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# CELLULAR DOMESTICITIES: LESSONS FROM THE CITY IN SPACE AND ITS RELEVANCE IN BARCELONA'S CONTEMPORARY DEBATES ON FLEXIBLE AND COLLECTIVE HOUSING / DOMESTICIDADES CELULARES: LECCIONES DE LA CIUDAD EN EL ESPACIO Y SU RELEVANCIA EN LOS DEBATES CONTEMPORÁNEOS DE BARCELONA SOBRE VIVIENDA FLEXIBLE Y COLECTIVA / DOMESTICIDADES CELULARES: LIÇÕES DE THE CITY IN SPACE E SUA RELEVÂNCIA PARA OS DEBATES CONTEMPORÂNEOS DE BARCELONA SOBRE MORADIAS FLEXÍVEIS E COLETIVAS

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**ABSTRACT**

The City in Space was an experimental housing research project developed by Taller d'Arquitectura between 1968 and 1975. Led by Ricardo Bofill, this multidisciplinary collective explored new ways of living through an approach that combined utopia and realism to address Spain's affordable housing crisis. As an alternative to the social housing promoted by the military regime from the late 1960s, Taller proposed a design system based on a domestic cellular unit that redefined fundamental aspects of collective housing: minimum housing, spatial flexibility, modularity, industrialization, and strategies to counteract the stigmatization of low-cost housing. Fifty years later, many of these issues remain relevant. Spain's housing crisis continues unresolved, driving renewed interest in large-scale public housing construction. At the same time, design strategies based on non-hierarchical and interconnected housing cells have re-emerged, while the concept of housing as a framework for communal life has gained traction with the rise of housing cooperatives. This article revisits Taller d'Arquitectura's research from a contemporary perspective, analyzing its impact and relevance in the current context. Through a critical reading of its design principles and spatial applications, fundamental insights are drawn for rethinking affordable housing within the framework of urban and social transformation.

**Keywords:** modular architecture, collective housing, affordable housing, cooperative housing, The City in Space.

## RESUMEN

La Ciudad en el Espacio fue un proyecto experimental de investigación sobre vivienda desarrollado por el Taller d'Arquitectura entre 1968 y 1975. Dirigido por Ricardo Bofill, este colectivo multidisciplinar exploró nuevas formas de habitar mediante un enfoque que combinaba utopía y realismo para responder a la crisis de vivienda asequible en España. Como alternativa a la vivienda social promovida por el régimen militar desde finales de los años 60, Taller propuso un sistema de diseño basado en una unidad celular doméstica que redefinió aspectos fundamentales de la vivienda colectiva: la vivienda mínima, la flexibilidad espacial, la modularidad, la industrialización y estrategias para contrarrestar la estigmatización de la vivienda de bajo coste. Cincuenta años después, muchas de estas cuestiones siguen siendo pertinentes. La crisis de vivienda en España continúa sin resolverse, impulsando un renovado interés en la construcción masiva de vivienda pública. Paralelamente, han resurgido estrategias de diseño basadas en células habitacionales no jerárquicas e interconectadas, mientras que el concepto de vivienda como soporte para la vida en comunidad ha cobrado fuerza con el auge de cooperativas de vivienda. Este artículo revisita la investigación del Taller d'Arquitectura desde una perspectiva contemporánea, analizando su impacto y su vigencia en el contexto actual. A través de una lectura crítica de sus principios de diseño y sus aplicaciones espaciales, se extraen claves fundamentales para repensar la vivienda asequible en el marco de la transformación urbana y social.

**Palabras clave:** arquitectura modular, vivienda colectiva, vivienda asequible, vivienda cooperativa, La Ciudad en el Espacio.

## RESUMO

*The City in Space* foi um projeto experimental de pesquisa sobre habitação desenvolvido pelo Taller d'Arquitectura entre 1968 e 1975. Liderado por Ricardo Bofill, este coletivo multidisciplinar explorou novas formas de habitar por meio de uma abordagem que combinava utopia e realismo para responder à crise de habitação acessível na Espanha. Como alternativa à habitação social promovida pelo regime militar desde o final dos anos 1960, o Taller propôs um sistema de projeto baseado em uma unidade celular doméstica que redefiniu aspectos fundamentais da habitação coletiva: habitação mínima, flexibilidade espacial, modularidade, industrialização e estratégias para combater a estigmatização da habitação de baixo custo. Cinquenta anos depois, muitas dessas questões continuam relevantes. A crise habitacional na Espanha permanece sem solução, impulsionando um renovado interesse na construção em larga escala de habitação pública. Ao mesmo tempo, estratégias de projeto baseadas em células habitacionais não hierárquicas e interconectadas ressurgiram, enquanto o conceito de habitação como estrutura para a vida comunitária tem ganhado força com o crescimento das cooperativas habitacionais. Este artigo revisita a pesquisa do Taller d'Arquitectura sob uma perspectiva contemporânea, analisando seu impacto e sua relevância no contexto atual. Por meio de uma leitura crítica de seus princípios de design e aplicações espaciais, são extraídas ideias fundamentais para repensar a habitação acessível no contexto da transformação urbana e social.

**Palavras-chave:** arquitetura modular, habitação coletiva, habitação acessível, habitação cooperativa, A Cidade no Espaço.

## 1. INTRODUCTION

Council housing architecture in recent European history has long been subject to extensive criticism, both quantitatively and qualitatively (Solà-Morales 2008; Fernández Salgado 2020), but very few architects were able to propose and execute large-scale, viable alternatives. In the early 1960s, after completing several high-standard housing projects within Barcelona's compact urban fabric, the multidisciplinary workshop Taller d'Arquitectura (later abbreviated as "Taller"), led by a young Ricardo Bofill, took the initiative to design and develop a series of affordable housing projects that challenged conventional approaches to social housing, both spatially and socially. Fifty years ago, Taller introduced themes that have once again become central in contemporary public housing development (Centre Obert d'Arquitectura - COAC 2025), after having been largely neglected for decades. Their alternative approach redefined key aspects of affordable housing, including the typology of minimum-existence dwellings, the definition of flexible non-hierarchical domestic spaces, modular housing, industrialisation, and preventing the stigmatization often associated with low-cost housing. Furthermore, these projects were rooted in a political vision of housing that prioritized the values of communal living —an approach that is now being revived with the rise of cooperative housing (Avilla-Royo, Jacoby, & Bilbao 2021).

After decades of an unresolved affordable housing crisis (Colau & Alemany 2012) —where only 3.3% of the housing stock in Spain is classified as affordable (Provivienda, Dirección General de Vivienda y Suelo 2020)— there is now a political commitment to the large-scale construction of public housing through the establishment of a national public housing company (Noriega 2025). In this context, reviewing Taller's work during the research on The City in Space can provide valuable insights into addressing contemporary challenges.

The research methods of this paper include a bibliographic review of historical journals where the work was published (L'Architecture d'Aujord'hui 1970; L'Architecture d'Aujord'hui 1975; Rayner Banham 1975) alongside monographs on Taller d'Arquitectura that contextualize its trajectory (Guedes, Hodgkinson, & Jencks 1981; R. Bofill 1985; R. Bofill & James 1988). Additionally, the study incorporates an analysis of unpublished archival documentation provided by Taller d'Arquitectura, along with the redrawing of project dwellings and masterplans. As Sam Jacoby (2016) explains, this research method enables a deeper understanding of architectural decision-making. Field research included visits to various buildings and an interview with Anna Bofill, a key member of the Taller during the research for The City in Space.

Several prior studies have explored La Ciudad en el Espacio from different perspectives. Castellanos Gómez, Domingo Calabuig, and Torres Cueco (2011) analyze it as a mat building, while Álvarez Arce, Galván Desvaux, and Martínez Rodríguez (2021) examine the role of models as instrumental tools for design taking The City in Space as case study. Broadbent (1975) described Taller as having "the burning conviction that people should be offered buildings different in kind from those the average architect designs" and defined The City in Space as "an embodiment of urban freedom," linking urban form with social behaviour. Expanding on this, Martorell Argemí (2022) investigates its relationship with Henri Lefebvre and Mario Gaviria from an urban sociology perspective. More recently, Álvarez Arce and Galván Desvaux (2023) emphasize the interconnection between space, the psychology of its use, and modes of living, focusing on the relationship between individuals and their experience of inhabiting surrounding spaces through the exploration of La Ciudad en el Espacio.

