

## ***Architecture and transformation in Mexico City's UNAM University Campus***

### **Arquitectura y transformación en la Ciudad Universitaria de la UNAM en México**

**Alejandro Leal** 

Universidad Nacional Autónoma de México. [arq.leal@gmail.com](mailto:arq.leal@gmail.com)

**Bruno Cruz** 

Universidad Motolinía del Pedregal. [cruzpetit@hotmail.com](mailto:cruzpetit@hotmail.com)

**Alejandro Pérez-Duarte**

Instituto Tecnológico y de Estudios Superiores de Occidente. [apdf230174@live.com](mailto:apdf230174@live.com)

Received 2020.01.20

Accepted 2020.10.19



**To cite this article:** Leal, Alejandro, Bruno Cruz, and Alejandro Pérez-Duarte. "Architecture and transformation in Mexico City's UNAM University Campus." *VLC arquitectura* 8, no. 1 (April 2021): 151-171. ISSN: 2341-3050. <https://doi.org/10.4995/vlc.2021.13028>



**Abstract:** *Architecture in permanent transformation is the starting point of this article, focused on the interaction between material and social aspects of a case study on modern Mexican housing, observing the building's life in relation to its inhabitants. The Multifamily Apartment Building for Teachers (Multifamiliar para maestros), a faculty housing building at the UNAM campus, is a mid-twentieth-century experimental housing project, developed at the beginning of Mexico City's densification. Today it is registered in UNESCO's World Heritage Sites. The case study sheds some important insights into the transformations of a spatial modern utopia facing inhabitants' needs. Numerous differences were detected between the original idea behind the building's architecture and the reality of its users today, revealing not only the ambiguous nature of the building but also problems derived from the country's accelerated modernization. The results show contrasting approaches of the intermediate space between the building's conception, and the constant process of becoming a home, where the scope of its habitability is negotiated.*

**Keywords:** *Mexican architecture; modern housing; Mexico City; processual nature of architecture; habitability.*

**Resumen:** Este texto propone un enfoque que toma la transformación arquitectónica permanente como punto de partida en el estudio de la interacción entre los planos materiales y sociales de la vivienda moderna en México. Se aborda como caso de estudio un edificio significativo en la historia de la vivienda colectiva moderna en México como es el multifamiliar para maestros de la Universidad Nacional Autónoma de México (UNAM). Gracias al contacto con los vecinos, se logró un acceso privilegiado al inmueble diseñado y construido por los arquitectos Mario Pani y Salvador Ortega, lo que permitió realizar un levantamiento, un diagnóstico del estado del edificio y entrevistas a sus habitantes. Se detectaron numerosas contradicciones entre la idea original de edificio y la realidad de los usuarios en la actualidad, lo que arroja luz no solo sobre la naturaleza ambigua del edificio sino también sobre una etapa de modernización acelerada del país y de crecimiento de utopías espaciales como Ciudad Universitaria. El caso de estudio confirma el interés de un enfoque centrado en el espacio intersticial entre la concepción del edificio y los ideales detrás de este y el proceso de devenir hogar; un espacio donde se negocian constantemente los alcances de la habitabilidad.

**Palabras clave:** Arquitectura mexicana; vivienda moderna; ciudad universitaria; naturaleza procesual de la arquitectura; habitabilidad.

## INTRODUCTION: ARCHITECTURE IN TRANSFORMATION

The processual nature of architecture is a particularly suitable methodological option when studying buildings from a post-occupancy perspective in Mexican architecture, given the informal residential practices registered especially, but not exclusively, among the lower social classes. M. T. Esquivel has pointed out processes of living space appropriation in government financed Mexican housing estates that have led to significant changes,<sup>1</sup> not only in the architectural interior, but in the entire building's morphology. In this respect, it is interesting to recall how in *Elements of Architecture* M. Bille and T. Sorensen suggest thinking about architecture more in terms of processes rather than as objects.<sup>2</sup> The authors were interested in showing "how architecture emerges and disintegrates through tangible and intangible elements and processes." The notion of architectural work is deconstructed in their collective book, depicted as a set of assembling elements, heterogeneous parts that do not form wholes, but are rather emergent, potentially disassembled entities; space can be addressed as a territory in dispute (biological metaphors can work as a tool),<sup>3</sup> that cannot be reduced to what it is and what it means from a semantic point of view. B. Latour and A. Yaneva also emphasize the idea that a building is not a static object but a "project in motion, that even once built, continues to be transformed by its users."<sup>4</sup> In their approach, attention is focused on both builders and users, as actors that interact with the material devices. M. Heikinheimo is inspired by these ideas in her study on A. Alto's Paimio Sanatorium,<sup>5</sup> focusing on how this piece of architecture came to be, with a detailed description of the chronology during the designing and construction period and the role of the architect's studio in the decision making of a collaborative process. For K. Fallan,<sup>6</sup> Latour's Actor

