

## Past Readings, Present Findings: on Intervening Emilio Duhart's PDVN House

BY ALEJANDRO BEALS AND LORETO LYON

*The stamp of the definitive is avoided.*

*No situations appear intended forever, no figure asserts its "thus and no otherwise."*

Between 1963 and 1966 Emilio Duhart (1917-2006) worked on the design of this single-family house in what used to be the outskirts of Santiago. During this period, a series of younger collaborators worked on the project, transforming it continuously. Now, confronted with the task of refurbishing the house, we trace back and try to understand the project development by researching archival material. However, it is the process of physically dismantling damaged fabric –almost everything, besides the concrete structure – that really reveals the main principles behind the whole design process. A silent dialogue with architects already gone, which provides the guidelines to write just another chapter in the life of this structure.

### I

We never imagined that this house, for which we always felt a lot of curiosity, speculated and imagined stories about, would end up being our own. And probably, where we will spend the rest of our lives. For many years we walked past this enigmatic structure. An exposed concrete skeleton being consumed by a mantle of ravenous creepers, which already seemed to have devoured the softer parts. Not much else could be seen under the vegetation, but the detached volume of a triple height staircase poking out of a corner, surrounded by beams and wrapped in a thin tissue of timber and frosted glass. Through this veil, it was possible to see the blurry shadows of ivy already spreading in. An improvised greenhouse, perhaps. At dusk, a soft green light glowing from within, and just a few times, a fading human outline moving up or down the staircase. Duchamp's painting.

When we saw the house listed for sale, we arranged a visit on the same day. We shook hands with the owner just a few hours later. It was then that we discovered this house was one of the few remaining houses designed by Emilio Duhart; a house of which we were unaware.

### II

Emilio Duhart, perhaps the most renowned Chilean architect of Modern Architecture, studied at the Pontifical Catholic University (PUC) of Chile and later at Harvard Graduate School of Design under the supervision of Walter Gropius (1883-1969). In 1945 he

returned to Chile, and for 12 years worked alongside his former teacher, Sergio Larraín (1905-1999), in projects of different scales and typologies, ranging from mixed use schemes, and educational complexes to residential homes. In 1952 Emilio Duhart received a scholarship to study at the Sorbonne University and during this stay in Paris, he became acquainted with Le Corbusier (1887-1965), with whom he worked at the Atelier de la Rue de Sèvres. There, he was involved in the projects of the Secretariat Building in Chandigarh and the Villa Shodhan in Ahmedabad.

### III

Back in Chile, in 1958 Emilio Duhart founded his own practice in architecture and planning, and during this stage, he had his greatest professional achievements. During the 1960s he developed the most important project of his career, the United Nations Building in Chile (CEPAL), in collaboration with Roberto Goycoolea (1928-2018) and Christian de Groote (1931-2013). This building shows several of the distinctive ideas of his architecture, such as the sense of scale, the relationship to landscape and the use of exposed concrete. It is in this work where the structure also acquired a fundamental value and appears as an exo-structure which allowed for absolute freedom of the plan and facades.

### IV

PDVN 0458 house, completed around 1966, is one of the few single-family houses by Emilio

Duhart which still stand. It is located in Pedro de Valdivia Norte, a neighborhood developed in the 1950s at the foothills of Cerro San Cristóbal, Santiago's metropolitan park. At the time of its construction, this area was on the outskirts of the city, now absorbed by its growth and therefore much more central. Despite this change, and because of its location close to the hills, somehow the feeling of being on a fringe of Santiago remains.

At the same time Emilio Duhart designed this house, he also worked on the CEPAL project. Obviously the two buildings have a completely different scale, however, it is possible to recognize in this smaller structure several concepts present on the CEPAL building, which in turn, inherits several of Le Corbusier's *Five Points of Architecture*.

### V

Once we realized the house was designed by Emilio Duhart, we started to research in order to know more about its history and define a point of departure for future transformations. Fortunately, all the drawings of the project were at PUC's archive, keeper of Emilio Duhart's archive.

The drawings cover a span of three years, from 1963 to 1966. Despite being a single-family house, and as expected in a time lapse like this, many architects and draftsmen intervened. Borja Huidobro (1936-) (Emilio Duhart's son-in-law) and Christian de Groote amongst them, two of the most prominent contemporary Chilean architects.