In this context, and given the recent interest in public housing to revisit themes anticipated in *The City in Space*, this paper examines its modular development of domestic space and urban scale. The aim is to draw conclusions that can inform the design of modular projects based on domestic spatial structures.

## 2. "AGAINST INDIFFERENCE AND VULGARITY": SPAIN IN THE 1970S

After the Spanish Civil War (1936-1939), Spain became a military dictatorship under the rule of Francisco Franco, which lasted until his death from natural causes in 1975. After the post-war period, in the 1960s, the beginning of industrialization triggered mass urban migrations, producing an unprecedented growth of metropolitan areas and a rapid increase in informal and precarious settlements. The institutional response to the housing shortage was so-called the Housing Polygons: large peripheral masterplans of endlessly repeating, rational, and hygienic housing blocks. In these developments, the individual became concealed by the scale of the anonymous block, while the street —reduced to an abstract, empty entity— denied the possibility of community formation (Fig 1, left). The early 20th-century modernist vision of hygienic skyscrapers surrounded by expansive green public spaces and an efficient road network remained unfulfilled, emphasizing the critical role of high-quality shared spaces in fostering social bonds —an aspect the Francoist regime actively sought to undermine as part of its political strategy. Fundamental rights such as freedom of assembly, opinion, and expression were strictly suppressed.

The Housing Polygons, modeled after Henry Roberts' Model House for Four Families (1951), functioned as instruments of moral regulation, enforcing social divisions in two key ways: first, by isolating families within segregated territories to limit unwanted social interactions, and second, by reinforcing traditional family hierarchies to consolidate parental authority (Evans 1978) (Fig 1, right). The. Housing policies, therefore, were not merely practical responses to urban growth but deeply political tools of social control. This intent was explicitly articulated by José Luis Arrese, Spain's first Minister of Housing, who declared in 1957: "We want a country of owners and not a country of proletarians," warning that "when a man has no home, he takes to the street violently."

Countering its context, Taller's response was both formal and political, rethinking not only the spaces where society dwelled but also challenging the very foundations of social organization and its underlying constructs. In opposition to the urban principles of the Modern Movement —which they criticized for providing the theoretical framework for housing polygons (A. Bofill 1975; R. Bofill et al. 1968)—, the research behind La Ciudad en el Espacio (The City in Space) sought to recreate the complexity of the traditional Mediterranean village within a single building. Here, density would translate into a new idea of community, structured around parameters of minimum dwelling, infrastructure, circulation, and flexibility. According to Taller, architects from the 1940s to the 1960s failed to adequately address these issues, as their reductive and limiting disciplinary approaches stemmed from fragmented inquiries into historical continuity. In contrast, Taller advocated for "a radical transformation of the idiosyncrasies of the profession."

> Architecture does not exist.
> Organize the revolt.
> Against Architecture.
> It is not possible to roof the whole world.

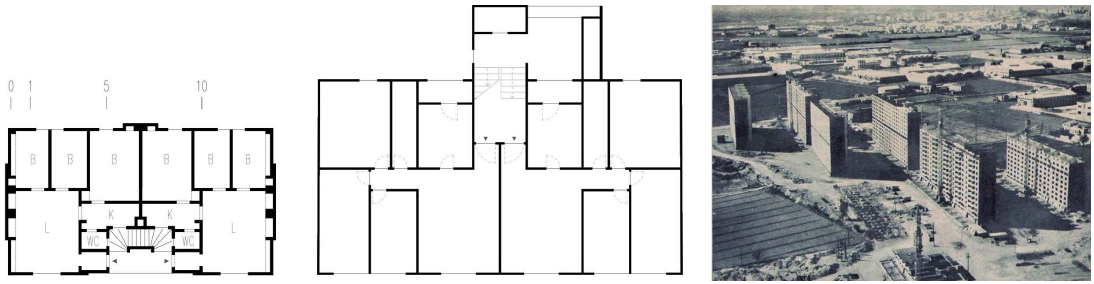


Fig 1. Left and middle: Right: The floor plan of Henri Roberts' Model House for Four Families (left) compared to the Bellvitge floor plan (middle). Both typologies share a similar spatial structure, domestic space hierarchies, and a lack of areas for interaction with neighbors. Source: author's redrawn plans. Right: Bellvitge Housing Polygon, Construction began in 1965, representing exactly what Taller sought to propose an alternative to: minimal public housing in repetitive, large-scale anonymous blocks, lacking quality public spaces and community areas. Picture under construction in 1968. Author: Manuel Domínguez López. Source: Wikimedia - CC BY-SA 4.0

> The architect must transform dreams into realities.
> But the order is in the non-visible.
> In which regulates the diversity of the elements and the structures.
> THE DEVIL'S MANIFESTO, Taller d'Arquitectura, 1968

In the *Devil's Manifesto* (Bofill Levi 2015), emerging from the events of May 1968, Taller articulated the need to rethink disciplinary norms and frameworks, positioning themselves between prevailing utopian discourses and the practical necessity of transformative urban impact. Statements like *"Architecture does not exist"* and *"Against Architecture"* reflect a call to reinvent contemporary architectural discourse and spatial solutions, while the word *"revolt"* suggests the urgency of political change. Meanwhile, phrases like *"roof the whole world"* and *"dreams into realities"* offer a critical reflection on utopian visions, such as Buckminster Fuller's *Dome Over New York City* (1960) and other speculative projects conceived without the intention of ever being built. Like their contemporaries Archigram, Constant Nieuwenhuys, and Yona Friedman, Taller aspired to reimagine social organization and urban form. Although each architect approached utopian ideals through distinct formal and conceptual lenses, the notion of a "new suspended ground" emerged as a powerful symbol for redefining the urban foundation. This concept sought to cultivate urban complexity and social possibilities, unburdened by historical legacies. However, Taller's pursuit of a built utopia —an oxymoron by definition— inevitably confronted the constraints of reality: gravity, budget, construction, and political context. Beyond these tangible limitations, time and deterioration also posed fundamental challenges. In other words, by engaging with the ground —both metaphorically and literally— reality became the measure against which these projects were ultimately assessed.

## 3. "A SHELTER IN THE AIR": HISTORY AND EVOLUTION

> I
> They wanted to build
> A place very different from those already known,
> A refuge in the air
> Against indifference and vulgarity.
>
> There they dreamed of a free space
> Like a score open to a thousand sounds,
> Like a church overflowing with incense
> Through windows and cloisters and gardens.
>
> Just like in a cave or a magic castle,
> Everything would change in that place,
> Everything would change because in the dream
> Impossible things happen with ease.
>
> Poem "Walden" (part 1), José Agustín Goytisolo
> English translation by the author

Rather than a fixed formal outcome, Taller's City in Space proposal was based on a formless and non-deterministic methodology, which they referred to as "the order of the non-visible." It was conceived as an ongoing research process that could be momentarily formalized before continuing its evolution. Between 1968 and 1975, this research materialized in 5 buildings, 1 unbuilt masterplan, a theoretical model, and a book-manifesto. These outcomes that should not be understood in isolation, as they not only overlapped in time but also represented frozen embodiments of an experimental inquiry in constant progress (Fig 2). Taller's multidisciplinary composition played a crucial role in shaping its evolving conversations, incorporating architects, sociologists, writers, musicians, filmmakers, and philosophers. Founded in 1963 by Ricardo Bofill and his father, Emilio Bofill —an architect and builder— Taller benefited from Emilio's construction expertise. Among his notable works was the Casa Gomis de Bonet Castellana (1953-1963), an iconic example of modern architecture in Barcelona. In addition, Mr. Margalef i Vila, who had previously worked with Emilio Bofill, served as building master, contributing vital construction know-how. Anna Bofill, Ricardo's sister, joined in 1964, followed shortly by English architect Peter Hodgkinson, a graduate of the Architectural Association (where Archigram members were based since 1960), who became a leading figure in the office. The earliest members of Taller included Ricardo and Anna Bofill, writer Salvador Clotas, poet José Agustín Goytisolo, and architects Joan Malagarriga, Manuel Núñez Yanowsky, Dolors Rocamora, and actress Serena Vergano. A few years later, Francesc Guardia and Xavier Llistsosella —two highly skilled Fine Arts students, nicknamed the two swans— joined the group. Taller's creative output extended far beyond architecture, encompassing not only buildings but also poetry, collages, and even films, such as Schizo (1972).

