The patio as an opportunity for reuse: TPA Housing project in Maracaibo, Venezuela

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Town Planning Associates (TPA) was the architectural firm led by Josep Lluis Sert, Paul Lester Wiener, and Paul Schulz, primarily engaged in projects across Latin America from 1942 to 1959. Its particular focus was on promoting the concept of urban projects that included Eurocentric fundamental elements in the local culture, complementing —even challenging— the ideas presented by Le Corbusier and CIAM in the Athens Charter.

In 1951, TPA collaborated with the Venezuelan Oficina de Planificación y Vivienda, featuring architects Moisés Benacerraf, Carlos Guinand Baldó, and engineer Francisco Carrillo Batalla, for a project in Maracaibo. This city was rapidly evolving into a hub for the burgeoning oil industry. Pomona Housing emerged as the only neighborhood unit entirely conceived and constructed by TPA. The project encompassed single-family homes with central patios, multifamily dwellings, school, health facilities, shopping center, and sports fields. In this endeavor, the architects strategically used the patio as a unifying element, believing that they were responding correctly to the climatic nuances of the region and drawing inspiration from the organizational structure of traditional Venezuelan colonial residences.

Despite meticulous consideration for climatic conditions and cultural context, the complex has undergone substantial transformations, retaining only fragments of its original architectural integrity. This analysis delves into the possible factors contributing to this evolution, centering around three fundamental questions: Why was the patio-centric housing unit strategy deemed as a unique response to the housing deficit? Furthermore, considering such projects as responses to post-war European city reconstruction, why was this model regarded as pertinent for consolidating new peripheral areas in Latin America, more specifically in Venezuela, to the detriment of local forms?

INTRODUCTION

> "As we have seen (…), design objects constantly transform depending on the ways in which they are appropriated, received, and re-signified in each case. Therefore, neither materials, things, spaces, places, bodies, nor architectures can be considered immutable elements whose behavior can be taken for granted and, therefore, anticipated."
>
> Uriel Fogué, *Las Arquitecturas del Fin del Mundo*

Town Planning Associates (TPA) was a project office founded by Josep Lluis Sert, Paul Lester Wiener, and Paul Schulz, based in New York and active from 1942 to 1959. Their proposals were primarily focused on urban planning, pointing to expand Latin American cities. They combined a territorial organization approach inherited from the International Congresses of Modern Architecture (CIAM) with local components from the places they designed for.

Between 1949 and 1952, TPA developed four projects in Venezuela, including two proposals for new cities, one neighborhood unit, and a single-family house. These projects coincided with the expansion of Venezuelan cities during decades marked by economic growth from oil and metallurgic exploitation, and the establishment of American companies like Creole Petroleum Company and Chevron in the country.

The growth of urban areas around oil and metallurgic activities led to the construction of housing complexes financed by public institutions like *Banco Obrero*. Most of these projects were designed through the *Taller de Arquitectura del Banco Obrero* (TABO), in collaboration with other national offices. The TABO's activity has been extensively documented in prior research by Beatriz Mesa Suniaga and Lorenzo González Casas.

TPA arrived in Venezuela as collaborators of the studio *Planificación y Vivienda,* led by Francisco Carrillo Batalla, Carlos Guinand Baldó, and Moisés Benacerraf. Additionally, Sert had previously been invited as an advisor for the Caracas Regulatory Plan due to his presidency of CIAM and collaboration with Le Corbusier on the Bogotá Master Plan. Thus, Venezuela became

