

DOMESTIC, NOT PRIVATE: FEMININE PROPOSALS FOR CARABANCHEL PAU EXPANSION, MADRID, SPAIN

DOMÉSTICO, NO PRIVADO: PROPUESTAS EN FEMENINO PARA EL PROGRAMA DE ACTUACIÓN URBANÍSTICA (PAU) DE CARABANCHEL, MADRID (ESPAÑA)

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Abstract

This paper offers a gender-based analysis of collective space in the domestic realm, beyond privacy, produced in significant social housing case studies in the urban expansion of Carabanchel neighbourhood (Carabanchel PAU, Madrid, Spain). Designed at the beginning of the 21st century, this period involves the incorporation of women into young architectural teams. Thus, this study seeks to delve into the significance of this role through the detailed study of eleven cases. Focussing on the common spaces of housing buildings, these small elements seem to recall the passage from the safe to the unsafe environment, from the space of the reproductive labour to that of the intersectionality. Following this finding, we propose an incipient study of the transitional spaces between the private and the public, where contacts between neighbours and the exchange of care beyond the private sphere are celebrated, as well as the public representation of domestic life. The methodological approach has established four meaning

aspects to analyse, related to inhabitants' life and intended as architectural parameters: spaces for neighbourhood flows, both for residents and visitors; areas of activity and leisure, available for resident daily life; connections between these areas of activity and leisure and, finally, connections of the common areas with the dwellings. The aim is to investigate the extent to which the participation of women architects makes these spaces more effective for care giving—or simply, more suitable for the expansion of intimate life and socialisation with neighbours. The results provide optimistic data for the discipline and its capacity, through this type of sensitivity, to correct some of the errors in the system of production of public space.

Keywords: architecture; gender perspective; city; urban design; urban planning; townscape; public space; architectural analysis.

Resumen

Se plantea un análisis con perspectiva de género sobre el espacio colectivo, de carácter doméstico, pero no estrictamente privado, producido en una selección de casos significativos de vivienda colectiva en el Programa de Actuación Urbanística (PAU) de Carabanchel (Madrid, España). Proyectados a principios del siglo XXI, un periodo clave para la incorporación de la mujer a los jóvenes equipos de arquitectura, este estudio pretende profundizar en el significado del papel de las arquitectas. Se ha incidido en los espacios comunes, estos pequeños elementos que recuerdan el tránsito del entorno seguro al inseguro, del espacio del trabajo reproductivo al de la interseccionalidad. Se propone, por tanto, un estudio incipiente de los espacios de transición entre lo privado y lo público, donde se celebran los contactos entre vecinos y el intercambio de cuidados más allá de la esfera privada, así como la representación pública de la vida doméstica. Para ello se analizan cuatro aspectos, relacionados con la vida de los habitantes y concebidos como variables arquitectónicas: espacios de flujos vecinales, tanto para residentes como para visitantes; zonas de actividad y ocio, disponibles para la vida cotidiana de los residentes; conexiones entre estas zonas de actividad y ocio y, por último, conexiones de las zonas comunes con las viviendas. Se trata de investigar hasta qué punto la participación de arquitectas hace más eficaces estos espacios para los trabajos reproductivos o, simplemente, más aptos para la expansión de la vida íntima y su socialización con el vecindario. Los resultados arrojan, por otra parte, datos esperanzadores para la disciplina y su capacidad, a través de este tipo de sensibilidad, de corregir algunos errores del sistema de producción del espacio público.

Palabras clave: arquitectura; perspectiva de género; ciudad; urbanismo; diseño urbano; paisaje urbano; espacio público; análisis de la arquitectura.

1. INTRODUCTION AND OBJECTIVES

The city is such a complex phenomenon that, often, a study of it ends up lost in a maze of prospective fields, cultural, socioeconomic and political determinants, even contradictory disciplines and analytical tools. Moreover, if the city as a consolidated form is a crystallisation of all its original multiplicity, developing urban processes adds indeterminacy, to the point that only pure speculation is able to brazenly face the complexity of the changes. With the objective of clarifying some parameters, this article proposes a disciplinary reading of the form of the collective landscape in its most intimate scale, capable of accepting urban diversity, including sprawl (Heidari, 2021), but focusing on interpreting the architectural facts that are designed from and towards daily public spaces or, properly, common spaces as understood, characterised and defined by Gutiérrez-Mozo et al. (2021).

The study is immersed in the evolution of the architecture and the city of Madrid over the last forty years—those of the latest Spanish democracy. In that time and place, but also that cultural setting, the most emblematic developments have been called Programas de Actuación Urbanística (Urban Intervention Programmes) or PAU (Dioni, 2021). To give an idea of the size of these operations, we should note that the first six proposals collected in the 1993 Avance de Plan General de Ordenación Urbana de Madrid (Pre-General Urban Plan of Madrid) currently includes more than 160,000 inhabitants (Madrid City Council, 2021), that is, almost 5% of the total population of the city of Madrid. The multiple deficiencies in this phenomenon have already been thoroughly analysed from numerous scientific standpoints (Díaz Orueta, 2012; Naredo & Montiel, 2011; Zárata, 2006). From the point of view of urban studies in particular, it is perceived as a failure of the discipline, including «municipal management, urban design and architecture» (López de Lucio, 2013, p. 243). For others, «it is not a mistake in itself, but the problem is the model» (Dioni, 2021, p. 85). However, intentional or not, the systemic collapse of the multiple agencies is evident; agencies that should have ensured physical spaces compatible with the natural environment and optimal for human life, consistent with a democratic society and sensitive to the needs of everyone, especially the most vulnerable. And within this latter collective, two very significant groups are worth remembering: children and

the elderly. Plus, one more that represents half of the population—women—who, in the demographic environment we are discussing, have been the ones mainly dedicated to caring for their children, a situation that has exacerbated since the 2008 financial crisis (European Parliament: Women's Rights and Gender Equality Committee, 2012).