The first built project was Barri Gaudí (Gaudí Neighbourhood), located on the periphery of Reus (1968), representing the first attempt to realize a large-scale affordable housing masterplan. Designed as a mat-building, its simple symmetry and repetition of three housing units allowed for continuous expansion, creating a system of elevated streets and squares intended as leisure

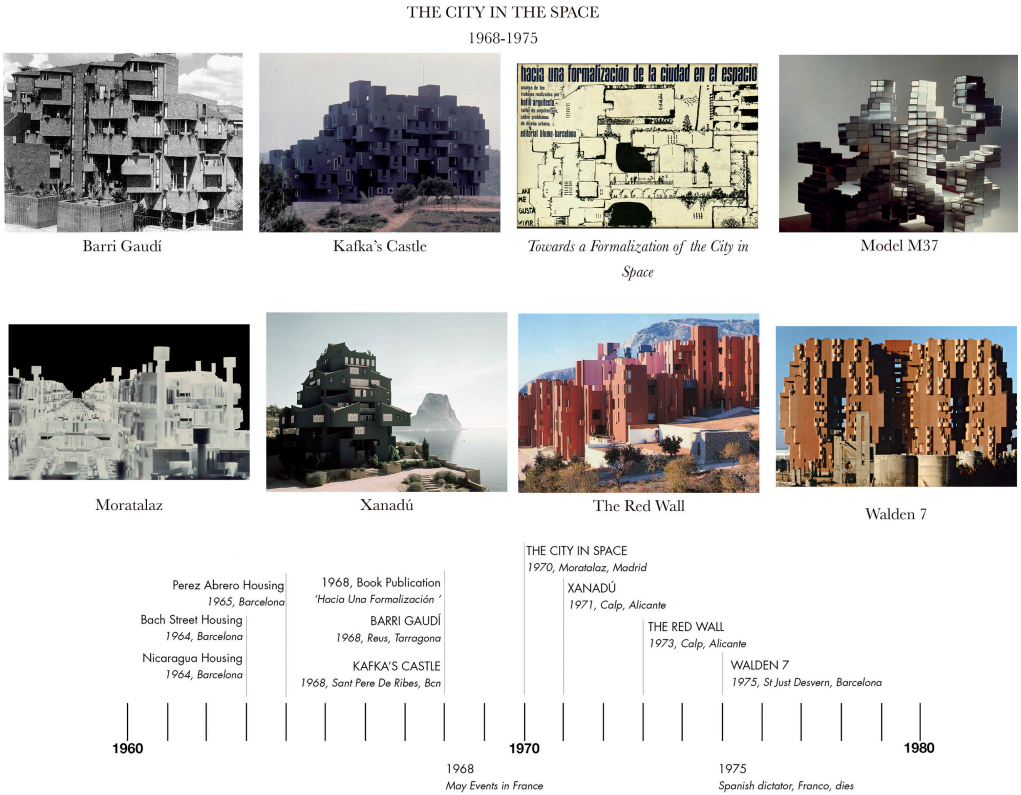


Fig 2. Top: The research projects comprising The City in Space include Barri Gaudí, Kafka's Castle, Xanadú, The Red Wall, and Walden 7, all of which were completed. In contrast, Moratalaz (also named The City in Space, as the whole research) was halted before construction, while Model M37 remained a theoretical concept, presented in the manifesto-book *Towards a Formalization of The City in Space* (1968). Source: courtesy of Archivo Bofill Taller de Arquitectura. Below: A timeline contextualizes these projects, illustrating their parallel development despite varying completion dates. It also situates them alongside Taller's earlier high-standard housing projects, such as Perez Abrero, Back Street, and Nicaragua Street. Source: author.

and meeting spaces (Fig 3). Over time, this system was envisioned to evolve into an urban tissue with no residual spaces, ensuring a seamless continuity between interior and exterior, as well as between individual and community. The stacking of modules, combined with typological variations and slight façade redefinitions on certain floors, downscaled the visual impact while reinforcing a cellular appearance, characterized by a formal intention of abstraction both in the overall composition and in specific elements such as balconies, planters, and chimneys. However, despite this visual effect, the structure neither employed cellular construction techniques nor featured cellular domestic spaces. Instead, it followed a relatively conventional layout, composed of multiple rooms articulated through a central corridor. As a result, the distribution suffered from the constraints imposed by its adaptation to a cellular exterior, leading to an ambiguous domestic

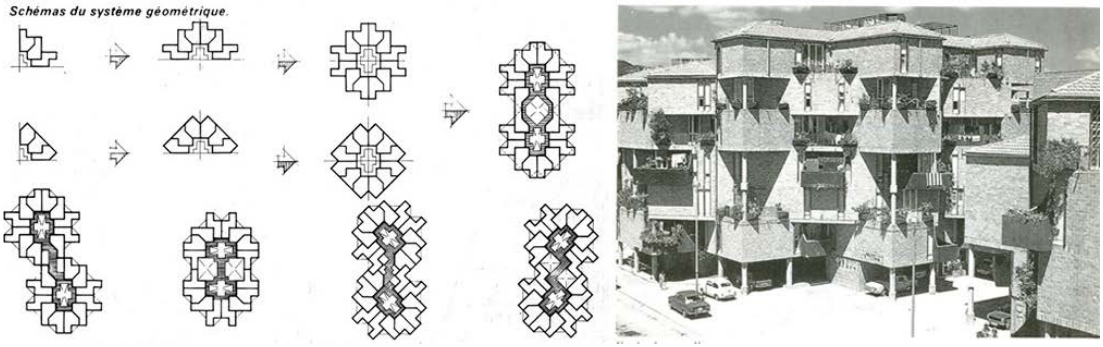


Fig. 3. Barri Gaudí in Reus, 1968. Left: Typological diagrams. Right: Photograph taken shortly after construction. Source: courtesy of Archivo Bofill Taller de Arquitectura.

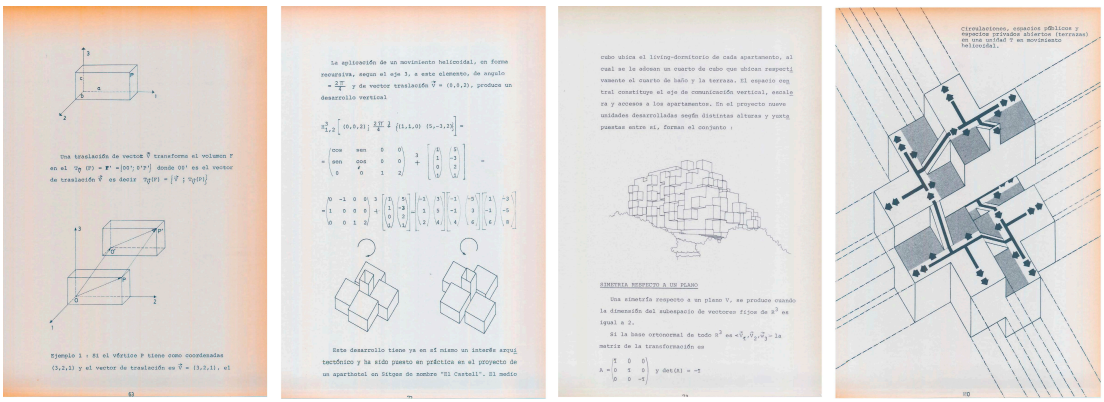

Fig 4. Anna Bofill's doctoral dissertation: "Contribución al estudio de la generación geométrica de formas arquitectónicas y urbanas", ETSAB, 1975. Some of the thesis images clearly reference ongoing projects from the Taller at the time: the second and third images from the left depict Kafka's Castle, while the one on the right shows the generative system of Moratalaz. Source: Courtesy of Anna Bofill.

spatial organization. Despite its many constructional and spatial inconsistencies, Barri Gaudí served as a radical experiment, planting the seeds for strategies and concerns that would be further explored in the years to come.