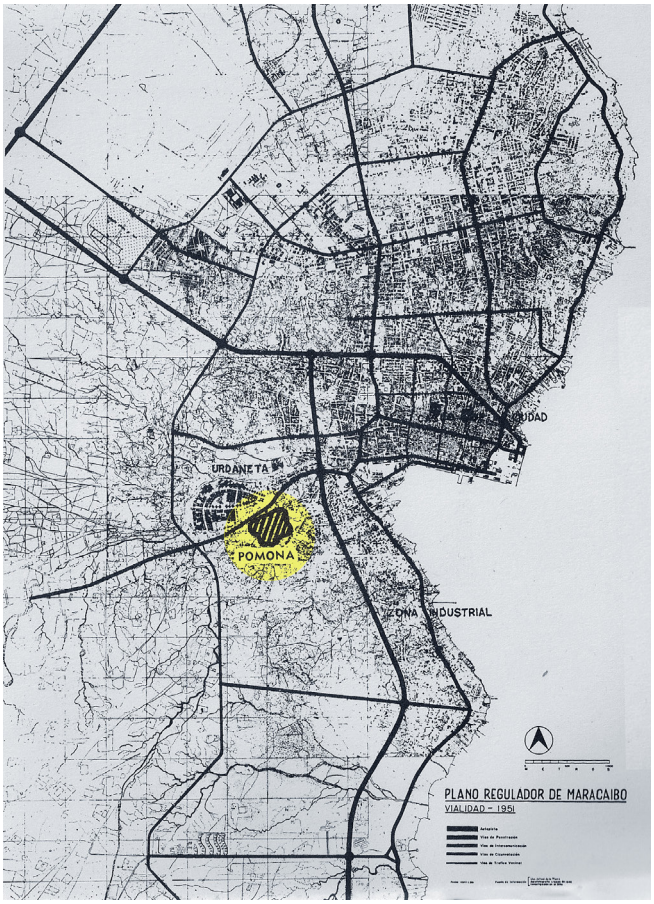

Figure 1: Pomona Housing Development location, Maracaibo, Venezuela. Image retrieved from: Villanueva, C and Celis, C. "La Vivienda popular en Venezuela 1928-1952". Caracas, Venezuela: Banco Obrero, 1953.

the fourth Latin American country to receive projects from TPA, after Brazil (Cidade dos Motores), Peru (Chimbote and Lima), and Colombia (Bogotá and Medellín).

THE POMONA HOUSING COMPLEX

Out of all the projects undertaken by TPA in Venezuela, Pomona stands out as the only Neighborhood Unit that was fully completed. Remarkably, this project was also the only extensive Neighborhood Unit completed during Sert's entire career. Financing for the Pomona project came from Venezuelan Banco Obrero, which supported most of the housing developments in the country until 1958.

Pomona Housing Development was situated in an area that served as the epicenter of petroleum activity throughout the 20th century. The project began during the Military Government led by Carlos Delgado Chalbaud and reached completion under the dictatorship of Marcos Pérez Jiménez. Despite the political turbulence and governance challenges in the country, construction of housing plans proceeded without interruption, as these developments were vital for sustaining economic growth.

According to the 1950 census, Zulia state experienced exponential growth in its urban population, surging from 61.5% to 75.3% within a period of nine years due to the expansion of the oil industry. Its principal districts, Maracaibo and Bolivar, served as the primary destinations for this influx of population.

The Pomona Housing Development program encompassed 192 single-family houses, 114 apartments in low-rise blocks, primary school, nursery, spaces for children's play, service station, parking facilities, and commercial spaces. The houses were designed in two types: single-family units with yards and apartment blocks. Apartments were categorized into three types based on the presence of terraces and patios, while single-family cells varied across six types with sizes ranging from 74.5 to 94.6 square meters (about 802 to 1018 square feet).

Given Maracaibo's extreme climatic conditions, the local office specified particular design requirements. Buildings were oriented and shaded to facilitate cross-ventilation within the homes year-round. Extensive eaves and roof covers were incorporated to provide shade over common areas and facades. Additionally, concrete ventilation blocks were used to promote continuous airflow within the buildings. The interior layouts of both single-family homes and apartments were kept straightforward to accommodate the diverse lifestyles of the population.

THE PATIO AS A FORMAL MULTI-SCALAR STRATEGY

In the Athens Charter (1933), Le Corbusier outlined the city's organization into four fundamental zones based on its function: living, working, recreation, and circulation. Building on this, Josep Lluis Sert, following his collaboration with the Swiss French architect and as president of CIAM, introduced the patio as a fifth function, enriching the framework of new cities.

The patio, serving as an organizing element, evoked the social activity seen in ancient public squares. By scaling urban design to a pedestrian level, the patio facilitated interaction among inhabitants, nature, and recreational areas. Sert also envisioned the patio as a democratic space where all citizens were equal, advocating for its inclusion across all scales of city planning.

TPA's urban proposals served as a laboratory for experimenting with various applications of the patio. In their 1953 article "Can patios make cities?" published in Architectural Forum, Sert and Wiener described the diverse architectural solutions achieved through patios in Latin American cities: from patio houses and neighborhood patios to patio parks, buildings, and civic centers.