Even though the house underwent several changes and transformations during the whole process, what we find to be the most prominent aspects, remained: a house thought to allow for continuous change and flexibility. The project as a structure to be filled, and lived in. Change and adaptation were sought, even encouraged, avoiding the definitive and, quoting Walter Benjamin, the "thus and no other wise." Architecture as a back drop for daily life to happen. No more and no less.

### VI

We identified three main moments during the design process: a conceptual stage, a documentation stage and lastly, a detailing and landscape stage.

The first plans and elevations, drawn by a young Borja Huidobro, already define the position of the house, closer to the front of the lot and leaving exactly half of the lot empty. The decision of leaving a big backyard to the west, probably linked to the views of



01 Emilio Duhart, *PDVN O458 house*, Santiago, Chile, 1963-1966.  
Exterior after repair, entrance and staircase detail, 2021.

nearby San Cristobal hill and the possibility of creating a continuous and – in appearance at least – more extensive landscape.

The house itself is organized within a compact two-story high rectangular volume, surrounded by a perimeter wall that runs along the entire boundary of the plot. On top of it, a roof terrace, with some curved walls that keep the space closed towards the street and open to the main views of the nearby hill; the roof terrace of Villa Savoye, or the sail shaped wall at Casa Malaparte.

The two floors are symmetrically divided on its longer axis by a main wall, which also separates the main rooms from the service areas, with secondary load bearing walls both perpendicular to it and along the perimeter.

The facades show the house covered in a generic white material, with big openings at ground level and smaller square windows on the north elevation of the first floor, with a second layer of sliding shutters. This difference between the two floors allows, on the one hand, for a more direct connection with the garden at ground floor, whilst on the other, for privacy and protection of direct sunlight.

## VII

On a second stage, by the end of 1963 and already under the supervision of Christian de Groote, the structure mutated and the materiality became more specific; all in search of an open plan that allowed for higher flexibility and future transformations.

The perimeter supporting walls disappeared, replaced by a series of concrete columns: three on each of the longer sides

and a single one coinciding with the central axis on the east and west elevations. The main wall that longitudinally divides the plan and a couple of perpendicular walls on the “service side” of the house, remained. Having earthquakes in Chile, these are needed in order to counteract horizontal movement.

The result was that now one half of the house became a free plan without any structural partition. On this side, the project specified different solutions to break down the big elongated space into smaller rooms or situations, always allowing for these partitions to be removed or transformed. At ground floor level the aim seems to obtain the longest site views as possible, connecting the front with the back garden, from wall to wall, through the interior of the house. The main space is divided into dining-room, living-room and studio using two accordion screens (*modernfold*), and therefore, without compromising the continuity of space.

On the second level the division of rooms is done by sliding doors or very thin partitions. The plan even indicates multiple possible positions for them, reinforcing the idea that these could be changed later in the history of the house and thus, adapted to the will and needs of their inhabitants. We took down these partitions when renovating the house, and found that these were made of very thin timber frames, secured just using some wedges against the slab and a continuous finished floor.

The new exo-structure sets the facades free of their structural constraints, allowing for a greater variety of openings. The difference

in size of windows between ground and first floor remained, and over consecutive drawings, they also adopt a different materiality and expression. At ground floor level, big openings are framed by thin concrete walls, creating a series of bow windows in order to be closer to the garden, or rather, *in* the garden. When there is need for an opaque wall, these frames are filled with bricks, and therefore making evident that this border, which never touches the slab, does not perform a structural function.

Differently, the outer walls on the first floor are completely made out of timber, but like the ones below, they stop before reaching the slab. Over the facade’s timber structure there is a lining of vertical tongue-and-groove boards, with smaller battens covering the joints. This textured surface runs along the four facades, recessed from the concrete structure, except on the west facade, where it is on the same plane, probably because of the main bedroom size requirements.

## VIII

During the last stage of the project the biggest change occurred on the roof. At first, a low, pitched timber roof covered the higher slab, but the stairs still arrived at this now inaccessible space; evidence that this structure was expected to be removed, if needed. Lastly, there is an alternative of using the roof terrace simply as an elevated garden: a wooden deck with planters around which also, if wanted, could be transformed later into an indoor playground.