Taller's members soon recognized the need to overcome the limitations of Barri Gaudí's two-dimensional growth and to explore the complexity of three-dimensional structures. Having joined Taller in 1964 and initially working on Barri Gaudí, Anna Bofill —eight years younger than her brother Ricardo— became a key figure in this shift. Rather than an art of composition or formal design, Taller's approach was grounded in systemic rules that defined "an adequate structure for each building solution", a principle they referred to as "the structural order." Beyond her role as an architect, Anna was also a musician with a particular interest in mathematics and experimental

music that relied on probabilities and alterations of systemic rules— a key aspect throughout the entire research of The City in Space. Her doctoral thesis at the Barcelona School of Architecture (ETSAB) provided the mathematical framework for the spatial development of The City in Space through an analysis of the Theory of Isometries —a method applying systematic rigid movements to a solid volume to generate a new spatial system without deforming the original mass (A. Bofill 1975)"genre":"Doctoral thesis","language":"spa","license":"ADVERTIMENT. L'accés als continguts d'aquesta tesi doctoral i la seva utilització ha de respectar els drets de la persona autora. Pot ser utilitzada per a consulta o estudi personal, així com en activitats o materials d'investigació i docència en els termes establerts a l'art. 32 del Text Refós de la Llei de Propietat Intel·lectual (RDL 1/1996. The starting point was the definition of a minimum habitable cell, which was then iterated through multiple transformations, with non-valid results discarded based on geometric and qualitative criteria (Fig 4). This process of cellular aggregation led to increasingly complex spatial and social structures, generating interstitial spaces that accommodated shared, community uses.

In 1968, Taller published *Hacia una formalización de la ciudad en el espacio* (*Towards a Formalization of The City in Space)* (R. Bofill et al. 1968), presented in a box whose contents appeared to exceed its physical limits. Designed as a double-bound book with no clear beginning or end, it was accompanied by a large poster featuring slogans such as "un-conventionalizing the forms of life and relationships" and "why do Bonzons burn themselves?" With an explicit critique of the Modern Movement and drawing heavy influence from both vernacular Mediterranean architecture and pop tendencies, the book positioned the architect's role as analogous to that of a scientist. It argued that control mechanisms should be employed to develop "formal models, based on the economy, the psychology of behaviour, the theory of information and the calculation of probabilities". Simultaneously, the publication encouraged readers to take an active role in shaping the system by including cut-outs that allowed them to design their own urban growth beyond the book's confines. This participatory approach was exemplified through the presentation of the three-dimensional speculative prototype Model M37. Unlike other projects in The City in Space, Model M37 was based on a large-scale 72-meter cube that operated through cellular subdivision rather than by aggregating smaller units.

Also in 1968 Taller published the book *Hacia una formalizacion de la ciudad en el espacio* (*Towards a Formalization of The City in Space*), presented in a box whose content appeared to exceed its physical limits. As a double-bound book with no beginning and no end, it was accompanied by a large poster with slogans like "un-conventionalising the forms of life and relationship" or "why do Bonzons burn themselves?". With an explicit critique on Modern Movement and heavily influenced by both vernacular Mediterranean architecture and pop tendencies, architects' work was considered to be analogous to that of a scientist, and that control mechanisms should be used to develop In parallel, it also encouraged the reader to take an active role in the development of the system through the inclusion of cut-outs which allowed the reader to design their own urban growth *outside* the book. This system was exemplified through the presentation of the three-dimensional speculative prototype 'Model M37,' which, unlike other projects in The City in Space, was based on a large-scale 72-meter cube that operated through cellular subdivision rather than by aggregating smaller units.

Two years later, The City in Space project in Moratalaz (1970) —sharing its name with the overarching research— became the first opportunity to test the system at a larger scale. In this project, the bearing and cellular systems overlapped, utilizing two types of pillars that ensured the system's flexibility by integrating essential sanitary infrastructures. Façades were designed as prefabricated elements, allowing dwellers the freedom to define their own homes, thus testing the

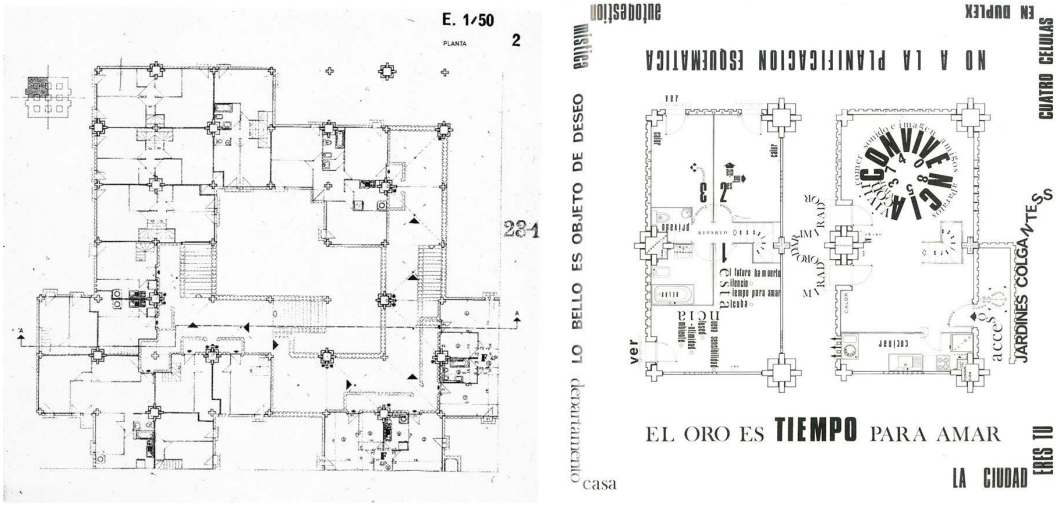


Fig 5. The City in Space in Moratalaz. Left: aggregation unit. Right: domestic space. Source: courtesy of Archivo Bofill Taller de Arquitectura.

possibilities of user transformation. Floor plans were represented unconventionally, depicting only fixed furniture, while verbs filled the space to suggest actions such as "to relax," "to heat," and "to cook." Slogans, including "you are the city," "self-management," and "a challenge in each house," reinforced the project's experimental and participatory nature (Fig 5). Despite adopting a traditional duplex typology for the domestic space, Taller demonstrated a non-deterministic approach in the overall framework. The project was intended to function as a self-managed cooperative, with 50% of its floor area designated as shared space —an unconventional surface percentage that affirmed Taller's "new inhabiting logic" based on community living. However, even though construction plans had been completed, the project was ultimately canceled after a promotional on-site event was read as a political demonstration by the military regime —or perhaps served as a pretext for its cancellation.

