup> Real-estate developers built in the hope of reselling or renting out their properties. Homeowners didn't necessarily live in their houses, which had become commodities. The vast majority of these developers were private. Such developments usually involved individual houses or city blocks (Commerçants 6), but tycoons such as Georges Brugmann and Edmond Parmentier constructed entire districts. A few public operations were also undertaken. For instance, the SABH<sup>63</sup> built an entire city block in Schaerbeek in 1875 based on plans by Gédéon Bordiau (Cité Louvain, pp. 138–139). Despite the larger scale of these developments, however, the standard type and its individual character persisted.

## The Terraced House Today

Brussels' identity is closely tied to its referential type, the bourgeois terraced house, which is still its most common form of housing. Currently, approximately 140,000 houses built before 1918 are still standing<sup>64</sup> and more than one-third of the dwellings in the city are in houses built between 1870 and 1914.<sup>65</sup>

In addition to this quantitative representativeness, the individual terraced house enjoys tacit recognition in the local residential imagination. Its spatial organisation also mirrors and supports local socio-cultural relations. In this way, the domestic space of the city can be read as meaningful.<sup>66</sup> In Brussels, an analysis of the features of the referential housing type reveals a series of socio-anthropological elements that characterise the city. First, front and rear positions created by closed blocks enable contrasting dwelling arrangements, a typical feature of many European cities, although with large variations.<sup>67</sup> While public practices take place on the street side, very private ones (ranging from drying clothes to self-built additions) are possible at the rear of the dwelling. Secondly, even on a building's highest floor, the distance to the public realm remains limited to about 15 metres, a threshold within which sensory relationships are still possible.<sup>68</sup> Thirdly, the individual character of the dwellings emphasises the individualistic nature of Belgian society. Indeed, Belgian citizens demonstrate a great sense of autonomy regarding political authority and collective efforts. Finally, the function-free floor plan reveals traditional Brussels households' socially conditioned relations. The plan enables a genuine hierarchy within the dwelling (front/back positions, small/large rooms, low/high situation) as well as various possible relations between occupants through a variety of circulation spaces. Interestingly, the house only displays two sizes of room, which would prove extremely polyvalent in the century that follows.

<sup>61</sup> In this respect, these corners function as a block's keystones. Modernist planners in the 1950s through the 1980s clearly understood this when they systematically razed corner buildings in the hope of initiating the decline of the block as a whole. Conversely, works undertaken within the framework of the "contrats de quartier" (Neighbourhood Contracts) are particularly concerned with their reconstruction. <sup>62</sup> Such as the banker André Langrand-Dumoncaeu, who was advised by Victor Besme to buy hectares of land around the avenue Louise before the avenue was created. Smets, Marcel. *L'avènement de la cité-jardin en Belgique, Histoire de l'habitat social en Belgique de 1830 à 1930*. Liège, Pierre Mardaga, 1977. Collection Architecture + Documents, p. 40. <sup>63</sup> Originally the *Société Anonyme des Habitations Ouvrières dans l'Agglomération Bruxelloise*, founded in 1868 by Leopold II. <sup>64</sup> Heymans, Vincent. *Les dimensions de l'ordinaire: la maison particulière entre mitoyens à Bruxelles*. Paris, L'Harmattan, 1998, p. 10. <sup>65</sup> In 2014, out of 546,118 housing units in the Brussels region, 195,831 dwellings were located in terraced houses. This figure is certainly underestimated, as informal divisions of such houses are very common. Ledent, Gérald. "Potentiels Relationnels. L'aptitude des dispositifs physiques de l'habitat à soutenir la sociabilité. Bruxelles, le cas des immeubles élevés et isolés de logement." *LOCI*, UCLouvain, 2014; RBDH. "Quotas de logements sociaux : les idées à retenir, les écueils à éviter." *Art.23*, no. 38, 2010, p. 9. <sup>66</sup> Devillers, Christian. "Typologie de l'habitat et morphologie urbaine." *L'architecture d'aujourd'hui*, vol. 174, 1974, pp. 18–22. <sup>67</sup> Panerai, Philippe et al. *Analyse Urbaine*. Mercuès, Parenthèse, 2009. *Eupalinos*. <sup>68</sup> Alexander, Christopher et al. *A Pattern Language: Towns, Buildings, Construction*. New York, Oxford University Press, 1977, p. 118.





L-shaped brick housing from the 15<sup>th</sup> century

Hôtel Clèves-Ravenstein, pp. 50–51









Gable row housing from the 17<sup>th</sup> and 18<sup>th</sup> century

Sint-Katelijnestraat – rue Sainte-Catherine  
Korte Boterstraat – petite rue au Beurre









Dead-end streets to house the working class

Vanhoetergang – impasse Vanhoeter, pp. 68–69

Strijdersgang – impasse des Combattants









### Neo-classical remodelling of the Great Beguinage

Grootgodshuisstraat – rue du Grand Hospice, pp. 60–61

Grand Hospice, pp. 58–59