Network Theory (ANT) is a positive contribution to architectural research that helps to enrich the study of complex interactions between people and things. Fallan critically reviews papers that use ANT in architecture, to which he responds by delimiting very precisely the methodological value of that theory. The author argues that, being above all a theory of action, ANT is not so much relevant for architecture as a constructive phenomenon, but for architecture to be understood as part of an "action" (this dualistic approach is also found outside the frame of ANT, in A. Forty).<sup>7</sup> In other words, "action" in architecture can be considered as the process of planning, designing and constructing spaces in a social, political and economic context; but also, and most importantly for our present study, in terms of mediation and use.

It is also interesting to consider Domínguez Rubio's proposal;<sup>8</sup> although it refers to objects and not buildings it gives us interesting clues in understanding temporality in material culture. This author invites us to study the fragility and change as starting points in research. He recommends observing how things (with their material condition subject to degradation) become "objects" with "status" and meaning, due to being in a sociotechnical network. Objects are important semiotic-material entities for users that devote a great amount of energy to avoid degradation and preserve their status as objects. Furthermore, the option taken by Domínguez Rubio is to locate his research, not at the level of objects (that is, "positions" in a sociotechnical network) or at the level of things, but in that space that extends between objects and things in which most of everyday life takes place. By focusing on this intermediate point, it is possible to understand how the identity of something as an object is constantly negotiated.

Making an analogy with the previous argument about how things convert to objects, we can

think of how buildings become dwellings and how interiors become homes, with a tendency towards increasing their entropy that users try to control by investing energy and economic resources. With this approach, we will address the architectural temporality and the dwelling quality of the Multifamiliar para maestros, faculty housing,<sup>9</sup> a work by renowned modern Mexican architects Mario Pani and Salvador Ortega at Ciudad Universitaria campus, an iconic piece of architecture similar to other Latin American spatial utopias documented by Carranza and Lara.<sup>10</sup> This project, initiated in 1952 and completed the same year, exemplifies the incomplete character of Mexican modernization (we could label it as an accelerated modernization, especially in the 1950s).<sup>11</sup> Mario Pani's firm had already designed Centro Urbano Presidente Alemán (CUPA) in 1948 (the first big housing estate in Latin America, following Le Corbusier's principles) and the Centro Urbano Presidente Juárez (CUPJ) finished in 1952, an improvement of the previous, both thoroughly analyzed by E. Anda and L. Noelle.<sup>12</sup> These two projects are direct predecessors to our case study, and all of them were designed by the Dirección de Pensiones Civiles, the Mexican government retirement and pension fund management institution, which was at that time in charge of social housing policies for bureaucrats (Figures 1 and 2).<sup>13</sup>

Although the new project at Ciudad Universitaria was much smaller in scale, it posed a challenge for the firm, as the site was a showcase of the very best of Mexican modern architecture. It was not simply a matter of reproducing a traditional housing model, but, in the name of modernity, experimentation and innovation were sought, and the possibilities were open to any proposal that was not traditional. When designing Ciudad Universitaria, "we felt that we had no more limit than our imagination," said González de León,<sup>14</sup> one of the architects commissioned to participate in the monumental work,

together with Pani himself. The ideas discussed, "had a radical component of change and promise of a better way of living, educating, working (...). The Ciudad Universitaria Campus was the opportunity to apply these ideas on a large scale and at an urban level."<sup>15</sup> Thanks to the economic boom that occurred since the end of the 40's it was financially possible to carry out these seemingly good ideas. Everything that has happened to the only housing building at Ciudad Universitaria afterwards, since its conception, is a matter that concerns our research.