In this social, economic and political environment, it is possible to rethink the last frontier between the public and the private: the space that is still inhabited as a social—even communal—place but is already perceived as domestic. Between intimacy and socialisation, in this last space that «a modicum of public responsibility for each other» (Jacobs, 1961, p. 82) that seems to have disappeared beyond the limit of the property still exists, in the deserted streets and the oversized avenues of the PAUs. Thus, this collective space on a domestic scale may mean the last disciplinary resistance, where architecture is able to help people to share their own cosy memorable place, their serene haven in comparison with the anguish of the jungle. This study, therefore, aims to establish a series of necessary—or, at least, recommended—conditions so that these common spaces with a domestic scale, vestibules before the intimate space of the homes themselves, authentic *in-between spaces* (Hertzberger, 2009), are effective when it comes to hosting the «marvel of balance between its people's determination to have essential privacy and their simultaneous wishes for differing degrees of contact, enjoyment or help from the people around» (Jacobs, 1961, p. 59).

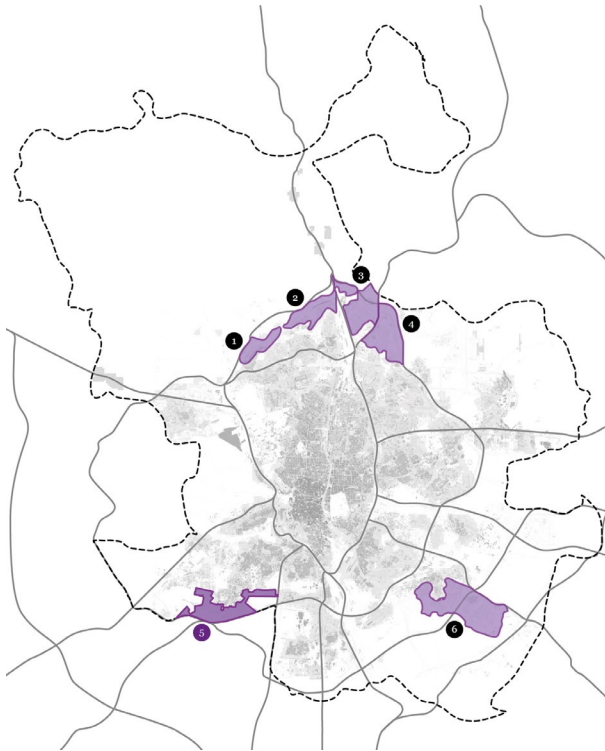
In addition, this research proposes to cross reference the analysis by looking at the influence of the gender perspective on urbanism and architecture. In a professional environment where female architects were already the norm¹, it is interesting to demonstrate whether their contributions—or those of architects that share this sensitivity—were significant. Or, if on the contrary, these spaces linked to reproduction have not benefitted from female authorship of the architecture, whether singular or plural.

1. In the course 2000-2001, 1,456 women architects graduated from Spanish universities, a total of 49% of the new professionals, according to Pérez-Moreno (2021b). This data can be compared to the conclusions by Agudo and Sánchez de Madariaga (2011).

2. CONTEXT AND CASE SELECTION

The tool of the already famous PAU as a possible development of Suelo Urbanizable No Programado (SUNP; Unplanned Developable Land)—at the exceptional discretion of the municipality—dates back to the 1976 Land Act (*Ley sobre el Régimen del Suelo y Ordenación Urbana*, 1976), which began to be applied in Madrid with the 1985 Plan, explicitly contemplated for the possible urbanisation of this SUNP. However, the 1997 Plan—as already announced in its 1993 Pre-Plan—used the tool of the PAU as a mere reminiscence of the previous ones, to justify «the classification of land at the maximum capacity of the municipal area» (López de Lucio, 2013, p. 243). Thus, the normative tool that had been created as a control mechanism for the territory was subverted by the city council itself, even before the approval of the 1998 Land Act, to make it easier for all unprotected land to be quickly developed. In short, the 1997 Plan General de Ordenación Urbana de Madrid (PGOUM; General Urban Plan of Madrid) already incorporated six isolated interventions known as PAUs. Five of them were defined as Suelo Urbanizable Programado Incorporado (UZI; Incorporated Planned Developable Land): 1) Arroyo del Fresno—still to be developed, but already urbanised; 2) Montecarmelo; 3) Las Tablas; 4) San Chinarro; and 5) Carabanchel; plus one defined as Suelo Urbanizable Programado (UPZ; Planned Developable Land); 6) Ensanche de Vallecas (Figure 1). A total of 2,000 hectares—3.3% of the municipality of Madrid—for almost 70,000 housing units.