On a smaller and less complex scale, as holiday houses on the coast, projects like Kafka's Castle (1968, , Fig 6), Xanadú (1971), and The Red Wall (1973) became exceptional opportunities for architectural exploration, each organized around a central circulation access. Built with only four drawings, Kafka's Castle investigated the possibility of a "spiral plug-in" —a direct reference to Archigram architecture, as explicitly stated in the project's documentation. Here, for the first time, the main room of the apartment was conceived as a topographic space, featuring an inner landscape composed of fixed furniture. In Xanadú, Taller envisioned the stacking of six different typologies around a central circulation core. Mimicking the monumentality of the rock formation on the opposite side of the bay, Taller combined both traditional and modern construction elements to create an abstract expression of volumetric singularity. Adjacent to Xanadú, The Red Wall was generated through the separation of service and served areas, an attempt to recover the "Mediterranean tradition of the Kasbah." Despite its centralized plan, the use of parallel walls

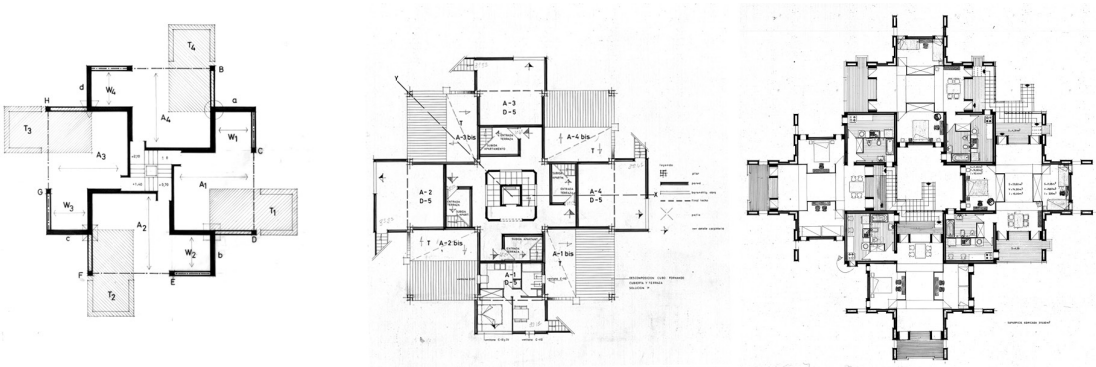

Fig 6. Left: Kafka's Castle (1968) — Housing units composed of a larger undetermined space and a smaller additional space containing service areas. Middle: Xanadú (1971) — Plan organized in a 3×3 square grid system, which nevertheless allows for a sculptural overall form. Right: The Red Wall (1973) — A reticular organizational system with a central access that contrasts with its exterior image of parallel walls. Source: Courtesy of Archivo Bofill Taller de Arquitectura.

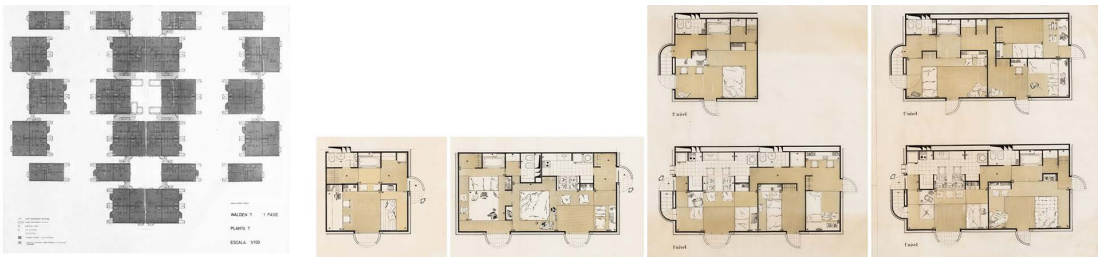

Fig 7. Walden 7, 1975. Left: The floor plan is generated through the aggregation of cells, which are shifted by one-third of their position every two floors, creating a large void between them. Right: Some of the cells that originally composed Walden 7—from left to right, housing units of 1, 2, 3 (in duplex), and 4 cells (also in duplex). Source: Courtesy of Archivo Bofill Taller de Arquitectura.

referenced constructivism, incorporating an access promenade, domestic topographies, and collective spaces on the rooftop.

Finally, Walden 7 (Sant Just Desvern, 1975) became both the most ambitious realization of Taller's utopian aspirations for The City in Space and, paradoxically, its conclusion. Built in a suburban area of metropolitan Barcelona, this singular building —comprising 446 housing units and nearly 1,000 residents— emerged as a monumental landmark on the periphery, designed both to distance itself from the stigmatization of affordable housing and to serve as a manifesto. Named after the homonymous books by Henry Thoreau and B.F. Skinner, Walden 7 fostered a broader reflection on life as a whole and encapsulated many of the concerns previously explored in earlier projects. It aimed to establish connections between the private individual and societal relationships, everyday life and economic growth, and the domestic realm and the monumental, city and countryside.

The generation of Walden 7 is driven by the embedding of cells within a larger cube, each measuring 5.3 meters per side. This cube is horizontally split in two and diagonally displaced by a third of its size. As a result, and as in the Moratalaz project, shared outdoor spaces emerge as an inherent outcome of the generative system and are distributed throughout the building. Every two floors, a network of elevated streets —previously tested in Barri Gaudí and Moratalaz— is created by the cube's displacement. Despite the building's 16 floors, circulation routes are reduced to eight, generating the need for a duplex housing system. Additional shared spaces include inner squares formed by the relative positioning of towers, a ground floor dedicated to community and commercial spaces, and a shared panoramic rooftop featuring two swimming pools —an uncommon feature in affordable housing. The generosity of communal spaces —and in contrast to the lack of them in public housing of the time, as previously explained— demonstrates a strong interest in community life and the social relationships shaped by architecture.

Departing from an approach that linked physical space perception and user behaviour (A. Bofill 2020), Walden 7's 30m² single-person cell-house stands as a statement on domestic living, reflecting the idea of flexible use and the non-determination of social structures. The dwelling is designed without interior partitions, with columns and beams positioned at the perimeter of the cube. Space is deliberately presented as ambivalent and undefined, avoiding traditional room subdivisions and instead portraying activities as part of a continuous, undistinguished topography of furniture, objects, and thresholds. A 15 cm increase in floor height seamlessly merges the ground with built-in furniture such as tables and desks. Sliding doors are used to emphasize the interconnection of spaces. A structural thickness, shaped as furniture between the kitchen and the living area, becomes a multifunctional element —for instance, the dining table is integrated into this volume, allowing the diners to sit both in the kitchen and in the living area.

In 1980, only one of the three phases of the master plan was completed. However, Walden 7 faced severe construction and economic challenges. Structurally, the ceramic façade began to break away and fall, leading to the installation of protective nets that remained in place for many years. Inside the units, residents experienced moisture damage and structural cracks. The building's renovation was completed in 1995, replacing the original façade materials. Eventually, the developer went bankrupt, and the plots designated for phases 2 and 3 were sold. These circumstances abruptly marked the end of the research on The City in Space. According to Ricardo Bofill, Walden 7 demonstrated the architect's inability to fully control all the construction, economic, and social dimensions involved in a building process (R. Bofill 2015). To him, Walden 7 also underscored the difficulty of confronting business lobbies that viewed affordable housing alternatives as a threat (Espada 2002).

II
Ah, how the darkest forces
Imposed themselves upon desire:
Ordinances and red ink
Mutilated the plans and erased the light.

Everything in its place, once and for all—
Remove those gardens and number the houses,
Sell the air by cubic meters,
And adhere to the strictest regulations.

And so that dream was left,
Reduced to a few small variations,
While utopia drifted away,
Disappearing into the sky like a proud eagle.

Poem "Walden" (part 2), José Agustín Goytisolo
English translation by the author

## 4. "LIKE A SCORE OPEN TO A THOUSAND SOUNDS": PLAYING WITH THE SYSTEM

Taller de Arquitectura had several reasons for using the cell as the starting point for their architecture. On the one hand, The City in Space was conceived as an architectural response to the housing polygons —the large-scale council housing developments of the 1960s— where individual identity was lost within endlessly repeated blocks. If the response was to be not only formal but also political, it made sense to begin at the opposite end of the urban strategy: shifting from the block-city to the individual-cell. The cell thus became a claim for individuality within the city, proposing a neighborhood not composed of anonymous citizens living in mass-repeated buildings, but rather of freely self-constituted individuals. From the aggregation of individuals —both domestic spatial cells and the people living in them— a new society would emerge. In this framing, built space, social relations, and political activities would be inseparable. Although pursuing a similar social agenda, Taller adopted an opposite approach to other utopias, such as those of Constant Nieuwenhuys and Yona Friedman. Rather than relying on a large-scale infrastructure to organize the system —where capsules or elements were placed within an overarching framework— the cell itself became the infrastructure. While Archigram conceived cells as specialized and function-dependent, Taller aimed to make them neutral and adaptable in their domestic conceptualization. For this reason, although not always recognizable from the exterior, cellular definition serves as the primary determining parameter and the building's inherent infrastructure. Drawing from Ildefons Cerdà's concept of the "minimum spatial unit" (3×3×3m) in his *General Theory of Urbanization* (1867), Taller defines the cell not as a surface but as an empty, inhabitable volume—a personal space framed by the collective void between masses.