The last two drawings, dated 1966, belong to a landscaping proposal. The earlier is signed by Emilio Duhart, a conceptual general planning of the garden, and the latest, by a landscape designer, María Santa Cruz, which mostly indicated the vegetal species following Emilio Duhart’s design. The most notorious elements are a continuous shaded border, completely covering the perimeter walls, and a swimming pool, strategically placed along the same view axis of the main space at ground floor. These two elements contrast with the rest of the drawing, which is outlined using very thin lines. Additional vegetation and trees are strategically planted in front of the main windows, and nothing obscures the staircase core. The contrast between the perimeter and the rest of the drawing transforms the whole plot into a new walled room, in which the interior views extend without obstruction to reach this exterior, new green boundary.

## IX

Apparently, the original owner, Mr. Herman, lived in this house for about 15 years, and then sold the house to a younger family, which lived here for almost four decades. There was no doubt about it. Door frames with children growing marks carved full height on them, red floor-wax stains climbing on the concrete walls everywhere, a derelict but reckless garden which was already devouring the house, and an old couple left alone living here, with joyful memories, but already too tired to keep going with the house. When we found the house, it was already unattended for too long.

Covered in ivy, the depth of the real damage of the concrete structure and timber elements was hidden, as was the precariousness of some construction detail solutions: every angle of the columns, beams and walls, was about to fall because of rebar corrosion; rotten timber window frames and secondary structure damaged by insects and fungi; dried out timber facades with plenty of weather grooves; broken glass; cracked waterproofing; torn vapor barriers and almost no insulation. The service installations, never updated, were useless and beyond repair. Despite all this, and having resisted several major earthquakes, there wasn't serious structural damage, but it was urgent to take care of the house to prevent further damage.

## X

Confronted with this unexpected scenario, and in order to adapt the spaces to our own requirements, we progressively began dismantling all that was damaged or faulty. In the end, we had no alternative but to leave nothing but the structure.

As we progressed with this unintended

process of deconstruction, more and more pathologies or construction deficiencies were revealed. However, not everything was negative, as this turned out to be a fertile process for discovery and reflection. A creative method born out of the deconstruction itself. This way we chose not only to base our design choices on the old drawings, but mostly, we looked carefully to what the house itself suggested. To focus on the qualities and atmosphere we discovered and enjoyed.

Probably, every architect has been in the position of imagining changes or corrections when visiting a work of architecture: "That window could be a little to the left, that way you could see that hill from this chair"... "this floor could have been the same as outside"... "a pivoting door here would allow for a continuous wall between inside and outside"... and so on; small adjustments to enhance what we found had value, or to improve what we considered to be shortcomings. A process we frequently use as architects, where, whether by visiting or reflecting on work done by others, we start creating our own.

## XI

The following is a list of themes and actions undergone in the renovation process, the result of the design method we used:

## On Continuity

- Demolition of transverse brick partitions, to obtain longer, unobstructed views.
- New glazed doors at ground level.
- Thinner steel frames on windows.
- Pivot doors on the first floor.
- To remove all doors between dividing rooms at ground floor level.
- Lower partitions between rooms on the first

floor, separated 22 centimeters (cm) from the slab and finished with laminated glass.

## On Materiality

- Paint removal over all concrete surfaces (slabs and walls).
- Replacement of gypsum board partitions and walls with tongue-and-groove timber lining.
- Change of terracotta tile floor for lighter marble stone on the ground floor and timber floor on the first floor.
- Replacement of frosted glass with wire mesh glass on the staircase. New frame and anchoring solution.

## On Constructive Improvements

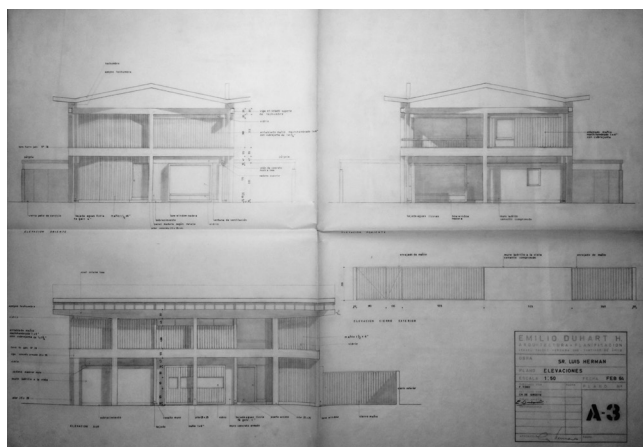
- Change of timber cladding to ventilated and horizontal thermo-treated timber.
- Full insulation and vapor barrier on walls.
- Change to lighter roof insulation and new waterproofing.
- Double glazed and laminated windows.
- Set back of first floor west facade to improve protection and to make the outer envelope completely independent from structure.
- Full replacement of service installations.