Figure 1. New urban plans (PAUs) incorporated in 1997 PGOUM



Source: Authors

Of the six planned PAUs between the 1993 Pre-Plan and the 1997 PGOUM, the PAU in Carabanchel offers the «most interesting design of this generation of developments, thanks to its continuity with the historical fabric» (López de Lucio, 2013, p. 262). That is, it is not just an island amid the sprawl. This, however, does not save it from the desertification of the collective public space just like in the other developments, nor even from the «desire for order and tranquillity» (Dioni, 2021, p. 142) that materialises in the obsession with daily security. However, larger doses of public housing—coherent with less real estate speculation—and, above all, the generalisation of a less conventional— less commercial or, simply, better—architecture promoted

by the Empresa Municipal de Vivienda y Suelo (EMVS; Municipal Housing and Land Company), have made this PAU an interesting laboratory for the possibility «to create city and generate quality public spaces with public buildings» (Pizarro & Rueda, 2009, p. 89). In short, it seems to stand out among its contemporaries as an example to verify if, indeed, an architecture of a certain interest has been able to alleviate the effects of the failure of the PAUs or, formulated in another way, if architecture can still create the sense of a city, or, at the very least, a neighbourhood.

The Carabanchel PAU occupies an area of more than 350 hectares for a total of some 11,350 housing units. In order to undertake a qualitative study, different works were selected that have enjoyed greater and better critical fortune, defined by their appearance in the specialist media and their longevity in architectural publications. In this sense, it is important to point out that the eight projects documented by Pizarro and Rueda have been analysed for their disciplinary impact. While the other three chosen projects correspond to cases that, in addition to being published in various media on the dates of their inauguration, have remained active in the COAM architecture guide (Colegio Oficial de Arquitectos de Madrid, 2014) and EMVS publications. Two have been selected that were realised collaboratively between international teams and local architects: one signed by the Chilean, José Cruz Ovalle with Enrique Nuere, and the other by the New York firm Morphosis, led by Thom Mayne, with Begoña Díaz-Urgorri (Figure 2).

Figure 2. Selected works and locations in Carabanchel PAU



Source: Authors

3. METHODOLOGY

In general, typological investigation and innovation do not seem relevant in the housing projects designed for the Carabanchel PAU as we will discuss in more detail later². Many other aspects of architectural experimentation, which justify the critical fortune of the selected examples, have also been left out of the present work: the architectural language and the composition of elements, the volumetric compositions, the spatial sequences, the construction systems, materials and sustainability.

This study focuses, therefore, on the spaces defined as domestic, but not private, that is, those places designed in the residential projects that do not belong to the house, but to the community, and that, given their nature and scale, are likely to host a part of everyday activity, as socialised extensions of family life. It is about establishing parameters, shared in the architectural discipline for other types of priority fields, and observing how and how much they have been considered in the configuration of these spaces and if the projects were successful in generating places to meet basic functional needs or, simply, if they have been sensitive to their existence. We should not forget that, in terms of strict productivity or efficiency, these spaces only play a role in terms of circulations. That means that their design focus on maximum economic optimisation and are dimensioned with the minimum legal standards as they are considered unqualified for any other use.

Key concepts in the generation of places for other scales and constructive typologies were used, from cities to institutional architecture. The effort on this small scale is to «perceive the beneficial dimension of architecture» (Fernández Alba, 1989, p. 22) to prevent the iconographic—and mandatory—consumption of the inhabited space and, with it, the inevitable abhorrence of the place. Thus, when in a 1962 essay Aldo van Eyck appealed to the «medicine of reciprocity» in his celebrated orphanage, he proposed a house that accommodated the relation between the domestic and the public, between its hierarchies and spatial compositions. In fact, one of his notable objectives was the proposal of a transition space between the public exterior

2. An important exception is the flexible housing designed by María José Aranguren and José González Gallegos, studied in detail as a typological experiment by Soler Montellano (2022).

and the private interior, that «in-between domain [...] helping to mitigate the anxiety that abrupt transition causes» (van Eyck, 1999, p. 89). In collective housing, this «idea of creating public and semi-public spaces that favour the relationships between residents» (Montaner, 2015, p. 169) continues, most times dependent on the quantity and quality of the space designed for this function, which is often ignored and disdained.

According to these conditions, the following parameters, corresponding to both the relationship between the residents and the expansion of the domestic space beyond the limits of the house itself, were established for the analysis:

- a. Resident flows: this is about identifying the spaces prepared to host these flows, and check if they favour the «sum of causal, public contacts at a local level [that makes] a web of public respect and trust, and a resource in time of personal or neighbourhood need» (Jacobs, 1961, p. 56). This web must guarantee a relevant balance between «a comprehensive «coming and go» traffic [and] outdoor stationary activities—specially short-term and spontaneous activities» (Gehl, 1987, p. 186).
- b. Environments of activity and meeting: together with the dynamic spaces for the resident flows, we studied if there are also «meeting and exchange spaces, versatile in their use and animated by all kinds of individual or collective appropriations» (Delgado, 2011, p. 16). While this quote clearly refers to the street, community needs for interaction are relatively comparable at this reduced scale, as they are to the fact that «social activities are indirectly supported whenever necessary and optional activities are given better conditions in public spaces» (Gehl, 1987, p. 14).
- c. Connections between environments: the study analysed the connection between the spaces for activities, for leisure and the areas dedicated to flows. That is, how they configure an inner urban landscape, an «art of the relationship [...] to take all the elements that go to create the environment [...] and to weave them together in such a way that drama is released» (Cullen, 1971, p. 10). These connections can configure a «physical structure with communal spaces at various

levels permits movements [...] from the more private to the gradually more public spaces, giving a greater feeling of security and a stronger sense of belonging to the areas outside the private residence» (Gehl, 1987, p. 61). On the other hand, this sense of community should be in accordance with the decision of the inhabitants to conserve their intimacy (Rapoport, 1977), in a way that allows options for a certain balance between domesticity and socialisation.