The Pomona Housing Unit exemplifies this use of the patio concept proposed by TPA. Within each of its designed spaces, the patio is integrated as a key functional element. Referring to the article, can be identified the following types of patios at Pomona:

Figure 2: Diagram of the different scales in which the patio can be used within projects of new cities. Own elaboration. Image © Wiener, P. and Sert, J. "Can Patios Make Cities?" 1953.

Patio houses: Two types are present in single-family units: interior patios that connect different spaces within the house, and rear patios that provide a connection to the exterior.

Neighborhood patio: Located on the ground floors of residential buildings and within apartment complexes, often featuring terraces and balconies.

Patio buildings: Notably integrated into the school at Pomona, where classrooms are raised on stilts over a continuous patio extending into play areas.

Civic Center Patio: Although Pomona lacked a formal civic center, the commercial hub was organized around a central patio, shaping the surrounding commercial spaces.

It is important to note that in the TPA's proposals, the Latin American region was considered as a single unit. Consequently, the design strategies put forth by the team were replicated across all cities, downplaying the particularities of each country and their deep cultural differences. For this reason, the set of patios proposed by the TPA were reduced to green spaces connecting enclosures, carrying the same scale and hierarchy in Ciudade Dos Motores, Lima, Chimbotle, Maracaibo, Havana, etc. This was one of the cristics received by the team's projects,