## METHODOLOGY

To fully understand this case study, we first had to delve into the historical and institutional context of its construction, using novel documentation found at the university archives.<sup>16</sup> Subsequently, a meticulous architectural survey of the building was conducted drawing from our plans, façades, and sections, as well as carrying out a detailed photographic analysis of the construction systems, materials, and finishes existing today. In 2018, thanks to the collaboration with the community of neighbors, privileged access to the building was achieved, which allowed entry to individual apartments, as well as the opportunity to interview its inhabitants on site. A record of the current condition of the building was made, with all its changes, damages, and deteriorations, comparing it with the original through documents found in archives. The results of the work were presented to the community; the community of neighbors delivered the architectural heritage study with a series of maintenance guidelines proposed to slow down deterioration and commence a process of conservation.

For descriptive purposes, the data summarized and presented herein will have the following sequence:

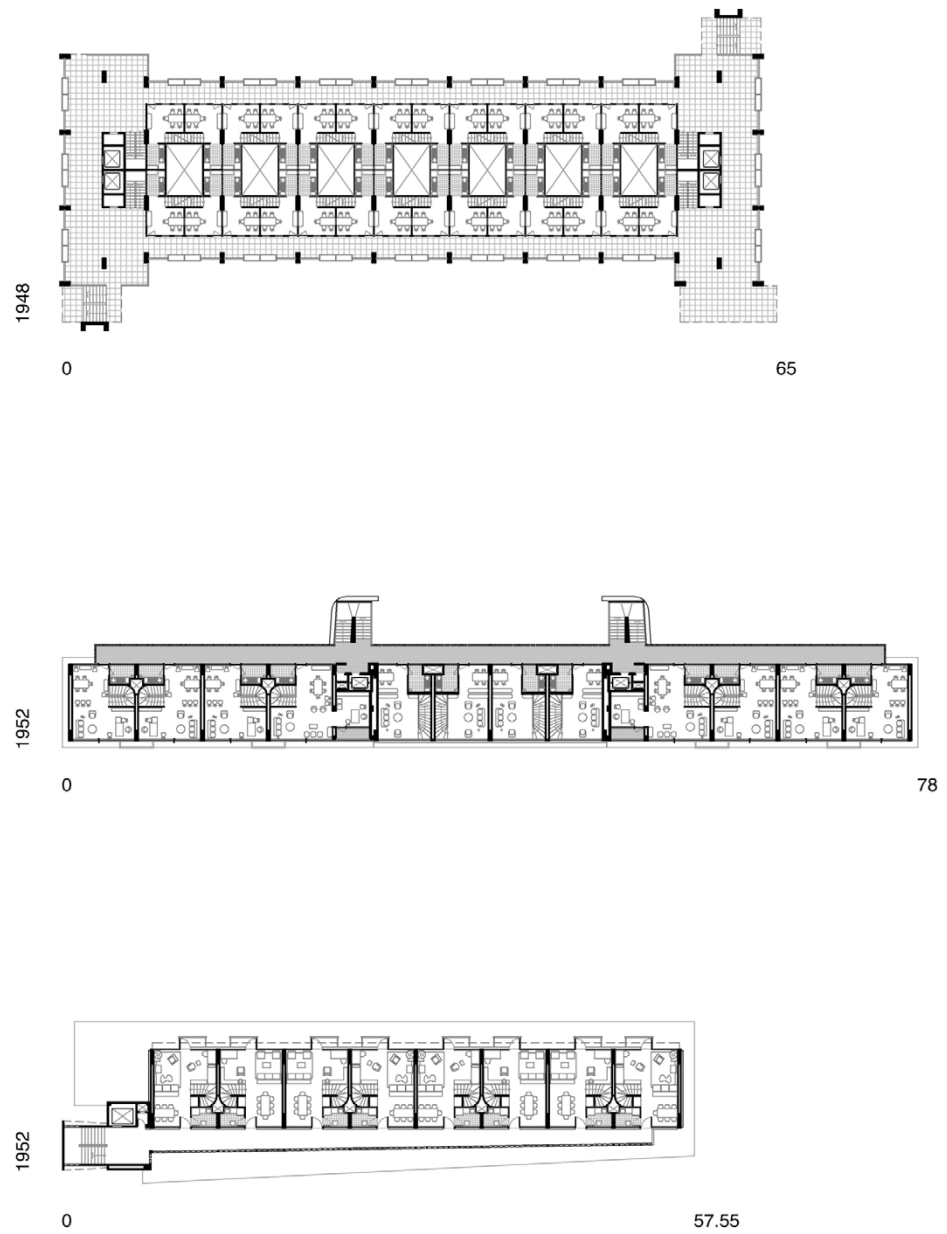


Figure 1. Building layout comparison of the Multifamiliares de pensiones. From top to bottom: CUPA (1948), CUPJ (1952), and the Multifamiliar para maestros (1952).



