

Elevation of the Willow Road House.

Ernö Goldfinger

Ignacio Román Santiago

*A Young architect ought to be made to build his own house first [...] he ought to have the chance to show what his ideas really are*¹

Ernö Goldfinger

Context

The Hungarian architect Ernő Goldfinger² settled down in London permanently in 1934, after some years living between Paris and Great Britain. He tried different spots around the city, looking for his ideal place. He looked at rental apartments - including his stay at the High Point I building, by the architect Berthold Lubetkin³ - until he finally decided to buy a plot in the Hampstead neighborhood and build his own house. Back in the 30s, Hampstead was already a popular district among intellectuals and artists of London⁴. A great number were European emigrants and in various cases, political exiles⁵.

Willow Road borders, on the south side, with the great Hampstead Heath. Located at the North of the city, Hampstead Heath stands out as the biggest of all the urban parks in London. The walk down this quiet street gives us the chance to contemplate the succession of Victorian houses that, with mimetic orientation and large windows, look over to the large and diffuse heath. In the Eastern part of the street, a few meters from Downshire Hill cross, the chosen plot is found.

This plot is formed by an elongated piece of land, slightly trapezoidal in shape, with a total area of 760 square meters and a street front line of scarce 20 meters. In its interior, four small *cottages* from Georgian époque stood in dilapidated condition.

As we look from Willow Road, the plot borders to the right with a strong Victorian construction in red brick, with three high floors and another floor under the slate roof, sprinkled with the traditional mansard roof windows of the Victorian style. Meanwhile, the plot to the right leaves the street block unfinished, and only as we walk up Downshire Hill, are we able to spot an important Georgian construction in light mortar cladding. From this point onwards, a number of Georgian style buildings from the late XVIII century, with great architectonic value, become visible. (F1)

When Goldfinger took on the design of his own house, he developed at the same time the appropriate strategy to finance the construction. He planned to build three attached dwellings within three levels. The one in the middle would be his family house and the two lateral ones would contribute to pay for the cost of the house itself and the plot. This is the first indication of a truly modern spirit.

Goldfinger faces in this project the complex challenge of giving a functional response to three housing units, configuring at the same time a unitary piece of architecture that would present itself with the right scale and character appropriate for the distinguished neighborhood of Victorian constructions. This careful attention to the spatial placing of the autonomous volume, together with the juxtaposition of various buildings and other urban components_ the street, the heath, the alignment of trees among others_ is expressed by Goldfinger himself: *[...] from the point of view of the town, the individual building is a mere brick in the spatial order of the street or square.*⁶

At the same time, the architect faces a generalized movement of opposition against his proposal. The project was severely criticized by the Hampstead Protection Society through the figure of its secretary Henry Brooke, because of his disregard for the built context⁷. From a "modern" approach, the building could not be explained either; its symmetrical layout collides with the guidelines of the new style. The incorporation

of new materials, not arguable from a "functional" approach, would also clash with the desirable neutrality of the modern movement.

Frontality

Willow Road façade materializes in a large dark brick rectangle, 21'30 meters long and 6'40 meters high, standing on a compressed base that is mainly air. Therefore, it reduces its vertical dimension to 2,10 meters and loses material weight. The elevation presents three well differentiated heights. A lower base where the structure is visible through concrete pilotis that solve the way the building meets the floor. The middle floor is very transparent, with a "fenêtre en longueur" taking the leading role of the framed composition. Inside, a new frame produces a smaller window. The upper floor is formed by a uniform band where the brickwork is interrupted by smaller perforations that follow an apparently regular distribution.

On the access floor, seven intercolumn spaces are alternatively occupied by the waxed oak-wood doors that close the garages and the semi-waterproof sheets that configure the access to the three houses. The first lines that organize the façades are this way established.

It is truly complicated to differentiate the three separate houses that the unitary façade arranges in front of Willow Road. To begin with, a series of distortions in the modular arrangement brakes the straightforwardness of an equivalent division: the upper floor has seven openings cut out of the brick wall, while the base has four doors corresponding to the garage bodies. Neither seven nor four are divisible partitions to evenly distribute the three houses that the façade organizes.

We can try to think of an uneven division that would result in a central house of greater dimension, with two smaller units attached to the sides. In this case, three of the seven windows of the upper part would correspond to the central unit, leaving two windows for each of the lateral ones. The access floor would therefore leave one garage for each of the lateral units, while the central house would have two parking spots.

Nevertheless, the middle floor correspondent to the daylight areas of the houses, will blur these virtual divisions and give rise to doubts regarding the internal configuration of the houses. A great window framed in white takes up 18'25 meters in vertical relationship with the band occupied by the square windows in the upper floor and the limit of the garage bodies in the lower floor.