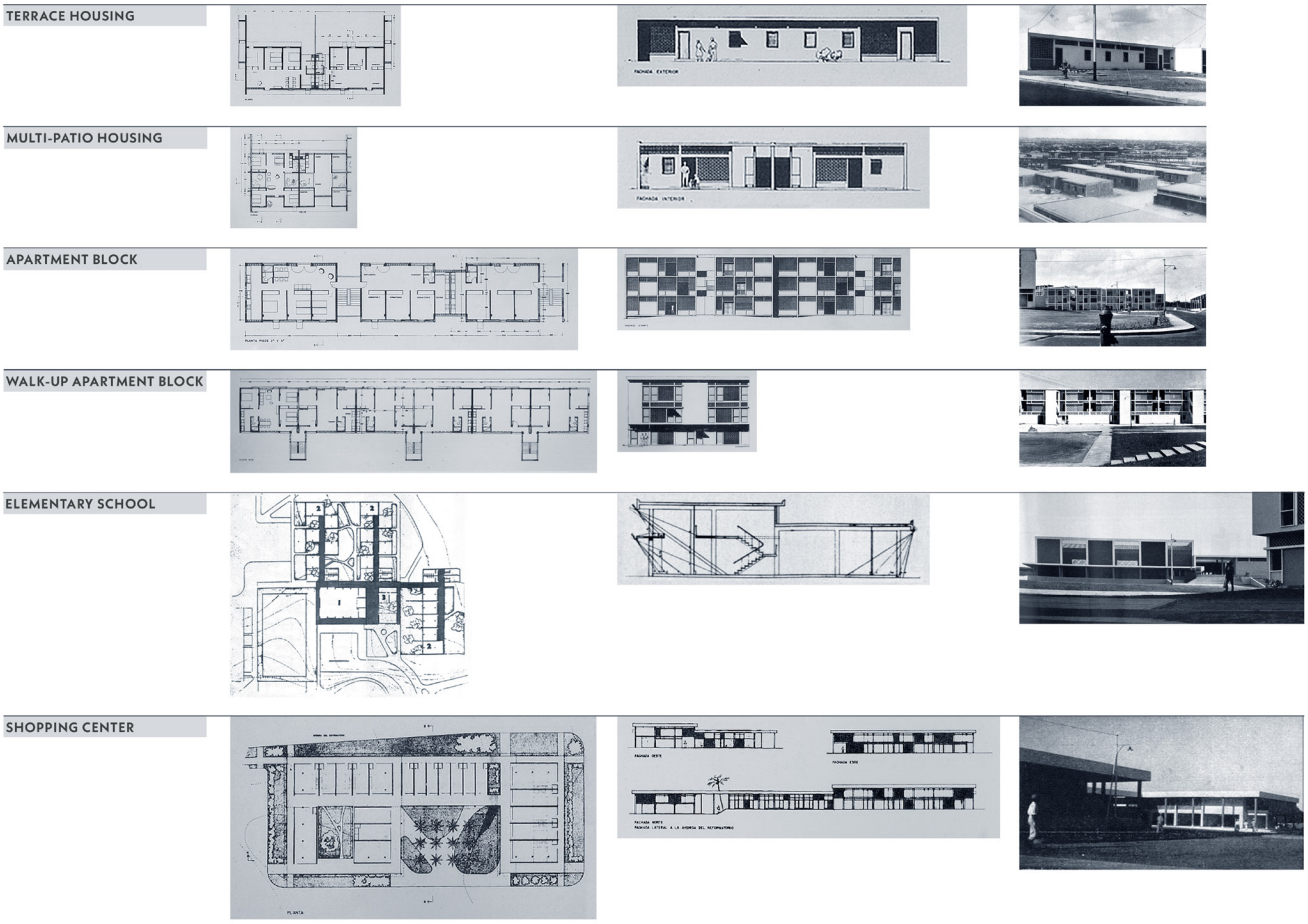

Figure 3: Patio typologies in Pomona. Own elaboration based on the Pomona Neighborhood Unit plans. (Villanueva, C and Celis, C, 1953).

which was later confirmed by the transformations undergone in the Pomona Neighborhood Unit.

PATIOS AS A HUMAN LANDSCAPE

Sert's Interpretation of the Spanish Patio. For Sert, a Spanish architect trained at the Barcelona School of Architecture, the patio is a component deeply rooted in his own architectural and urban experience. The Spanish patio has its origins in Islamic architecture, a legacy of the Arab occupation that took place between the 8th and 11th centuries. During this period, the Muslim kingdom of Al-Andalus occupied most of the Iberian Peninsula, leaving a profound cultural, urban, and architectural imprint on the various kingdoms that would eventually form the Kingdom of Spain.

In Latin America, this typology was introduced during the Spanish conquest and colonization between the 15th and 19th centuries. This is evident in the so-called Laws of the Indies, a central set of documents issued by the Spanish Crown that regulated political, economic, religious, and social aspects of the newly conquered territories in America and Asia. Among these aspects were relevant guidelines regarding land use and urban planning for the new cities in the then-emerging Spanish colonial empire. Even at that time, the plaza was positioned as the main organizer of communal life, just as the patio served this role on a domestic scale.

When the TPA introduced the concept of the patio in its interventions across Latin America, it likely did so by emphasizing the importance of this strategy, deeply rooted in the region's colonial heritage. At the same time, in Sert's vision, the patio became the defining element of the urban formula first proposed by Le Corbusier.

The Pre-Hispanic Wayú Patio. Traditional Spanish patio or the canonical modern patio were not the only possible visions of this element within Latin American cultural context. For the indigenous peoples of western Venezuela, more specifically in the region of Lake Maracaibo and the Guajira Peninsula —the latter shared with Colombia— the patio holds a unique significance and way of manifesting. Historically, this region has been home to the Wayú or Guajiro people, a branch of the Arawaks, a group of peoples who were settled in the Antilles and the circum-Caribbean region at the time of the Spanish arrival in the late 15th century.