**Figure 2.** Duplex apartment layout comparison of the Multifamiliares de pensiones. From left to right: CUPA (1948), CUPJ (1952) and the Multifamiliar para maestros (1952).

first a brief architectural analysis; secondly a historical and social account will be delivered concerning interior domestic everyday life (we present the results of three interviews, among five carried out).<sup>17</sup> Finally, the data will be examined according to a theoretical approach to see how the material and social levels interacted in our case study.

## THE BUILDING

The building is in the northwest part of the campus, in what are the highest grounds, and has a commanding view of the entire university and confirms

the relevance of the project in the original campus layout (Figures 3 and 4). With a north-south orientation, the building has a 10-story linear block scheme with 42 apartments in total. Of these floors, eight are intended for 32 duplexes (maisonettes) apartments with eight units per floor and accessed by a gallery-like corridor every two floors (Figures 5 and 6).

The open corridor has a latticework from floor to ceiling and extends along with the building on the east façade, meeting the vertical circulation (stairs and elevator) at the north end. The other two floors house 10 remaining one-bedroom apartments (only one



*Figure 3.* View of the Multifamiliar para maestros with its original sign, 1958.



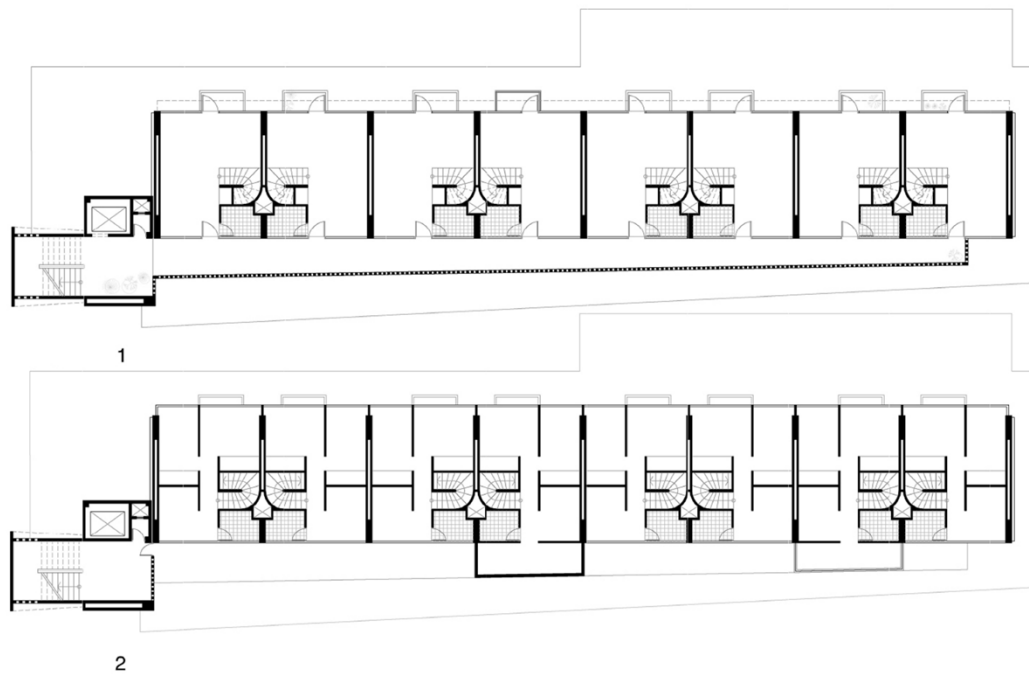
**Figure 4.** Aerial view of the east façade (facing the campus) of the Multifamiliar para maestros, 2018.