Inside this great glass rectangle stands a smaller one that shares the same base and lies right in the center, as if it was the product of a homothetic transformation.

This window inside the bigger window, reduces its size until a smaller rectangle is produced, 12'75 meters long and 1'5 meters high. Far from respecting the virtual division of the three parts mentioned previously, this device overflows the central housing unit on both sides, invading the intercolumn space of the lateral units. The length of this interior window establishes a visual relationship between five of the seven openings on the upper floor, and five of the central intercolumn spaces of the lower floor. This way, only the two volumes that configure the garage of the lateral units fall out of the scheme. (F2)

While the central unit follows, independently, the same rules as the overall elevation, with its symmetrical and balanced arrangement; the lateral dwellings cannot be understood on their own. They do not follow any apparent rule and do not stand out as independent elements. With this geometric

* Photographs are attached in the spanish version

operation, Goldfinger links all the units through the invisible forces of composition⁸ and perception; sharing a center.

If we force ourselves to isolate the portion of one of the lateral dwellings, the result is an estrange volume whose lack of proportion and balance is not understandable. The large window on the second floor is perfectly defined on three of its sides, embraced by the brick work. Towards the interior, on the contrary, the window overflows the scheme, showing its incomplete condition. The windows on the third floor would also fall out of balance when only a fragment of the whole elevation is analyzed: we cannot find a rule that organizes the different spacing between windows, between window and the limit of the building, and yet again between the division line of the different dwellings.

The access floor shares the same quality when the lateral fragments are analyzed independently: the garage body is used to solve the irregularity between the trapezoid-shaped plot, placing the volume slightly shifted from the columns on the edges. What is more, both these columns on the East and West edges, are displaced from the structural modulation of the rest of the building. Towards the end of the building a void is found, placed to absorb the irregular shape of the plot.

From the lateral garage volumes towards the inside, the entrances are articulated within a recessed plane. The doors to numbers 1 and 3 are located in the center of these recessed planes, thus producing the distorted effect of symmetry inside a clearly unbalanced layout. (F3).

It will always be necessary to read the façade as a whole, so that the dwellings adjacent to Willow Road n°2 make sense and connect to the overall strategy sought after by the architect. After a closer look, this north façade starts to show subtle operations that thoughtfully intervene in our perception of the whole complex. (F4)

We could consider in general terms that the Willow Road dwellings follow a symmetric arrangement. The geometry of the plot, to which the built complex adapts itself, shows the inability to use one axis with the intention of dividing two equal parts.

We find a built volume, close to the parallelepiped, whose shorter sides are noticeably shifted from a right angle. The plot loses 1,90 meters from the perpendicular on the eastern border, and opens a total of 70 centimeters on the western side. Consequently, the south border is shortened by some 1,20 meters.

The virtual symmetry axis that organizes the building is established in the middle of both symmetry axis of the North and South elevations. This decision implies an uneven distribution of the total length of both *halves* of the North elevation. (fig 4.1 & 4.2)

At what point does a balanced composition change its axial condition, and becomes a virtual symmetry, possible through a perceptive compensation? The whole central portion corresponding to the Goldfinger house and study shows a purely axial disposition towards the exterior. Once again the smaller frame, inserted in the great window of the middle floor, will define a strategic point to produce the alteration. This way, the portion of the smaller window that overflows both lateral unit absorbs the difference between the left part of smaller size and the right one, corresponding to numbers 1 and 3 respectively. This dimension of the window fragments introduced

in the lateral units, differ scarcely in 20 centimeters. The architect blurs this slight distortion through a series of strategies. He keeps the same amount of windows in the upper band, distributing the spare centimeters between the four ventilation panels that run along the smaller window. (F 4.3) Moreover, the different separation between the frames of the two rectangles that form the great window, help to reduce the unequal surface of brickwork that hold the façade elements on both sides. On n° 3, the gap between the smaller frame and the great window is 2,40 meters wide; while on n°1, it reaches 2,80 meters. This difference is assumed through the insertion of an extra partition in the window gap between both frames on the Eastern wall. That is, 6 partitions compared to 5 on the western side. (F 4.4)

As mentioned before, there is a visual connection between the "fenêtre en longueur" of the middle floor and the gap cut out by the square windows on the upper floor. This relationship presents a contrast between the modern image casted by the continuous strip window on the second level and that of the evenly distributed, square perforations on the upper floor. The window dimension, 1,25 x 1,25 meters, present a Homestead-scale that responds to the function developed inside.

