

Flexible Design and the Role of the User in House Design

Javier Sanchez
JSa Arquitectura

Collective housing became relevant to architecture at the moment of the transformation of production, the moment that Walter Benjamin has characterized as one of technical reproductibility, which formed part of the urban revolution that created metropolization. Up to this point, the majority of houses were inherited by men, the product of slow transformations, while the process of modernization-metropolization introduced the need of giving fast responses to cover the need for enormous quantities of houses with modes of living without precedent. Reflecting on the vast array of purposefully designed collective housing projects finds countless valuable precedents.

The Deutsche Werkbund assumed the important challenge of proposing the new collective housing projects and communicated the results by setting up three important exhibitions; the first of them in Stuttgart, in 1927, had the title “Die Wohnung.” An experimental neighborhood resulted in determining the base for serialized modern construction. The prototype houses of the director, Ludwig Mies van der Rohe, as well as J.J.P. Oud, and Mart Stam became well known. According to Walter Gropius, “the big house concept” was not an evil one, but a complex residential problem of our time. One can easily visualize Le Corbusier’s *Unite d’Habitation* (1945), in Marseille, France, which continues to inspire contemporary design of housing types influenced by his ingenious interlocking of double-height maisonettes with circula-

tion streets every three levels, open ground floor plan, and the *Toit Jardin* on the roof. In Mexico, architect Mario Pani, built the *Unidad Habitacional Miguel Aleman* (1948), which added new elements to the Corbusier predecessor. Improvements included the elevated circulation exterior streets that overlook Mexico City while maintaining connections to Le Corbusier’s duplex typologies.

The evolution of this type of housing model in the years to follow would eventually lead to the exhaustion of the model as many were robbed of their spatial concepts, leaving only massive, dense, vertical communities. In Europe, housing has continued to evolve as governments have been able to maintain architects’ interest to further explore housing. Examples of this can be seen in numerous publications that show the evolution of social housing designed by architects, although it is clear that the proposals have grown already far from the Modern Movement predecessors; they have evolved into smaller scale projects that have a better human scale and living conditions. In 2007 a study by the French firm Lacaton and Vassal yielded the book, *Plus + Large Scale Housing Development*. It is an exceptional case, which proposes solutions to refresh existing housing blocks built in France and by doing so, aspires to reclaim the Modernist ideals. Also, many projects are published yearly that continue exploring the possibilities of social housing from an architectural perspective.

In the United States, these types of vertical housing developments became known as “projects” and were proved to fail at the mid-1970s. A good example of this is Pruitt-Igoe in St. Louis, Missouri, designed by Minoru Yamasaki in 1954, which was demolished in 1976 due to strong criticism on racial segregation and crime. In Mexico, these types of projects were more successful because they included a mix of housing types, services such as schools, theaters, sports facilities, retail, and even religious buildings, which contributed to creating a mixed-use neighborhood that was open to the city grid. These projects aged well and have become modern paradigms and are important references of a period of time when architects were proud of their accomplishments in housing. This model, however, was unable to survive because the demographic explosion of the 1970s was such that the government could not continue building housing projects to meet the large demand. Therefore, it shifted toward becoming a financier and leaving the development to the private sector builders. Unfortunately private sector builders have not been interested in creating communities; their goal, as private entities, is to produce earnings in the most efficient way. The new paradigm they have created has only the simplest objective of building as many homes as possible regardless of social and urban concerns. It is very important to say that in this transformation from the modern ideals of housing, to the 1970s crash of the “projects” in the United States or

the developer-driven houses built in Mexico, we have lost the participation of architects and also the discussion and critique of housing projects that is necessary for the creation of better living environments.

Designing economic housing is a major public interest and should be included in the architectural agenda once again, as the construction of housing can shape the development and growth of our cities and represent the values of our society.

Time Is a Design Factor

The design of this type of house, which does not have a known client, is then designed for an abstract man that does not exist, and leads to many projects becoming disconnected from their intended users. In Mexico, half of the housing demands are met by people without professional architectural input. One of the biggest lessons to learn from the informal production of housing is that people continue building through their lives to enhance their living conditions. If we consider time as an important factor for design, then we have to think about flexibility and dynamism, the ability to transform, grow, shrink, expand, and contract, such as life does. In communities that are not designed by architects, houses and buildings mutate and react to the changes within families and communities. The large developments made by builders in Mexico do not include uses other than housing, so people begin transforming the housing into mixed-use neighbor-

hoods. Single units eventually become multi-unit buildings with retail and shops on the ground floor and apartments on consecutive levels.