- d. Connections with the housing: this section looked at whether these semi-public domestic-scale spaces have «a constant succession of eyes» (Jacobs, 1961, p. 50) that guarantee «nearly all children and a considerable proportion of other age groups to maintain closer more frequent contact with friends and acquaintances» (Gehl, 1987, p. 21). In turn, this identification of common spaces as belonging to the community allows «a better and more useful framework for everyday activities» (Gehl, 1987, p. 53). This aspect is of particular interest in social housing, given the usual restrictions of the sizes of the properties, so that «the activities in the house can flow freely outside» (Gehl, 1987, p. 189).

4. WOMEN ARCHITECTS AND ARCHITECTURE TYPES

The professional evolution of women as architects in Spain has been thoroughly studied from different perspectives, including some sections of the Zaida Muxí's retrospective work *Women, Houses and Cities* (2018) and the multiple efforts of numerous researchers focusing on «looking at the history of architecture from a gender approach and [...] giving voice to outstanding women architects within the architectural culture of our country» (Pérez-Moreno, 2021b, p. 19). This was also the focus for the different articles published in the 17th issue of *Feminismo/s* journal, whose introduction insisted on the need to advance «in the construction of an effective and real equality» (Gutiérrez-Mozo, 2011, p. 9). Yolanda Agudo and Inés Sánchez de Madariaga's seminal contribution to the study of the particularities of women architects' careers in Spain, its authors remembered that with the transition to democracy, the number of women grew from «a scarce 15% in 1980 to exceed 50% of the students enrolled in the first year for the first

time in 2007» (Agudo & Sánchez de Madariaga, 2011, p. 160). Specifically, at the School of Architecture of Madrid (ETSAM) exceeded this with significantly linear growth, from 15% in 1978 to 57% in 2011. That is, towards the mid-90s there was already a significant number of young women architects who either decisively participated in architecture competitions (including in some of the case studies chosen), or, in other cases, they were part of the teams—either as qualified designers or as students—of other professional offices and consultancies as well as engineering, building and real estate companies. This confirms that the construction of the PAUs counted on the intervention of a good number of women architects, some more and others less known.

By looking at the confirmed authorship of the projects, the comparison between the number of women architects involved in the early 1980s in the projects in Southeast Palomeras (Cordero, 2020) and those in the selected projects for the Carabanchel PAU, shows that, in effect, the incorporation of women was already a consolidated fact, at least in the most innovative practices. Among the eleven selected cases, only two are signed by all-male teams. One of them was commissioned from the international figure, José Cruz Ovalle, associated with the local architect Enrique Nuere, while the other was a young solo architect, Jacobo García-Germán. For the other nine teams with female participation, a man headed the design team in six cases: Sergio de Miguel, accompanied by Cristina López, Blanca San Martín, Jesús Ulargui and Eugenio Vivas; Foreign Office Architects (FOA), international team led by Alejandro Zaera Polo and Farshid Moussavi; Morphhosis, the firm based in New York led by Thom Mayne, associated for the Carabanchel project with the architect Begoña Díaz-Urgorri; the office of Andrés Cánovas, Nicolás Maruri and Atxu Amann; Dosmasuno Architects, founded by Ignacio Borrego, Néstor Montenegro and Lina Toro; and the partnership formed by Juan Carlos Sancho and Sol Madrideo. In the other two projects signed by mixed teams, women headed the list: María José Aranguren with her partner José González Gallegos and Beatriz Matos with Alberto Martínez Castillo. Finally, one of the teams was led by two women architects, Mónica Alberola and Consuelo Martorell.

In general, in almost all the proposals, disciplinary experimentation dominates over formal and/or constructive issues, which are usually the

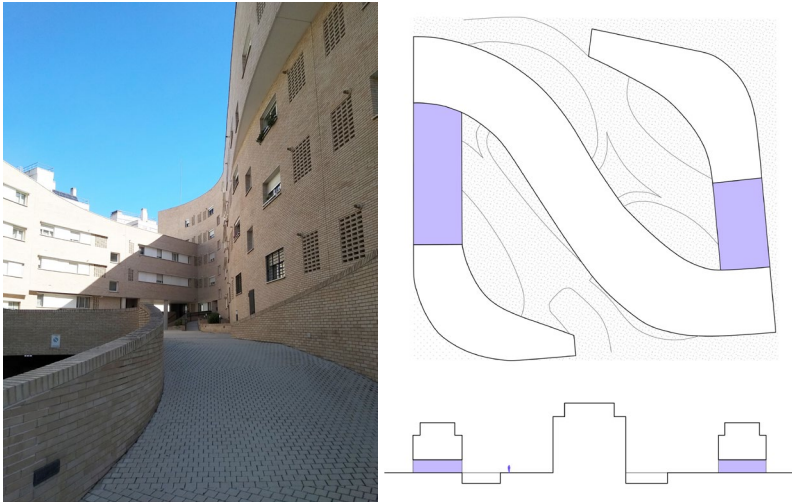
core that gives conceptual and/or technical support to a project. In terms of architectural types, only María José Aranguren and José González Gallegos's project focused on the ways of life of the residents, who «dedicate their free time at home to communal activities» (Soler, 2022, p. 10) with the rest of the family members. The other selected cases do not show any significant differences in terms of typological investigation, and they even seem to represent a crystallisation of the social housing laboratories undertaken in Madrid in the previous decades through the operations, Remodelación de Barrios (Neighbourhood Remodelling) and Nuevos Ensanches (New Extensions).