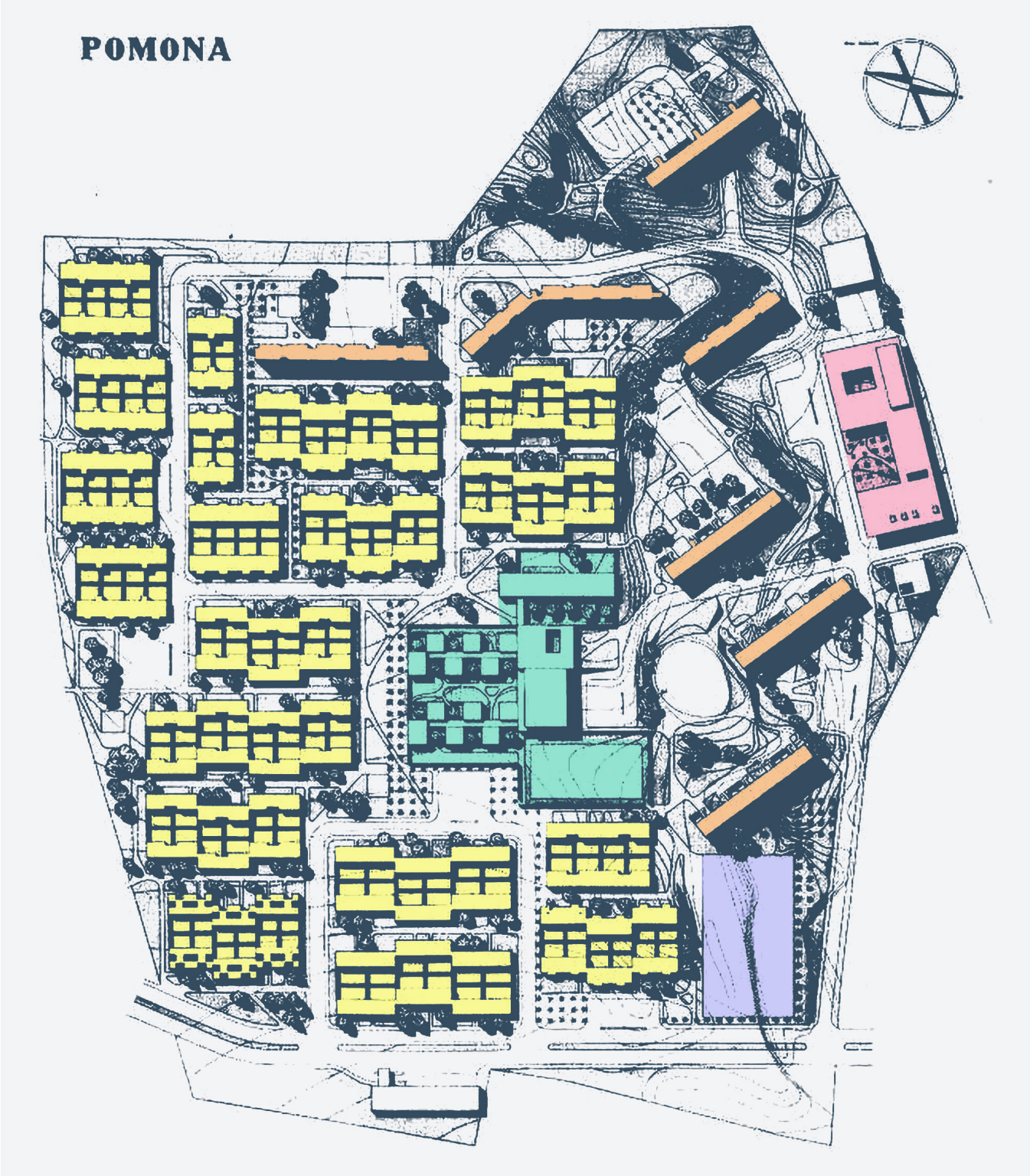

Figure 4: Diagram of the different building typologies and uses defined in Pomona Housing Complex: patio houses (light yellow), patio buildings (light orange), elementary school (light green), shopping center (light red), and civic center (light purple). © TPA and Sert, J. Graphic editing by the authors.

Although the TPA's intervention was designed for an eminently urban population, the reality was far more complex. By the mid-20th century, the population of Maracaibo was the result of an ongoing process of mestizaje in which many indigenous and colonial traditions fused, giving rise to a specific idiosyncrasy. In fact, many of those who would inhabit La Pomona would come from neighboring rural areas — and even distant ones — attracted by the region's oil development.

In spatial terms, the Wayú people developed an important stilt-house architecture facing the water, whether the Caribbean Sea itself, Lake Maracaibo, or the numerous tributaries of both. Unlike Western societies, the Wayú society was matriarchal. According to their tradition, the mother's house functioned as a generative unit and center around which the daughters' homes were built. In this system, the mother's kitchen was used collectively by all family clan members, so all the homes were spatially and operationally connected to it. The group formed a network of interconnected surfaces raised on stilts above the water, loosely recreating the idea of a patio. This particular layout was also replicated in the so-called land architecture: those non-stilt houses built far from the coast, where the mother's house played the same central role.

In this land-based architecture, the patio was defined as an extensive area that connected all the family homes. Its use was not static but transformed according to family needs and the specific conditions of the context. Other inherent architectural traits included permeability to the environment and a temporal conception of the structures. All these buildings materialized according to an intricate set of situations: open, intermediate, flexible, transformable spaces, etc. To achieve such adaptability, the Wayú employed a collection of components and materials: collapsible and permeable enclosures and partitions designed to filter the transition between outside and inside, responding to their specific social experiences and climatic conditions.

All these forms and traditions were part of the 'on-going' idiosyncrasy of the Maracaibo'spopulation when the TPA carried out its proposal — and they remain so today — so it is no surprise that the Modern ways of living proposed for La Pomona generated limited attachment.