The evolution of The City in Space, though short in duration (only seven years), was intense in both thought and production. It followed a continuous process of trial and error, where different strategies were tested in parallel. For example, cell sizes varied significantly, ranging from 72m³ in Model M37 to 5.3m in Kafka's Castle and Walden 7 (Fig 8). The three possible relationships

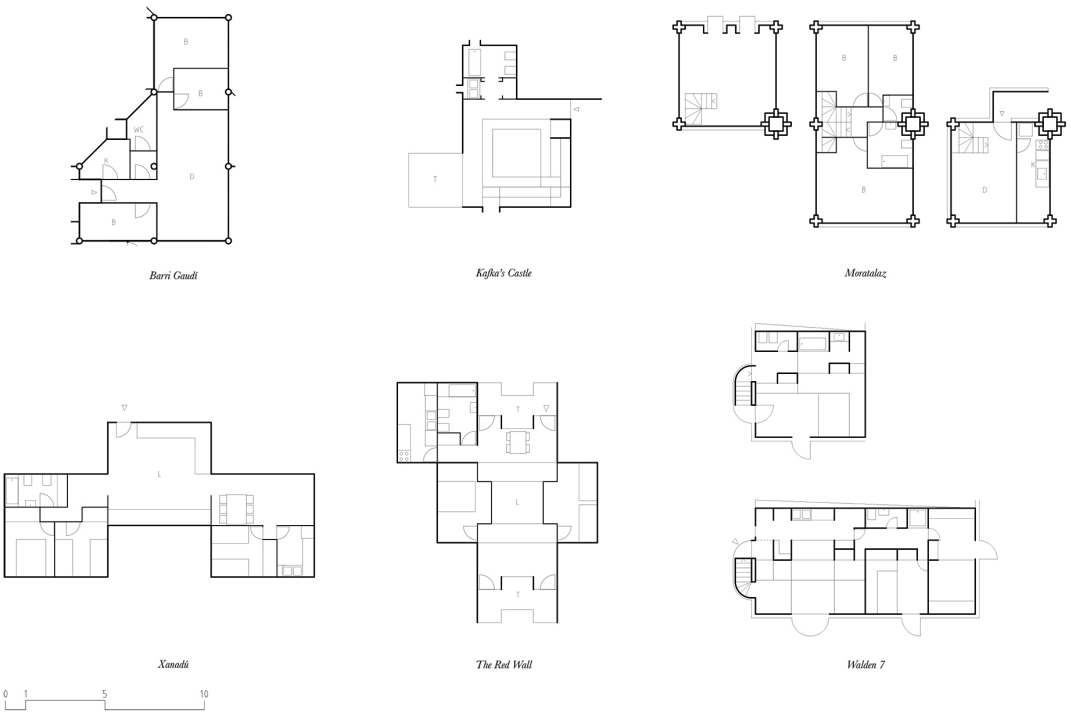


Fig 8. The City in Space projects' cellular domestic units, drawn at the same scale. Source: author.

between the cell and domestic space were explored: a single cell equates to a domestic space (Barri Gaudí and Kafka's Castle), a domestic space formed by the aggregation of multiple smaller cells (Moratalaz, Xanadú, The Red Wall), and a domestic space created by subdividing a larger cell (Walden 7 and Model M37). As shown in the figure, from Kafka's Castle onward, square-based geometries of relatively equivalent sizes can be identified across all projects.

The choice of the base cell directly influences the generation of the system (Fig 9). Driven by an experimental approach and a desire to test the limits of the system itself, each building employs a different generative structure based on rigid movements, including displacement, array, and symmetry. Two major patterns can be identified: large-scale buildings in the form of urban tissues that create generous intermediate communal spaces derived from circulation and cell displacement, as seen in Barri Gaudí, The Red Wall, Moratalaz, and Walden 7, and smaller-scale buildings organized around a single core, such as Xanadú and Kafka's Castle.

Analyzing The City in Space as a whole, it becomes evident that there was no single pattern but rather a willingness to experiment by exploring different paths (Fig. 10). Variations are present at all stages of design, from the cell to the urban tissue, including the definition of intermediate stages. The number of cells that make up a dwelling, the number of distinct housing typologies, and the number of dwellings that form the aggregation unit are all variable. From this point, there is also a variation in the overall design logic, ranging from organization within a grid, as in Barri

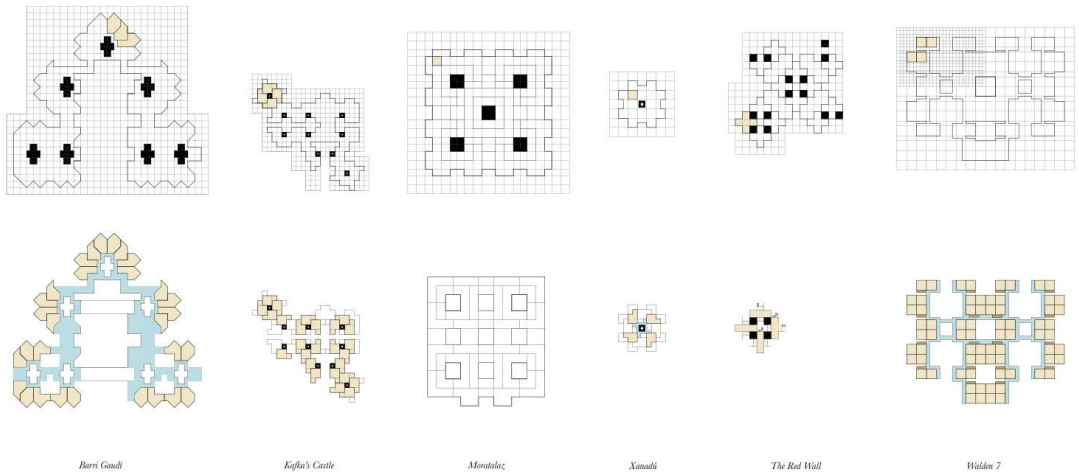


Fig 9. The City in Space projects drawn at the same scale and analysed through their urban form. Source: author.

Gaudí, to arrangement around a circulation core, as in Kafka's Castle and Xanadú, to the stacking of service spaces, as in The Red Wall, or the displacement of the cell, as in Moratalaz and Walden 7. The expansion of this system towards the urban tissue is also variable, both in the number of elements and in the applied geometric strategy, which includes symmetry, matrix organization, or displacement. Theoretically infinite growth found its limits in the repetition of large elements or through the symmetrical arrangement.

Situating these projects within a dual-axis graph that relates the geometric complexity of the cell to that of the overall system reveals an almost linear evolution over time, with a consistent relationship in which the cell becomes simpler while the urban tissue grows more complex (Fig 11). In other words, the simplest cell allowed for the greatest spatial richness. Paradoxically, housing polygons such as Bellvitge (Fig 1) were also composed of very simple cells, as each dwelling constituted a single unit, but their literal stacking into buildings and the repetitive placement of these buildings at an urban scale failed to achieve the richness of The City in Space. In The City in Space, the appearance of buildings evolved from an explicit celebration of cellular aesthetics, despite the absence of cellular strategies, as seen in Barri Gaudí, to Walden 7, where the house is formed by several cells that are simultaneously embedded within a larger cube, mediating between the domestic and urban scales. System evolution takes place in parallel to a progression of the domestic space gaining complexity and nuances as a result of pursuing undefined spaces with blurred boundaries.