The sensibly trapezoidal geometry of the plot, and yet again, the aim of keeping the central house as a pure rectangle, produces two trapezoidal lateral units. In order for these lateral units to have the same area, they have to take different lengths in the main elevation. Therefore, we know that the window arrangement does not correspond to a strict axial scheme.

Contrasting with the apparently symmetrical distribution of the dormitory windows within a central axis, we find an organization that gathers small alterations; where practically all the gaps between windows differ from each other. These variations are produced attending to a defined unit of measure: the brick. This way, the brick wall between the central windows has a length of six and half bricks. Towards the western end, the gaps shrink down to six bricks. On the contrary, these gaps will widen towards the eastern side up to seven bricks. The unit of red brick, 21,5 x 10,25 centimeters, will be the module used to produce the slight variations inside the window arrangement in the elevation.

Finally, two halves with different length are determined (approximately 60 centimeters) within the area covered by the large window and the lateral gaps of the upper floor (F 4.5)

The right angle that defines the edge of the completed building, is also shifted from the center of the house n°2, moved 60 centimeters towards its left side. If we establish the difference between *halves* taking the virtual center of the central unit as a reference point, the elevation would be split into two unequal parts with a noticeable difference of 1,2 meters. The large window manages to smooth this strong asymmetry as it extends to the eastern side and creates a new center. This center lies between the axis of the building perimeter and that of the central unit. Although the brick wall on the eastern edge differs 80 centimeters from its equivalent on the western side, a balanced overall perception of the elevation is achieved.

The relative position of the two great windows, shifted from their central axes, combined with the relationship of these parts with the total built rectangle, and the relationship of the overall complex with its unequal site conditions to the right and to the left; all together achieve a brilliant exercise of compensation of masses. Nevertheless, this compensation is not achieved through a strict symmetry, but through the use of visual weights to produce a balanced perception⁹. (F 4.6)

Depth

Willow Road dwellings respond very differently to the interior and the exterior conditions. The front façade opens to the North towards the great Heath

of Hampstead through the quiet, sloping Willow Road. Towards the South, the dwellings look out to an elongated green space, produced by the backyards of the four streets that configure the city block. Each single-family house is aligned with the street and extends towards the interior of the city block through backyards of equivalent dimensions.

Between Willow Road and this interior garden area, there is a sharp drop in the ground level of almost 3 meters. The section of the houses absorb this fall naturally. To this purpose, the North façade has three heights, while the façade to the interior gains an extra floor in direct connection with the garden.

In the back façade, the dimension of the different floors is defined after dividing the total height between the four levels. Only the upper floor reduces slightly its height by 10 centimeters. It is interesting to see how, through a jump in the section¹⁰ of the second floor-slab, the transition between the difference in height of the front façade and the back façade is produced.

The upper floor keeps its constant section from the front to the back, with a conventional height of 2,45 meters. It is in the middle floor where Goldfinger intervenes, altering the free floor-to-floor height towards the North façade. The slab of this first floor drops 40 centimeters, producing a noticeable difference between a compressed access space and a second floor that gains all the importance and prominence of the house. (F5)

The search for character and scale in the building is evident through the numerous subtle interventions introduced in the section. Variations in the lines of impost, movements towards the interior and the exterior of the plane of façade, materiality and depth of the elements that participate in this frontal scheme, are some of the strategies used by Goldfinger in order to achieve the desired character of this construction. (F6) The access floor produces a façade that moves quite freely between the structural concrete elements, in the shape of columns scarcely 30 centimeters in diameter. Four differentiated planes define the margins of the movement in this lower base. The two garage volumes of the lateral units move forward from the plane of façade. They go beyond the limit of the brickwork by more than 70 cm and are closed with two wooden doors. On the same plane, a strip of brick on the middle floor extrudes to form the railings of the lateral terraces. (F 6.1) These two volumes on the sides delimit a porch, a deep shadow held by five intercolumn spaces, that hosts the two garages and the access to the central unit as well as the pedestrian entrances to the lateral units.

This porch is produced as the result of alternate extrusions and set-backs on the façade. The access to the houses is sunken with regard to the plane of façade: 1,35 meters in the central access (F 6.4), and even deeper in the lateral units 1 and 3, reaching 1,80 meters (F 6.2).

The doors of the two central garages are located between these pedestrian entrances and they come out to an intermediate plane, slightly recessed from the concrete columns they never touch. (F 6.3)

The lack of correspondence between the dimension of the porch in shade and the limits of the central unit of Willow Road, makes it difficult to establish the true dimension of each lateral unit. The continuous extrusions and set-backs of the façade do not follow a hierarchy related with the interior functioning of the dwellings.