Seen as a whole, these traits reflect the underlying potential transversality of the local spatial conception: transversality between spaces, units, and buildings; and transversality between architecture and the natural environment. This local spatial conception found little or no resonance in the proposal made by the TPA, which likely limited the inhabitants' identification with the place and led to its continued transformation over the following decades.

70 YEARS ON. RETHINKING LA POMONA THROUGH ADAPTIVE REUSE

Despite the considerations made by the studio *Planificación y Vivienda* and TPA, the Pomona Housing Complex experienced successive alterations to adapt to the lifestyles of its inhabitants. Today, few traces remain that allow for the identification of the original project. The concrete ventilation blocks on the facades were filled in to enhance home security and install mechanical ventilation equipment.

Over the years, the patios proposed by the TPA were the most vulnerable spaces to changes made by the inhabitants. Most of them were enclosed and completely repurposed to create new environments within the houses. This can be seen as an opportunity for expansion, but it may also reflect a functional distribution of spaces that did not align with the culture of its users.

Exploring aspects that may have been overlooked by the architectural teams, two factors stand out: the development of housing projects in response to housing shortages, and the consolidation of Maracaibo's peripheral areas.

A question that can be raised today concerns the relevance of the Neighborhood Unit model for Latin American cities. In the specific case of Venezuelan towns, there was no general city planning to connect these units, resulting in isolated populations to which, in subsequent decades, vast extensions of informal developments were attached, attracted by the provision of basic services such as water, electricity, waste collection, among others.

FINAL REFLECTIONS

The Pomona case appears to demonstrate that architectural ideas or intentions solo are not enough to achieve successful outcomes. The inclusion of the multi-scalar patios, intended to complement the ideas of the CIAM, aimed to provide a spatial link between communities and thus ensure the long-term viability of this type of urbanism. However, the unstructured growth of Maracaibo and the development of numerous contingent situations hindered the success of the initial plan.

These situations vary in nature. Some lie in the political sphere, in the central planning of the city. Others stem from an incorrect architectural response, attempting to transplant a foreign social model. All these carry significant structural and human implications. From this, several relevant issues can be highlighted:

In terms of urban dynamics. For reasons that go beyond the urban project and extend to metropolitan planning, La Pomona became the target of widespread vandalism by spontaneous occupants settling on its outskirts. This process of informalization is common in Latin American cities, where precarious housing clusters are illegally erected around large complexes — primarily Modern ones — to gain access to basic services. Due to the government's inability to control and respond to this type of

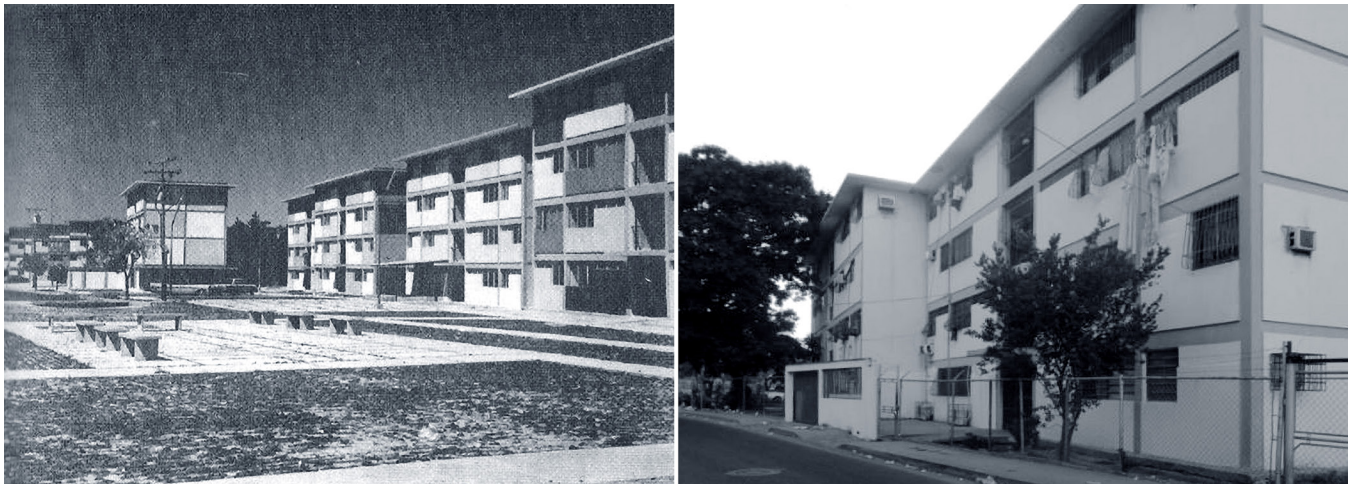

Figure 5: Original (1952) and current situation. Own elaboration. Image (Right) No author found. (left) from Villanueva, C and Celis, C., 1953.

occupation, over time, this situation leads to widespread deterioration and the functional collapse of the original complex.