5. ANALYSIS OF CASE STUDIES AND RESULTS

What follows next are the analysed case studies and the results obtained from the four parameters of this study:

1. **Complex of 101 social housing units**, designed by José Cruz Ovalle in collaboration with Enrique Nuere: the resident flows were considered when designing the circulations on the ground floor, which link the streets and the adjacent park to the entrances in sinuous curves that contrast with those of the facades. However, these flows are not articulated with activity or meeting spaces, not on the ground floor or, even less, in the circulations of the entrances and exits to the housing units. The same can be verified in the design of the common spaces and the connections between the areas of communication—both horizontal and vertical—and the private spaces of the housing. The building, in this way, brings two interesting triangular courtyards to the semi-public space with notable undulating facades in pale brick but does not manage to achieve complex articulation between these two spaces or with the housing on the ground floor (Figure 3).

Figure 3. 101-unit social housing complex (José Cruz Ovalle, Enrique Nuere). Connections and ground floor schemes (floor plan and section) of common spaces



Source: Authors

2. Complex of 78 social housing units, designed by Jacobo García-Germán. The resident flows on the ground floor are conceived as free space within the plot combining the covered places with the open-air ones that are bigger and partially landscaped with a children's playground. These spaces under the blocks, which open to the two adjacent streets, lead to the vertical communication cores and so allow the spontaneous appearance of areas for conversation—in shade in summer and under the sun in winter—or for the playground protected from the rain. In return, no links are established, beyond the horizontal continuity of the ground floor, between the common daily spaces, in just the same way that these connections with the private space of the houses are not created either. However, it should be noted that the galleries that open to kitchens and other rooms behind the practical shutters that give continuity to the entire inner facade, produce interesting relations with the outdoor spaces of the community, from a sculptural point of view, as well as for climate control and domestic life. In this sense, although this project did not focus on the semi-private spaces, visual control

and communication were considered between the collective ground floor, which works as a resident courtyard, and the intimacy of the housing units (Figure 4).

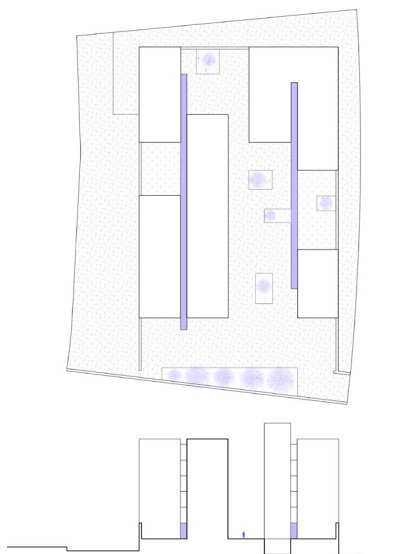
Figure 4. 78-unit social housing project (Jacobo García-Germán). General courtyard and ground floor schemes (floor plan and section) of common spaces



Source: Authors

3. **Complex of 60 social housing units**, designed by Sergio de Miguel in collaboration with Cristina López, Blanca San Martín, Jesús Ulargui and Eugenio Vivas. The resident flows materialise in the sets of galleries that are inserted between the housing units or are revealed, supported by their structural framework, to create a communal courtyard. Thus, this narrow area of connection on the ground floor is isolated from the urban environment by the perimeter walls and the metal frames, emphasising the volumetry of the complex and the vertical composition of the openings on the facade. This design priority is incompatible with the domestic character of the collective space, even more when avoiding—for the sake of the homogeneity of the rhythms—the direct connections between the ground floor housing and the resident courtyard (Figure 5).

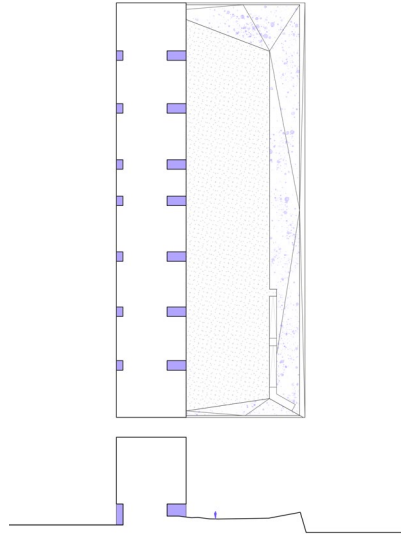
Figure 5. 60-unit social housing complex (Sergio de Miguel, Cristina López, Blanca San Martín, Jesús Ulargui, Eugenio Vivas). Ground floor schemes of common spaces



Source: Authors

4. Complex of 88 social housing units, designed by Foreign Office Architects, the firm founded by Alejandro Zaera Polo and Farshid Moussavi. The spaces for resident flows are sized for mere circulation with a strict economic criterion that contradicts the number of doors and vertical communication cores. There are, therefore, no areas for activities or meeting up. The structure of the common spaces has been reduced to the effectiveness of circulation and, finally, the connections with the dwellings are not contemplated beyond the threshold of the entrance door. The design effort instead focuses on the creation of balconies—closed with continuous bamboo shuttering—private spaces, that are related to the external public space with a suggestive environmental richness. Nevertheless, the building does not address collective domestic spaces (Figure 6).