The façade is understood in its thickness as a limit, that becomes denser or lighter depending on its location. This density does not necessarily correspond to a matter of weight or materiality.

This is visible in the entrances to the different houses. The darkened glass panels that flank the doors gain a certain thickness as we hint a wooden matrix. This wooden structure produces a series of small compartments to the inside where small pieces and objects are placed, proof of Goldfinger's travels. This wall made of air becomes a vibrant and dense limit through its texturized surface, the reflections and veiled silhouettes. Yet another decisions that contributes to the enrichment of the complex base of the building. (F7).

On the second floor Goldfinger will use this thick wall to develop, for the first time, a window solution that will be repeated throughout his work¹¹. The so called *Photobolic screen* consists of a smaller frame within a greater window, that maintains the plane of the façade, and the rest of the window sets back towards the interior of the house, broken up into smaller operable modules that allow for ventilation inside the room. (F8).

The resulting façade is not configured like a simple plane. On the contrary, its thickness becomes sensible to the different conditions between the interior and the exterior, producing shaded areas and reflections of light. The perceived surface from the outside is not strictly material, but the result of a careful arrangement of the glass panels in various positions with regard to the strict alignment of the plane of the façade, as well as the shaded gaps produced by their set-back. (F9)

Willow Road façade will be the main exercise on which Goldfinger will support his writings and formulations about the reversibility of the enclosure. This façade is also part of the screen or wall which separates the urban spaces from those beyond, the public urbanity from the unknown of the individual privacy¹². The walls in Willow Road, including the large windows, are read from the outside as a limit that hosts life itself. When the façade is analyzed attending to the different rooms it encloses, we can start to read elements that qualify the different spaces that the architect wants to create. The line of impost that defines the transition between the two window planes, is located at 2,10 meters high. This horizontal line defines the base of a smaller window that frames a fragment of the park and brings it closer. This, together with a collection of objects standing on the windowsill, 76 centimeters high, introduces the intimate and individual realm.

The portion of the deep window that runs along the entire front of the central house, is subdivided into two big format glass plates that are fixed, and three vertical windows. These three vertical elements, located one on each side and the other on the central axis, are composed of two hinged windows each.

This deep window only takes up a portion of the house at the lateral units 1 and 3. Approximately one third of the living room front is occupied by this thick frame that defines a showcase full of objects. The rest of the façade is experienced from the inside of these houses like a single floor to ceiling sheet, with an opaque base and a translucent upper part. This whole fragment is set back from the plane of façade, matching the inner face of the thick frame. The recessed glass sheet embraces the smaller window and is broken up into alternating window panels, fixed or foldable horizontally. On the upper part, a strip of operable windows allow for ventilation. Under the impost line at 2,10 meters, the partition scheme is only altered to produce a wider sheet that extends to the floor in order to configure the exit to the terraces on the sides. (F10).

The position, quality and use of this thick and dense limit, facilitates the inclusion of the human scale. Every single decision made at Willow Road, from the general guidelines to the pieces of furniture, has taken the human being as the true unit of measure¹³.

The concrete frame that defines the limit between both

glass sheets is used at the same time as a screen to reflect light. This light is softly drawn inside the house as it is reflected by the horizontal frame_ painted white to improve its reflective properties_ and washes the ceiling plane. Therefore a uniform and diffuse light is created. Light is manipulated like a plastic element, becoming another material of the project.

On the upper floor, the façade loses density. The limit becomes conventional. The windows are located 90 centimeters above the floor, perforating the brickwork up to a height of 2,10 meters. The size of these perforations corresponds to the homestead character of the dormitory rooms that they serve. Each one of these openings is pushed a couple centimeters to the exterior. A concrete frame painted white reinforces this gesture, defining the contour of the windows. The material simplicity and functioning of these windows, composed of two folding windows of equal dimension, express a conventional system far from the sophisticated, technological and spatial statement of the large window on the second floor.

An epilogue

Between November 1941 and January 1942 Goldfinger wrote three articles: *The Sensation of Space, Urbanism and Spatial Order* and *Elements of Enclosed Space*. They constitute his main theoretical legacy about architecture. He emphasizes the relationship between the architectural space and the human experience within it. His main thesis supports the idea that architecture is just a way to define a space. The way in which this space is defined, causes a certain spatial feeling that can be put in objective terms and studied. In order to manipulate this experience the architect should intervene on two essential elements: the enclosing agent and the enclosed space. The quality and quantity of these elements, together with the interaction between them, play an essential role.