Despite most of the projects aiming for an abstract formal aesthetic, The City in Space was built using traditional techniques, where bearing systems served merely as structural solutions rather than design drivers. The lack of technological considerations in its project-driven strategy was heavily criticized by Reyner Banham in his paper Megastructure (Rayner Banham 1975) and later in his book of the same title (Reyner Banham 1976). In contrast, Banham praised projects like Archigram's Plug-In City (1964) and the Pompidou Center (1972-1977). Beyond disciplinary debates —such as Ricardo Bofill positioning himself as an "anti-Archigram" (R. Bofill 2015)— The City in Space could

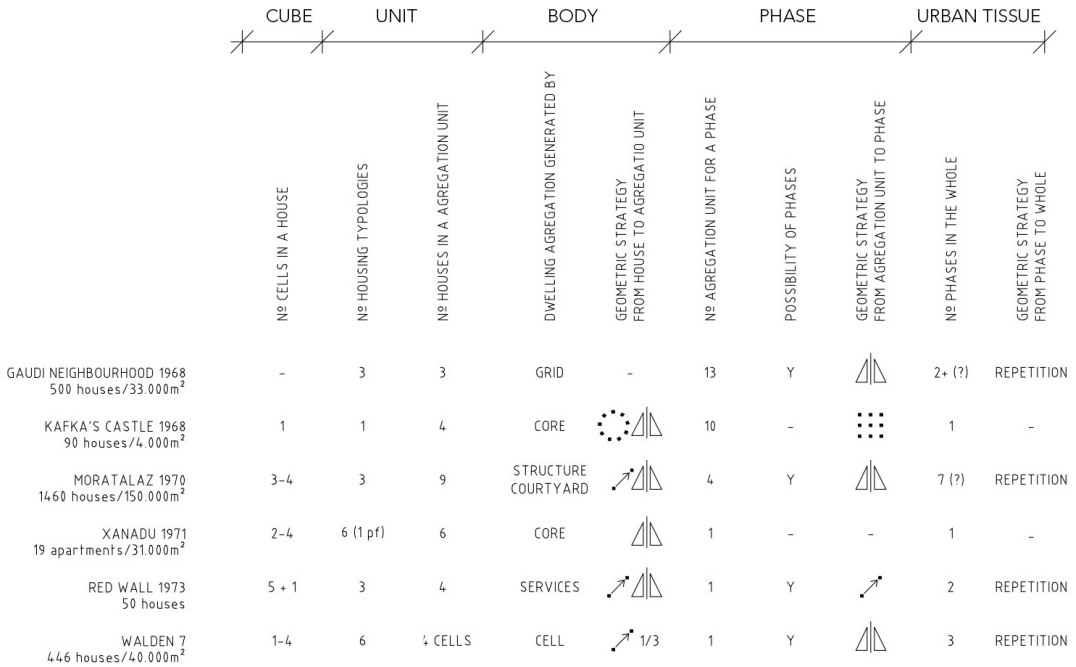


Fig 10. Generative strategies from the cell to the urban tissue. Analsys by the author.

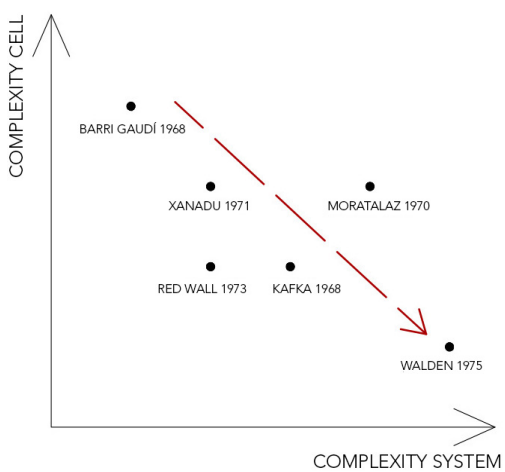


Fig. 11. The City in Space projects organised according to the complexity of the cell and the complexity of the urban system. Source: author.

never have been technologically driven given the context of developing affordable housing in a non-industrialized country. Moratalaz incorporated a prefabricated panel system and allocated spaces for future infrastructure installations within its structure, yet it was never built. However, in other cases that were constructed, projects had to be fundamentally reconsidered to adapt to more conventional structures, such as the original plug-in concept of Kafka's Castle or the diagonalized structure of Walden 7, which paradoxically ended up resembling a large-scale version of Le Corbusier's Dom-Ino framework. On the other hand, one could argue that traditional methods enabled extremely low construction costs, ensuring feasibility —for example, Model M37 cost 4,500 ptas/m² (€27/m²) in the 1970s.

The apparent constructive contradiction emerged in the late 1970s when, due to the experience with Walden 7, Taller decided to pursue projects in France, an industrialized country where prefabrication of components was possible. Rather than developing variations of The City in Space, as they had done with two previous unbuilt French projects, the Montecarlo Horse (1969) and Petite Cathédrale (1971), after Walden 7, Taller opted for a completely different approach, focusing on large-scale developments with classical urban and architectural languages, as exemplified by the Abraxas complex (1975). Taller's architectural linguistic shift was met with strong criticism from architects and intellectuals, yet it was also supported by figures like Charles Jencks, who saw in Bofill a visionary capable of reinventing himself (Guedes, Hodgkinson, & Jencks 1981). This disciplinary shift towards a more commercial architecture led to internal divisions, resulting in the departure of some members from Taller, including Anna Bofill, who left after the Abraxas project. In addition to developing her own projects, she became a pioneer in gender studies applied to urbanism in Spain. Notably, the research of The City in Space coincided with Anna Bofill's tenure at Taller.

## 5. "TIME WILL LEAVE MARKS ON THE WALLS": A CONTEMPORARY PERSPECTIVE

> III
> If a wish is beautiful,
> It changes reality even if it fails,
> And thus one can see what is made
> As something unusual and surprising.
>
> There, different ways of life are blended,
> There is a certain intimacy in the hive.
> One finds places for meeting and rest,
> Defying the air with their ambiguous forms.
>
> Of what happened with that project,
> Time will leave marks on the walls.
> If the dream failed, it was because everything
> Had been prepared for it to happen that way.
>
> Poem "Walden" (part 3), José Agustín Goytisolo
> English translation by the author

As we reach the 50th anniversary of the project's high point, the construction of Walden 7 in 1975, it is worth considering the relevance and impact that The City in Space has had on contemporary architectural debates within its immediate context, the city of Barcelona, positioning Taller's research as ahead of its time in terms of the discussions and project strategies it introduced. From all the domestic experimentation, three main themes stand out: the definition of minimum housing, the design of the building from its cell and the flexibility possibilities that arise from it, and the political dimension of housing linked to community life, shared spaces, and user appropriation.

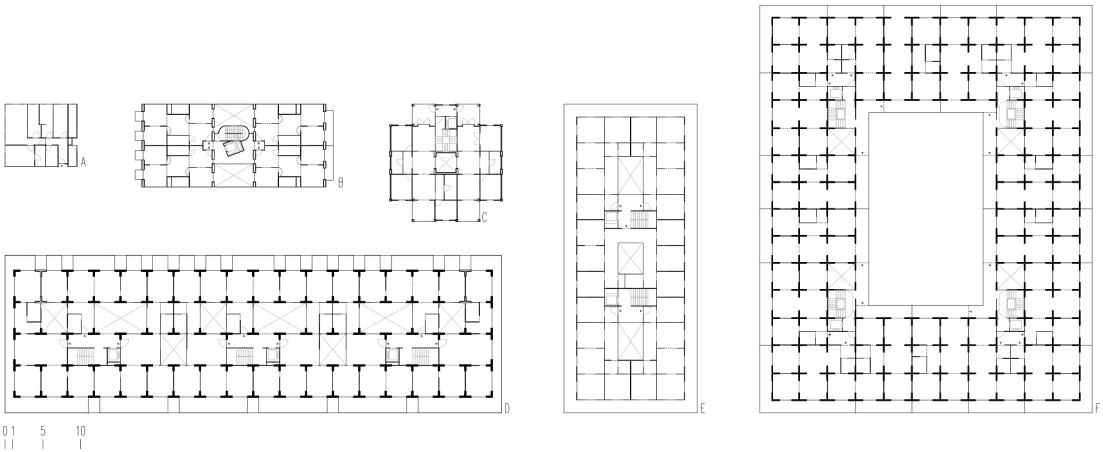


Fig 12. The shift in the way domestic spaces are planned towards a cellular logic. A: A recent example preceding the change: MIM-A and Juan Herreros, Edificio Caracol, 2009-2019 (fragment). B—F: Examples of housing organized in a cellular manner. Except for B, all are public housing projects. B: 110 Rooms, Maio, 2016. C: Housing in Trinitat Nova, Narch + Maira Arquitectes + DATAAE, 2018-2023 (fragment). D: Competition Proposal, Carles Enrich, 2018. E: H Arquitectes, Gavà Housing, 2017-2022. F: Pisa Housing, Peris Toral, 2017-2020. Source: redrawings by the author.