Figure 6. 88-social housing complex (Foreign Office Architects). Ground floor schemes of common spaces

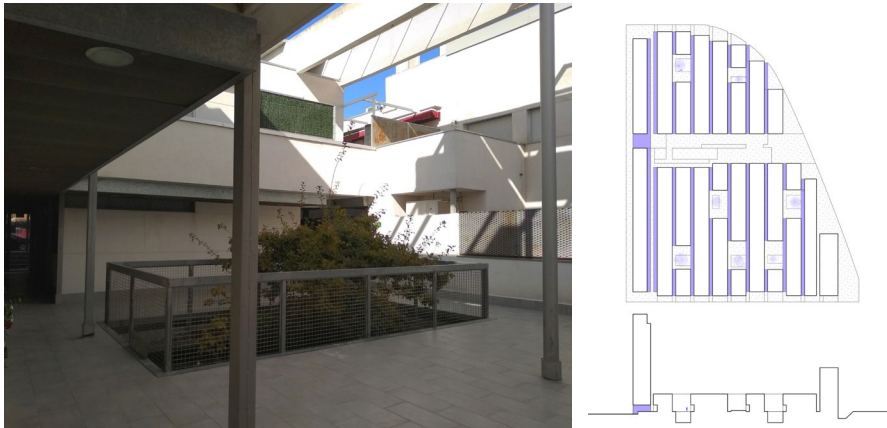


Source: Authors

5. **Complex of 141 social housing units**, signed by Morphosis (led by Thom Mayne) in collaboration with Begoña Díaz-Urgorri. The project presents a typological mixture between a higher rise block to the north and the horizontal extension of single-family housing, composing a kind of interconnected village. The resident flows are supported by a significant network of routes somehow convoluted and insufficient, but because of the sheer numbers they manage to promote encounters between residents. Moreover, groups of housing units gather around environments at an intermediate scale, which communicate two interior streets and allow a wide diversity of activities and common spaces for neighbours. Unfortunately, these are interrupted by the vegetation that grows up from the underground parking floor, protected by a parapet from possible falls and, therefore, preventing the continuity of games or other interactions. In addition, the structure that could have connected these semi-private spaces with the general courtyard in various hierarchies, is limited to the circulations of entries and exits to

the housing units and prevents spatial or functional interconnection between these areas, which are therefore removed from their ability to transform into places for domestic expansion. Finally, and reinforcing this idea, despite its adequate dimensions and proportions, these connecting spaces do not open to private life either, beyond the minimum threshold of each home. Not even the possible opening up of the private courtyards towards these small communal courtyards, even by means of a medium-height fence, ended up being formalised. The courtyards are completely isolated so any interconnection between the domestic and collective sphere is definitively cancelled. Thus, the ideas that could have rendered this work a model of transitions between the public and the private, an authentic architectural model around the creation of places, are lost in purely formal aspects of very little interest (Figure 7).

Figure 7. 141-unit social housing complex (Morphosis and Begoña Díaz-Urgorri). Inner courtyard and ground floor schemes (plan and section) of common spaces



Source: Authors

6. **Complex of 82 social housing units**, projected by Andrés Cánovas, Nicolás Maruri and Atxu Amann (*temperaturas extremas* team). The spaces designed for resident flows start in the accesses from the heads of the blocks, where they are alternatively oriented to the interior free space and the vertical

communication cores, the latter on a much tighter scale. The spaces for casual encounters are reinforced by two areas on the ground floor large enough to house covered activities, complemented with those offered by the carefully looked after inner courtyard, which, in addition to the character of a domestic-scale park, includes a play area for children. It is more complicated to establish spatial relations, let alone functional ones, within these complexes which, on the other hand, do not provide programmatic solutions on the upper levels, despite the openings created by the container aesthetic with alternating colours to identify each individual home. Rather, the collective spaces are reduced to the communication cores, while each housing unit looks onto the inner courtyard and the street through these interstices transformed into balconies, guaranteeing an interesting gradation between the interior and exterior spaces, always in the private sphere. Thus, the domestic expansion of the common spaces of the block is not possible here either, not even on the ground floor, where a row of shrubs separates the housing from the landscaped community area, without allowing more access than through the communication cores (Figure 8).

Figure 8. 82-unit social housing project (*temperaturas extremas*). General courtyard and ground floor schemes (floor plan and section) of common spaces



Source: Authors

7. **Complex of 102 social housing units** for rent, designed by the team *dosmasunoarquitectos*, founded by Ignacio Borrego, Lina Toro and Néstor Montenegro. In this case the flows have been strictly dimensioned as circulation spaces, beyond the need to cross a covered access to the block to reach the vertical communication cores. However, the need to cross the open space again to reach much of the housing, enables the establishment of a communal courtyard, which includes a playground³, as well as a large area for chance encounters, activities or leisure, in optimal climatic conditions. Unfortunately, the continuity of this tapestry is often broken by the vegetation that rises from the underground floor, which make parapets necessary and affects some spontaneous activities. In other areas, the collective ground floor spaces have not been arranged as an interconnected network. Moreover, not even the ground floor housing opens on to this communal open space beyond its entrance doors, which reduces the domestic life to the strictly private environment (Figure 9).