On the other hand, Goldfinger brings us closer to a theory of visual experience through a gradient that runs along three phenomenon: The pictorial, the plastic and the spatial. For the architect, the consideration of these related categories should be the basis of all aesthetic theory.

After a frontal look at the Willow Road façade, we understand the first of these qualities: the Pictorial. The façade is understood like an abstract canvas, just another portion of the landscape, observed from the outside from a static point of view. We can later understand the Plastic quality, incorporating the third dimension through the depth of its façade. The building can be understood in its sculptural dimension through a dynamic visualization from the exterior. The last quality, the spatial sensation, brings the previous ones together and requires a subconscious experience from the inside. It will therefore only be understood from a personal impression once we go through the doors of these houses.

Through the study of this work, the importance given by Goldfinger to the design of the enclosing agent becomes obvious.

The striving for plasticity is already very evident in Goldfinger's pre-war work, such as in the facade of the Willow Road Houses of 1938. The concrete structure is only visible to the exterior in the great frame of the large front window, as well as in the vertical columns on the access floor. What Goldfinger presents to us is a red brick façade that unifies and hides the configuration of three attached houses through a

smooth surface. The strong disturbance produced by the deep strip window on the first floor, the row of square openings clearly highlighted by the white concrete frame, the extruded garage bodies, the blurring and discontinuous vertical elements... all these decisions are more than simply functional or technical considerations. (F11, F12, F13).

Goldfinger concludes one of his articles with the following words:

When space is enclosed with the skill of an artist, when the purpose is to move, then 'spatial sensation' becomes spatial emotion and enclosed space becomes Architecture.

Ernö Goldfinger presents his manifesto with the construction of the Willow Road dwellings. The small georgian constructions that occupied the plot are demolished by the architect, convinced that they are nothing more than residues from an old time, lacking any kind of value. Against the challenges of the plot, Goldfinger responds with a moderate exercise that is far from the aesthetics of white prisms, so popular in the modern movement. The insertion of these dwellings with a flat roof in the urban landscape, is done in an intelligent way. There is no mimesis with the surrounding constructions, but a good understanding of the context, resulting in an architecture closer to the essence of the XVIII century constructions. The symmetric arrangement of the façade would have been questioned by the guidelines of the modern movement. The use of brick for the building envelope could be seen as a cosmetic or postmodern mannerism. Nevertheless, the architect turns to an essential use of the forms that may have their origin in the Classicism. Goldfinger says on this matter: *I really tried to build a late Georgian or Regency terrace in a modern way. These houses have a classical feeling.*

It is therefore a clear statement for a lack of interest in style, in favor of specific values of each project's challenge.

Willow Road is by no means a classic building, but it does not pretend to stand out for its modernity either. It has the ability to stand close to the character and tone of a bourgeois family house of the XVIII century. At the same time, it presents itself as a brilliant exercise of spatial organization with innovative technical solutions.

This would be the appropriate moment to quote Berthol Lubetkin in his renowned Whipsnade manifesto, applying his series of negations to the work of Goldfinger, in order to declare negatively all the things that this house is not:

It is not a *Modern House*, a *Shelter*, which, according to professors, should be self-obliterating, unselfconscious and insignificant in its hygienic anonymity; [...] It is not a direct or functional result of a haphazard choice of site and of materials; or of the digestive or hygienic customs of its inhabitants; [...] It does not pretend that it is nothing but the last modest, silent and objective link in any chain of specifically Nordic or English tradition. [...] It does not try to prove that its design grew *naturally* from the given conditions like an ordinary pumpkin, Victoria Regia, or deep-sea fish. [...] The flat roof is not a sign of the exhibitionist tendencies of nudist inhabitants; the bathroom is not top-lit in order that the bather may be more jealously guarded [...] The text concludes with the following statement: [...] *there is, on the walls of the WC, a collection of cold-blooded tropical butterflies; while the bedspreads have little bells sewn on to them to brighten the dreams of the occupants.*

These considerations that come out of the personal

experience, would be necessary in order to approach and get to understand the houses built by Ernő Goldfinger in Willow Road. This exercise stands in the fracture between the objective discourse and the personal feeling, without the affiliation to any particular current of thought, out of any dogmatism and questioning a lot of the key guidelines of the *new style*. Charlotte Perriand wrote the following text for the AA exhibition in May 1983:

[The Goldfingers] built their nest in accordance with their fine principles [...] For her it encapsulated the essence of an age: It is not without emotion that I stay there, surrounded by friendship, objects, books, paintings, rediscovering the spirit of that unique period, for it was then that the modern age was built.



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