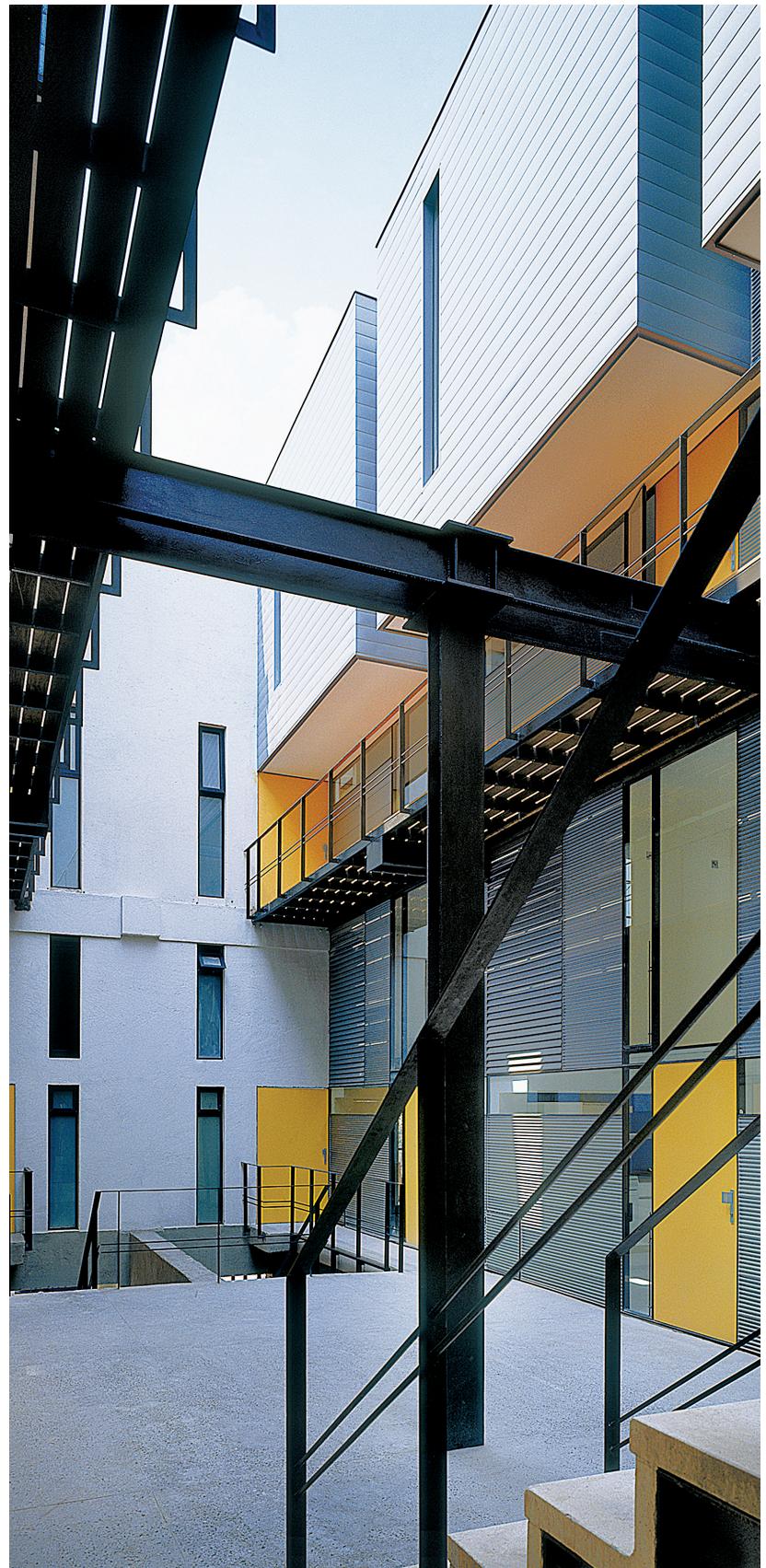
Alejandro Aravena and Elemental's Quinta Monroy (2008) exemplifies the need for housing not delivered to the user as a finished product, but a space that can evolve in time. These spaces adapt within certain design parameters and also with certain liberties for the user to decide how this process continues during the life of the project. People are given a space ready for growth, the structure is already considered and they decide how and when to manipulate their homes. This undetermined condition also allows for the homes to age better and acquire a multi-faceted image, each evolving differently from one another. Alejandro Aravena's project can be connected to the 1969 PREVI (Experimental Housing Project) in Lima, Peru, a "Latin-American Weissenhof," where former President Belaunde commissioned several architects that included James Strling, Aldo van Eyck and Fumihiko Maki, among others to design an experimental low-cost housing community on the outskirts of Lima. Today, little evidence remains of the proposed architectural design by the architects, namely a continuous evolution by the end users has occurred. However the urban design proposal prevails and the original urban vision is embraced by the community without any significant modifications. An important concept present in the PREVI project is its mixed-use character

and importance of public space. The urban design provided for different types of lots and streets, with some enjoying contact with two streets. Today, lots have housing on the more private street, and retail areas and other uses on the most public street. It is important to mention that the evolution of the neighborhood took place without any direct architectural planning; PREVI has evolved into a vibrant neighborhood where the only trace that remains of the original project lies in the urban design.