Figure 9. 102-unit social housing project (*dosmasunoarquitectos*). General courtyard and ground floor schemes (floor plan and section) of common spaces



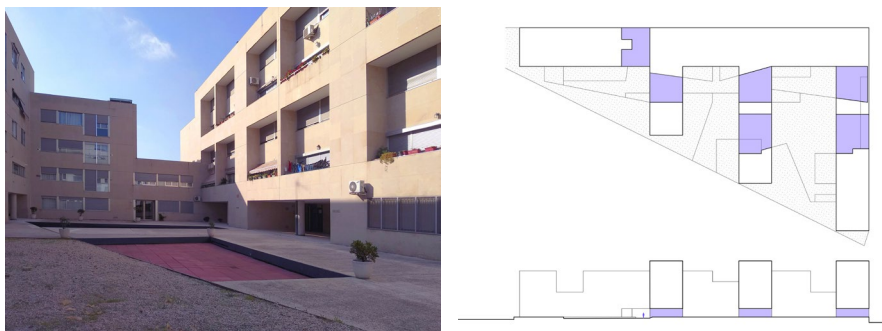
Source: Authors

8. **Complex of 66 social housing units**, designed by Juan Carlos Sancho and Sol Madrudejos. The resident flows on the ground floor are organised

3. Some authors as Parra-Martínez, Stutzin and López-Carreño (2021) have studied the neglected design and lack of architecture qualities of this type of spaces, which is striking in this case study.

by a succession of reduced-size courtyards, which guarantee the possibility of chance encounters with neighbours, with their broad dimensions and ample height, appropriate to the climatic conditions. In fact, it is these same spaces that establish communal areas for recreational activities, although too conditioned by sculptural surfaces and level changes. These collective places are connected transversely through covered areas, which in turn lead to access portals, so they generate interesting relations on the ground floor. Unfortunately, these places disappear on the upper floors, where only strict circulation spaces are designed. Thus, domestic life does not expand beyond the limits of the private enclosure, except for the ground level floors, where the housing units try to interact, with little success, with the community courtyards (Figure 10).

Figure 10. 66-unit social housing complex (Juan Carlos Sancho and Sol Madrಿದೆjos). General courtyard and ground floor schemes (plan and section) of common spaces



Source: Authors

9. Complex of 64 social housing units, designed by María José Aranguren and José González Gallegos. In this housing project, after passing the two entrance areas to the block, the resident flows are strictly foreseen as communication spaces, linked closely to the vertical communication elements and an entrance space to the housing. However, the presence of two generous covered spaces, diagonally inserted into the crisp composition of the volumes of the project allow some contact between neighbours and offer a space for casual conversation, rather than activities each with a character

differentiated by its position in respect to the central courtyard. These areas, however, are only connected in a sculptural way within the composition of volumes and voids, but they do not manage to weave a hierarchical structure between the common spaces. In the same way, there is no connection between the scarce communal circulation space and the private areas, beyond the threshold of the entrance door. Additionally, these latter two conditions are decidedly reinforced on the ground floor of the complex, where the articulation of the volumes with the courtyard—which is exquisitely landscaped—prevents any spatial, visual or live contact beyond the careful circulation towards the communication cores. In fact, according to the post-occupancy evaluation, only five owners of a total of 18 surveyed use the courtyard (Soler, 2022, p. 3). As well as the impressive volumetric composition, this project offers façades that are articulated with subtlety from the urban perspective, where grey precast glass reinforced concrete, in an admirable state of conservation, is combined in perfect harmony with continuous black metal framework (Figure 11).

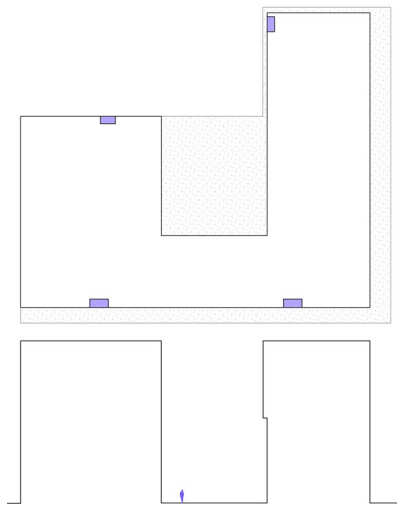
Figure 11. 64-unit social housing project (María José Aranguren and José González Gallegos). General courtyard and ground floor schemes (plan and section) of common spaces



Source: Authors

10. **Complex of 68 social housing units**, designed by Beatriz Matos and Alberto Martínez Castillo. The flows are reduced to the minimum space necessary for the entry and exit of residents, enabled by the careful design of the access portals. Beyond this circulation structure, no spaces for meeting up or activity have been provided, not even on the ground floor. There are no connections between the different areas or housing units, which are accessed, whether on one floor or in duplex, from a walkway. The latter, however, represents an interesting exercise in light and climatic control through its lattice work, which establishes quality spatial connections with the surrounding urban space, prior to the PAU (Figure 12).