First, Taller d'Arquitectura embarked on a research project focused on the minimum size of housing. This recurring debate throughout the 20th century (Teige 2002; Klein 1980), particularly during the reconstruction of Europe after World War II, is once again on the political agenda. The rising costs of construction and land value are reducing the standard sizes for new housing. In 2005, Spanish Minister of Housing María Antonia Trujillo proposed reducing the minimum size of public housing to 30m² (Galindo 2005), a measure that coincides with the one tested in the minimal cells of Walden 7. However, Walden 7 was designed with units ranging from 1 to 4 cells, depending on household size. Although invisible from the exterior, numerous transformations and combinations of cells have taken place over the years, with some units now reaching up to 8 cells. Paradoxically, a structure as seemingly immovable as Walden 7 has proven to be much more flexible than other architectures designed for adaptability thorough plug-in structures. Just as an example, no unit was ever added, removed, or relocated in the Nakagin Capsule Tower over its 50 years of existence (1972-2022), though this does not diminish its architectural value or constructive experimentation. Flexibility proved more effective when planning an interconnected cell system with a facilitative infrastructure rather than through the notion of the disposable city, with capsules for specific uses, as seen in Archigram. In other words, internal flexibility has proven to be more adaptable than external flexibility.

Second, the response to flexibility through the design of housing composed of individual rooms has become a well-established architectural strategy in Barcelona over the past decade, demonstrating a shift in the way buildings are conceived toward cellular floor plans, where the unit that constitutes the building is not the dwelling itself but rather the individual room (Fig 12). In recent architectural logic, the floor plan is conceptualized as a sum of cells —neutral

rooms— equalizing the dimensions of bedrooms, living rooms, and kitchen-dining areas. Similar to the evolution of The City in Space, the room-cell has been simplified and has lost specialization (previously dictated by room size, which conditioned its function. See example A, Fig 12), allowing for richer aggregation. The interconnection of these rooms provides, on the one hand, great flexibility in the use of the space due to the generous room sizes. On the other hand, in some cases, the positions of the dining and living areas are interchangeable. However, two distinct characteristics emerge as limiting factors in the current system when compared with The City in Space. First, due to regulatory evolution (namely (*Código Técnico de la Edificación* 2006; *Decret Llei 141/2012* 2012) —which, while ensuring minimum housing standards, also restricts certain typological solutions. Combined with increasingly smaller housing size standards, there has not been a duplex typology in public housing in Barcelona for at least 20 years. As a result, the richness of the three-dimensional system is lost, reducing it to a two-dimensional one —like if The City in Space would never have abandoned the bidimensionality of Barri Gaudí's horizontal growth. If spatial richness in section is lost, simple stacking of floors remains. Second, these projects are usually developed on sites where volumetry is predetermined by urban regulations. By contrast, the projects of The City in Space allowed for formal exploration at their outer limits. Contemporary housing designs start from the perimeter and move inward, rather than beginning with the cell to determine the building's overall form based on that unit.

Third, Barcelona is currently experiencing a rise in cooperative housing under a grant-of-use model, characterized by shared ownership and collective management of space, with a typological approach that reduces private space in favor of expanding common areas (Avilla-Royo, Jacoby, & Bilbao 2021). As The City in Space, cooperative housing under grant-of-use acknowledges the political dimension of housing. In this regard, The City in Space provides a historical perspective on the evolution of shared spaces and their role in urban living. Unfortunately, the cancellation of the Moratalaz project makes it impossible to evaluate what might have occurred, as it was conceived as a cooperative project —though with a model very different from today's cooperatives, where ownership remains collectively managed over time (Fernández & Miró 2016).

In the Gaudí neighborhood in Reus, common areas have often been underutilized, and rooftop laundry spaces have been enclosed with metal grates (Fig 13). The apartments are largely disconnected from the corridors, eliminating the "eyes on the street" effect that Jane Jacobs argued fosters a sense of collective care among neighbors (Jacobs 1961). Buildings like Walden feature better-maintained common spaces, though they also exhibit a rigid separation between private and communal areas —an issue that cooperative housing actively seeks to address. A particularly relevant aspect highlighted by contemporary images of Barri Gaudí (Fig 13) is the lack of a cohesive community that takes care of shared spaces.

Despite the gradual decline of self-management ideals, Walden 7 is widely regarded as a success in fostering a strong sense of community and identity through its architectural design (Bosch 1997). The continued high demand for housing within the complex attests to its enduring appeal. However, the limited physical interaction between apartments and shared corridors in Walden 7 has restricted the appropriation of communal spaces —unlike in Barri Gaudí, where larger, yet often underused, common areas provided more potential for social engagement. Ensuring the success of communal spaces requires more than their mere provision; an optimal connection with dwellings through well-integrated intermediate spaces is essential for fostering meaningful appropriation and use.

Fig 13. Three pictures of Barri Gaudí taken by the author during a visit in 2024. Left: Entry door to a house accessed through a shared corridor. The house is hermetically enclosed, offering very limited possibilities for social interaction with shared areas. Middle: View of the rooftop, showing designated laundry spaces enclosed in metal cages. The dwellings on the upper corridor are also secured with metal bars. Right: A generous communal rooftop, yet underutilized. The three images highlight the lack of use and appropriation of communal spaces and illustrate how housing, instead of opening up to shared spaces, tends to isolate itself from them.

Community social relations also play a fundamental role. First, during the building's gestation, if —as in the case of cooperative housing— the community precedes the building, it fosters stronger social bonds from the outset. In contrast, public housing follows a model where the building is designed incorporating communal spaces with the expectation that residents will use them responsibly. However, these spaces are often closed off to prevent potential conflicts, prioritizing the avoidance of negative consequences over the encouragement of positive communal interactions (Avilla-Royo & Bilbao España 2024). This underscores the importance of fostering community cohesion from the earliest stages of a project's development.

Second, the way common spaces are utilized is heavily influenced by the ownership structure. In individual ownership models, communal areas tend to be less actively appropriated compared to cooperative housing, where residents share both the responsibility and the benefits of maintaining and managing these spaces. Communal living is not only a matter of typology but, above all, one of coexistence, although shaped by spatiality and materiality. To ensure that generously designed communal spaces fulfill their intended function, social support mechanisms (self-managed or professional) should be integrated into the management framework. This is particularly relevant in cases where residents are in vulnerable conditions. Ensuring respectful use prevents both physical degradation and disturbances to residents.

Despite Ricardo Bofill's repudiation of The City in Space as a "failure" and an example of "what shouldn't be done" (R. Bofill 2015), Taller demonstrated the feasibility of both qualitative and quantitative improvements in affordable housing. While debates and experiments around affordable housing, collective spaces, and cellular architecture were widespread in the 1960s, what makes Taller's work remarkable is its determination to translate these discourses into built reality despite significant challenges. This was achieved through a systematic linguistic and spatial experimentation that pushed the boundaries of architectural design methods and disciplinary conventions. The monumentalization

of affordable housing fostered a unique sense of identity and pride, despite the frequent stigmatization of low-cost peripheral developments. This could only be achieved by addressing the collective dimension of community and redefining the urban approach — scaling up from the individual cell rather than imposing a predetermined, rationalized subdivision of space. In this way, the city was conceived from the domestic and individual outward in volumetric terms, rather than through the stacking of repetitive floors and the compartmentalization of urban and domestic spaces.

By designing a generative system rather than a fixed formal outcome, Taller's research and design experiments acknowledged the inherently unstable and evolving nature of the city. Their work left behind a series of utopian materializations, each adapted to specific contexts, offering a radical alternative to conventional urban planning. Ultimately, their projects stand as a testament to the idea that architecture can only be revolutionary when it is both politically aware and physically constructed.

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