In response, La Pomona underwent various interventions, including the addition of peripheral fences to control access to common areas. This pattern was repeated on a smaller scale in the single-family homes, where front and back patios were fenced off. Since the original patio configuration did not align with what residents were accustomed to, the patios were abandoned and incorporated into the interior of the houses as new rooms.

This was compounded by little to no maintenance. A high level of collective organization is inherent to large-scale projects like this one. Without an effective communal administration, degradation through use, intervention, or vandalism is almost guaranteed. It is also likely that the scale of La Pomona exceeded the capacity of its inhabitants to assimilate, causing a sense of alienation and contributing to their lack of identification with the newly built place. It is important to note that most of the people who came to occupy the complex developed by the TPA were used to more compact urban environments, mainly determined by family relationships.

In terms of architecture. When taking on the project, TPA and Sert advocated for a standardized modern model capable of being replicated everywhere to maximize people's well-being. However, in the case of La Pomona, it has become clear that pragmatism prevails over the canonical. There, the local idiosyncrasies, the ways people relate to each other, and the vernacular ways of appropriating and understanding domestic and collective space ended up dismantling much of this textbook example of modern construction. The population's assimilation to a Eurocentric model of living has been, at best, partial, and the appropriation and modification of the built environment is an ongoing act that continues today.

Like La Pomona, many structures erected in Venezuela and across the region were based on models imported from other places, with limited or no attachment from their users. Today, given the completely different economic and climatic circumstances, it is impossible, and undesirable, to think that these structures could be quickly or easily replaced. It is essential to consider their reuse, recognize the significant infrastructural base they can provide, and outline the necessary modifications to finally adapt them to the prevailing human landscape. Repair, reuse, recycle is the right direction given the economic situation of many countries and the global climate reality, where reducing the carbon footprint is crucial.

In the case of La Pomona, this would involve attempting to '*transversalize*' the spaces — bringing to this constructed complex the spatial flexibility and climatic comfort that characterize vernacular domestic models. This would foster direct spatial relationships and allow residents to identify with the domestic and collective spaces. Nowadays, there are many examples of transformations of modern structures worldwide (Grand Parc, Park Hill, Kleiburg De Flat, etc.). From such interventions, a common itinerary of strategies and design operations can be drawn:

Regarding formal-spatial aspects:

(1) Explore the different floor plans of the complex, distinguishing between load-bearing and non-load-bearing elements.

(2) Identify opportunities for spatial connections between different areas, units, and rooms.

(3) Adapt the connections to be made and the spaces to be redefined according to a renewed programmatic plan that accommodates a broader spectrum of users and relationships between users.

Regarding material-tectonic aspects:

(1) Examine the structure, envelopes, and partitions to classify construction elements by their rigidity: non-disposable, interchangeable or replaceable, and accessory or disposable.

(2) Define the necessary substitutions or eliminations, for example: replacing blind envelopes with permeable partitions (such as perforated walls, louvered shutters, brise-soleil, lattices, etc.), or fixed envelopes with dynamic ones (that allow partial or total openings).

(3) Identify local industry and market resources, focusing on vernacular materials and components that could be used in the adaptation, such as aggregate-based materials (wattle and daub, clay bricks, terracotta, etc.); or natural fiber materials (structural, sheet, or woven).

In short, with no communal administration dedicated to maintaining the facilities, no strong sense of identification from the inhabitants with the place, and an architecture that fails to respond to the local human dynamics, the fate of La Pomona has been marked by continuous deterioration, awaiting a restorative solution. At some point, this solution must induce a reuse process that grants its inhabitants — both current and future — greater autonomy. A process that allows for the '***transversalization***' and personalization of its spaces, ultimately leading to the empowerment of the users in terms of their ways of living.

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