Figure 12. 68-unit social housing complex (Beatriz Matos and Alberto Martínez Castillo). Ground floor schemes of common spaces



Source: Authors

11. Complex of 122 social housing units for rent designed by Mónica Alberola and Consuelo Martorell. The resident flows in this project, especially in the accesses to the lower blocks, are of a fundamental importance that seems to persist from the project idea to the way the project is lived. Beyond the critics it received for being oversized—which is necessary to guarantee sufficient space for resident meetings—this system of flows is perceived as both a clear and a complex organisation, identified by the other transition spaces that are organised by it. Thus, beyond the vertical flows, the galleries on the upper levels occur in transverse order to the main flows, outdoors, and maintaining the link to both the indeterminate spaces of circulation and the rest of the lateral spaces, which serve as places for leisure, calm chatting or other informal activities for adults and children, protected by the shade of the balconies and by the proportion of the widths and heights of each sub-patio. The succession of small courtyards, therefore, also becomes the connection system of the places, identified by the signals of the inhabitants, who have subtly colonised the communal spaces. This ampliation of private spaces, evident on the ground floor, also occurs in the upper levels, thanks to the width of the walkways, which allow domestic life to expand to the communal areas of the wide thresholds, where the domestic merges organically with collective life. Furthermore, when qualifying places by different domestic or community intensity, some of the spatial nuances are reduced to simple but subtle gestures through the materials, like small paving cobblestones; light and shadows, where the shadows also provide shelter on rainy days; and the textures themselves, which are most dramatic in the collective spaces and gentler as we enter the domestic environments. The project, in short, has become a model of how architecture is capable of creating common places in unfavourable conditions, where «the useable space of small-scale housing is extended and the intermediate spaces are promoted to enrich the variety of free urban space and encourage social relationships» (Montaner, 2015, p. 179) (Figure 13).

Figure 13. 122-unit social housing project (Mónica Alberola and Consuelo Martorell).
Courtyard and ground floor schemes (floor plan and section) of common spaces



Source: Authors

6. CONCLUSIONS

The following conclusions have been established with a certain playful approach. The following properties were identified after the detailed analysis of the case studies and according to the four proposed parameters of study (Table 1):

Table 1. Case studies comparison, according to the parameters of study

		Neighbourhood flows	Areas of activity and leisure	Connections between areas	Connections with houses
1	Cruz Ovale/Nuere (101)	●	-	-	-
2	García Germán (78)	●	●	●	-
3	De Miguel/López/San Martín/Ulargui/Vivas (60)	●	●	-	-
4	FOA Zaera/Moussavi (88)	-	-	-	-
5	Morphosis/Díaz-Urgorri (141)	●	●	●	-
6	Cánovas/Maruri/Amann (82)	●	●	-	-
7	Dosmasuno Borrego/Montenegro/Toro (102)	●	●	-	-
8	Sancho/Madrirdejos (66)	●	●	●	-
9	Aranguren/Gallegos (64)	●	●	-	-
10	Matos/Castillo (68)	-	-	-	-
11	Alberola/Martorell (122)	●	●	●	●

Source: Authors

- Commutative property: *The order of the factors does not alter the product.* Regarding the participation of women architects, the order of signature in the design teams does not seem to provide any differentiating factor with respect to the criteria studied related to a gender perspective focus on care and reproductive labour. Thus, the Matos-Castillo team (where the surname of its female architect, Beatriz Matos appears in the first place), does not appear to address these aspects with greater intention than its contemporaries Sancho-Madrirdejos, where, on the other hand, the male architect appears as the first author.

- Associative property: *The result does not depend on how the terms are grouped.* Again, associations between female and male architects, or only male architects, do not seem to yield different results regarding the aspects of this study. The only project signed by one person, that of Jacobo García-Germán, does not seem more insensitive to a gender perspective than his ETSAM companions Cánovas-Maruri-Amann, despite the latter group including a woman architect who is especially active in research on care⁴.
- Distributive Property: *Two or more multiplied summands equal the sum of their products.* In this case, distribution has a more literal meaning, since it has been shown that its sum produces an important multiplicative effect. Thus, when the circulation network is not reduced to a minimum legal size and is dimensioned to be able to assume the informal uses of meeting, leisure and community activity, the results are usually optimal for the development of domestic life beyond the limits of the communal property. When, in addition, all these spaces are organised in a joint system—one more to add to the complexity of the discipline—the result can become that last resistance that architecture provides to people to have a fuller existence.

In summary, a network of domestic and non-private spaces in residential complexes, implies the possibility of social relationships and the expansion of intimacy into community space. However, this quality was observed especially in the only case study signed by two women architects, so it is up for continued research to identify to what extent it is a characteristic of the professional work of women or a specifically feminine sensitivity. Beyond this intuition, which must be confirmed or refuted in further research, it is evident that architecture that concentrates on reduced, liminal spaces, at the borders between the domestic and the public, aligns itself with a gender-based perspective that is absent in projects that focus on the symbolic and representative functions of the mechanisms of power (Montaner

4. Atxu Amann was the organiser, along with Mara Sánchez-Llorens, Sálvora Feliz Ricoy and Flavio Martella, of «Cuidados» (2021), First International Feminist Conference about Architecture and Care.

& Muxí, 2011). It is a sort of feminine architecture, which designs places for care giving (Figure 14) or, rather, for the life of the people who inhabit it.

Figure 14. 122-unit social housing project (Mónica Alberola and Consuelo Martorell).
Common spaces



Source: Authors

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