floor), three in the basement, and seven on the ground floor, where the main entrance is located. Each duplex apartment has a total interior area of 84 m<sup>2</sup> and was designed to house families of up to five members. Each single bedroom apartment has a total area of 45 m<sup>2</sup> and was designed to house families of up to two members.<sup>18</sup> The one-bedroom apartments have the additional feature of opening to enclosed patios.<sup>19</sup>

The configuration of the interior space of both types of apartments is determined by the service area (kitchen, bathroom, and installations/fittings duct), which coincides vertically in all dwelling units. In the duplex apartment, the lower floor is defined as a social area, with the dining room assimilable by configuration and position to the living room. This is a mono-local environment that concentrates diurnal activities (Living space: socializing, resting, eating, and/or studying),<sup>20</sup> to which a balcony is annexed, extending the surface to the exterior and opening a view to the university campus (Figures 10 and 11). This space was also conceived as a possible area for the intellectual activities for the faculty members who had to occupy it, with a place for bookcases and for a desk that received natural

light, according to postulates that we find in circulating publications at the time, such as *The Modern Flat*, by Yorke and Gibberd,<sup>21</sup> which define the living room as an “open space where various activities are carried out.” The configuration refers to the conception of the new nuclear family, implemented within the typology of the modern Mexican multifamily, as the place of greater dynamism of daily life. On the same level, the service area consists solely of a kitchen with a rectangular floor plan and limited dimensions; it constitutes a reminiscence of functional kitchen experiences, such as Frankfurt’s kitchen.

The second floor is the intimate space of the apartment, configured by three rooms with a different characteristic. The master bedroom is designed to hold a double bed, closet, and dressing table. A secondary bedroom next door manages to house two single beds, a closet, and a desk. The third room is not formally a ‘bedroom,’ although it is referred to as such in the original plans of the time; it shows certain transience (or flexibility) with the plan to install a sliding door - giving rise to a free space that can be opened and be a study or family room. All bedrooms share a single bathroom.



**Figure 5.** Duplex or maisonette floor plans: first and second floors respectively.

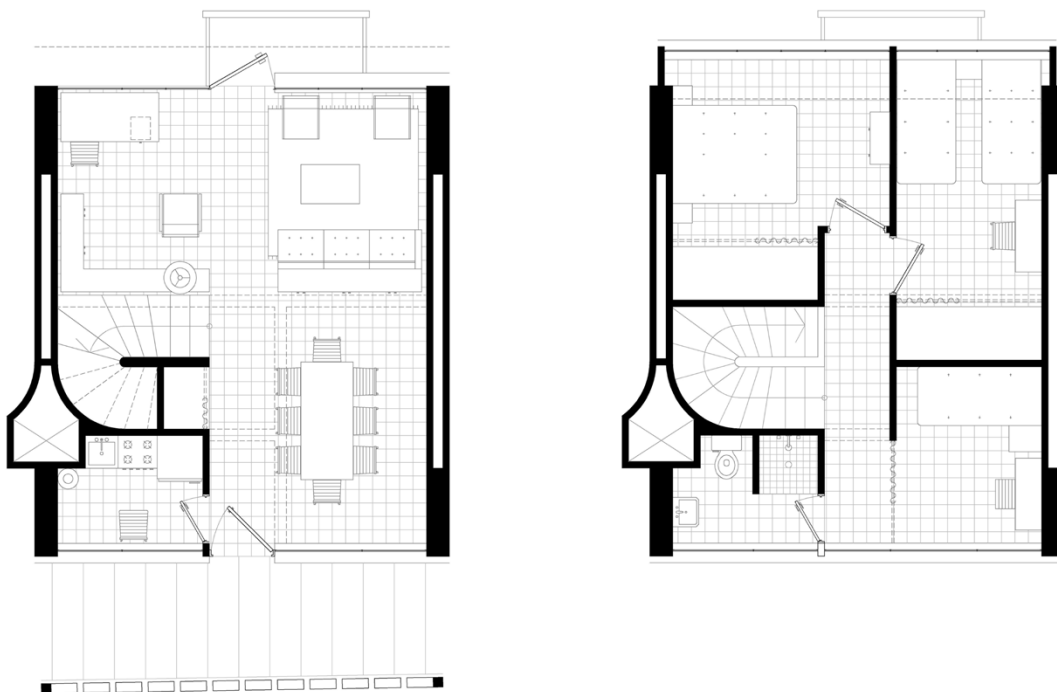
On the west façade (which looks towards Luis Barragan's Jardines del Pedregal neighborhood) there are cantilevered corridors on every other level enclosed behind a latticework made out of hollow concrete bricks that allow the natural ventilation and lighting of these corridors; in contrast, the glazed brick walls tucked into the upper floors of the maisonette apartments (levels 1, 3, 5 and 7) produce a rhythm emphasized by distinct chiaroscuro.