## On Garden

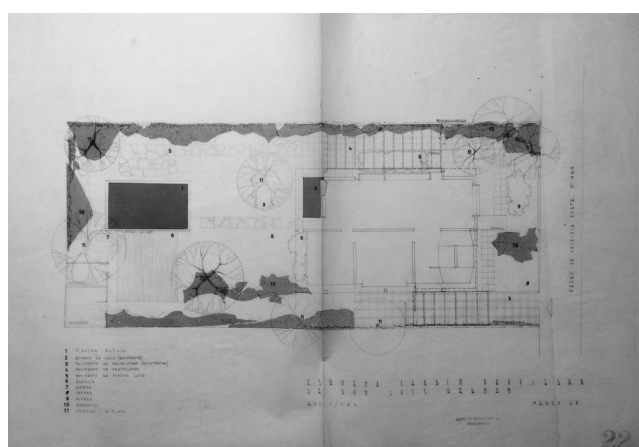
- Harmonization and rendering of perimeter walls.
- Demolition of exterior service rooms.
- Restitution of trees and plants.

## On New Life

- New distribution of rooms.
- Replacement of access hall by a new concrete volume. A place to leave your coat and shoes.



02 Emilio Duhart, PDVN 0458 house, Santiago, Chile, 1963-1966, second scheme facades, 1964. © Source: Emilio Duhart Studio. Archivo de Originales. Sergio Larraín GM Library, FADEU, Pontificia Universidad Católica de Chile.



03 Emilio Duhart, PDVN 0458 house, Santiago, Chile, 1963-1966, landscape proposal, 1966. © Source: Emilio Duhart Studio. Archivo de Originales. Sergio Larraín GM Library, FADEU, Pontificia Universidad Católica de Chile.





**04** Emilio Duhart, PDVN 0458 house, Santiago, Chile, 1963-1966. Main entrance covered in creepers, 2017.



**05** Emilio Duhart, PDVN 0458 house, Santiago, Chile, 1963-1966. Rear garden facade, 2017.



**06** Emilio Duhart, PDVN 0458 house, Santiago, Chile, 1963-1966. Open plan interior, dining and living room, 2017.



**07** Emilio Duhart, PDVN 0458 house, Santiago, Chile, 1963-1966. Exterior after repair, entrance and staircase detail, 2021.



**08** Emilio Duhart, PDVN 0458 house, Santiago, Chile, 1963-1966. Exterior after repair, staircase detail: wire mesh glass and ash wood studs, 2021.



**09** Emilio Duhart, PDVN 0458 house, Santiago, Chile, 1963-1966. Interior under repair, dining and living room, 2019.

- Repositioning of the kitchen in what use to be a maid's room; bigger and more open to the garden. Now the kitchen is again at the heart of family life.

## XII

If the survey of archival material allowed us to understand the evolution of the project and the successive contributions of Emilio Duhart's younger collaborators, it was the process of dismantling everything that was damaged or needed to be renovated, what really revealed the main spatial aims of the project. This method set the guidelines to adjust or reshape what we consider to be shortcomings. The exo-structure allowed us to rethink and renew the interiors, but most importantly, to retain and intensify the qualities that define the identity of this house. An ongoing process of observation and discovery in what will be just another chapter in the story of this house. And probably, not the last one either.

## Notes

- 1 Walter Benjamin, "Naples", 1925, in *Reflections: Essays, Aphorisms, Autobiographical Writings*, New York, Schocken Books, 1978.

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## Alejandro Beals and Loreto Lyon

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In 2001, Alejandro Beals (Chile, 1976) received the title of architect from PUC (Chile). In 2012 he received a Master of Philosophy degree at the Royal College of Art (RCA), London, where he researched boundaries and borders in architecture, under the supervision of professor Nigel Coates.

In 2005, Loreto Lyon (Chile, 1979) received the title of architect from PUC (Chile). In 2011 she received a Master of Science degree (MSc) in "Environmental Design and Engineering" from the Bartlett, University College of London (UCL).