These two examples show how important time becomes as a design factor in economic housing communities, not only to allow for the user to continue developing the value of their home, but also for the community organism to develop and grow.

Flexible Design Is a Public Interest

Flexible design capable of being transformed by the user is a public interest because it can provide the necessary elements for a space to be modified and accommodates different activities and needs. The concept of a round space, an integrated room, where all activities can occur, is the minimum design program. If we think of the potential activities of a contemporary user (sleeping, cooking, eating, washing, socializing, intimacy, relaxing, learning, working, storing), some spaces can be integrated and some need privacy. We could think of housing design based on the activities, and we could provide the user



13 de Septiembre is an example of flexible design



with a space capable of handling all of them. Depending on the overlap of activities, all could happen in one space, or in several. In 2004 we created a housing project with an integrated space concept with minimal subdivision, but capable of all of the above and other additional activities that will surely occur. It was our first time dealing with the minimum space for living (600 square feet) but with great spatial quality provided by the existing structure, an abandoned warehouse. Intimacy can sometimes be accomplished by creating different levels of use and a double-height space can provide for a softer division than even a light partition. We went back some years later and redrew our original plans to include the modifications made by the users and also to learn from the way the space was furnished. We came to the conclusion that the raw space was still present and the original concept was not modified substantially even though it had been capable of transformation. Much can be learned from revisiting projects and analyzing occupational patterns. The follow-up process is vital for architects.

Acupuncture within the Mega City

A Case Study of the Houses of Brasil 44

Acupuncture in urban theory has to do with understanding the individual and collective potential of architectural proposals regardless of their size and particular objectives. This way of thinking takes some of the pressure away from the project

that larger planning strategies inherently carry. Architecture then has the capacity to transform the city from within the urban fabric. In some cases, this strategy is multiplied inside the urban tissue in the form of small

projects that add up and become part of an overall planning proposal that works as urban acupuncture. The Institute for Housing of Mexico City's Government has engaged in the creation of many small urban infill

projects within the city center in the past few years. These projects have a clear objective of providing economical housing for people that are affiliated with this organism. These projects, although independent, add

up to create a bigger strategy that involves creating opportunities for an area of dwindling population in the past 20 years. At the same time, the projects have to do with the renovation of landmark buildings



Section perspective demonstrating the re-designed living spaces

that are in danger of collapse due to lack of maintenance throughout the years. The strategy addresses social necessities as well as urban and architectural components that can be understood within the acupuncture frame of thought.

Brasil 44 is a housing project for a small community in Mexico City's historic center a few blocks away from the Zócalo, one of the most symbolic places in Mexico. The project was commissioned by Mexico City's office for Urban Development and Housing in collaboration with the Junta de Andalucía from Spain. The purpose of Brasil 44 was to safeguard a small community of five families and a retail shop occupying a landmark building, which was at risk of collapse due to structural damage. From the beginning of the design process, we focused on building a relationship on trust with the inhabitants. The client wanted serialized housing; we wanted specific programs that would attend to their individual needs. The

families were temporarily relocated and we were able to conduct a series of interviews with the future users of the housing units, determining the best way to allocate the program within the existing structure. We built large-scale models to explain the project and we also made a schedule of the furniture they owned, understanding that buying new furniture was not an immediate option. The property had experienced severe changes through time, especially in allocating additional space for the users (they had built bathrooms on the common exterior space of the building at the detriment to the architecture). The exterior bathrooms and storage facilities built were taking away important space from the common patio and circulation space.

One of the strategies from the beginning of the project was to demolish the added volumes to reclaim the open space of the original building. Another important move was relocating the common stair to an-

other part of the building where it was more effective for the units. We also decided to build a second floor mezzanine level because the original property had 16-foot high ceilings; this allocated for the needed program inside the units and cleaned the exterior space in one stroke. Partitions for the project were created out of light structure elements to provide for flexibility and customization of particular needs. We designed additional windows for the mezzanine levels above the original floors to improve the light conditions of the interior space.

Finally, we designed the communal space on the patio level for them to occupy as exterior living space from their homes and allocated space on the roof for communal use and a small garden. The final design is not standardized; it is flexible and allows for change in time.

The project won the Golden Lion on the 2006 Venice Biennale for Archi-

tecture because the jury understood the importance of the acupuncture strategy on a city as big as Mexico City. The jury said regarding the project, "Brazil 44 is a project small in scale but large in possibility. It shows how, with simple meanings, housing of great aesthetic quality can be constructed for people with limited resources – housing to which the inhabitants themselves can contribute formal design ideas. Brazil 44 is a project which invites adaptation and mutation rather than imitations, a project which brilliantly explores the DNA of the ordinary urban house. We celebrate it as an exemplary piece of social architecture."

Image Credits

Page 71: Luis Gordo, Page 72: (Top Left) Juan Reyes, Page 72: (Top Right) Pedro Hiriart, Page 72: (Bottom) Pedro Hiriart, Page 73: Salomón Yasser, Page 74: Pedro Hiriart