Over time these remnant spaces have been in many cases adapted as terraces by the inhabitants, although they were not planned to be habitable; its usefulness derives from its marquee-canopy character that avoids the west façade becoming

overheated by the afternoon sun (Figure 7). The extension of the apartments taking advantage of the absence of exterior corridors in those sections of the façade is an example of spatial appropriation or lived architecture, which corresponds to a building with informal management practices discussed in the following section.

The vertical circulations are delimited by a solid wall of *béton brut* and by two lighter hollow concrete brick walls that permit the passage of natural light, cross-ventilation, and allow, from the outside, to glimpse the staircase. The *béton brut* wall and staircase are a distinct feature of the building; even though it is not the main exterior material, its





**Figure 6.** Duplex (maisonette) apartment, lower and upper floor plans of the 1952 project for the Multifamiliar para maestros.

*persistent use is a direct reminder of Le Corbusier's imprint in Mexican modernity.*

*The building shows some other changes concerning the original project (Figure 8). The substitution of window partitions and painted surfaces on originally bare materials such as *béton brut* and glazed bricks, as well as the laying of new ceramic tiles on top of the original bare concrete floors was observed. Other important alterations were found, such as the enclosing of balconies: they have been roofed and merged into the interior space of the apartment. Similarly, an appropriation effect was*

*detected on the ground floor in comparison to the original plan. As a result of lacking offices for the concierge, ones were created, closing off an existing corridor, which, in turn, resulted in the adjacent apartments annexing the leftover space from the corridor, thus increasing their interior surfaces.*

*In terms of damage and deterioration, the building is mainly affected by a lack of maintenance on façades, particularly through cracks that have allowed water to seep through and the growth of parasitic flora which, combined with the important local seismic activity, has resulted in the detachment*



**Figure 7.** Aerial view of the west façade (facing Jardines del Pedregal) of the Multifamiliar para maestros, 2018.

of the glazed bricks that covered the façade, in certain areas, to such an extent that significant parts of the north and south façades are compromised.

It should also be noted that the roof of the building, originally intended for washing and drying clothes, is in disuse. During our visits, the abandonment of the area was recorded, denoting the absence of any activity or people. The washing is now done inside the apartments, which have been improvised in order to install a washing machine –and in some cases the balconies are used to dry the clothes.

Another element in disuse is the garbage incinerator; replaced with rubbish bins that are regularly emptied. The children's play area, at the southeast of the building, remains in good condition, although

adjacent in an ill-advised manner with garbage containers. Still, during the various visits, no children were playing in this area, or present at all in the building for that matter.

### THE SOCIAL LANDSCAPE

If we consider the apartments interior surface area (superior to the CUPA and many of the typologies of the CUPJ) and the application of the duplex model (the idea of having in a modern collective housing solution the characteristics of a house, a predominant model in Mexican culture), we could think that the building was designed for upper class users. Despite this, as early as 1954 (the year in which Ciudad Universitaria campus initiated functions) the



**Figure 8.** On the left, an enclosed balcony; on the right, painted bare materials and replaced un-matching glazed bricks, 2018.

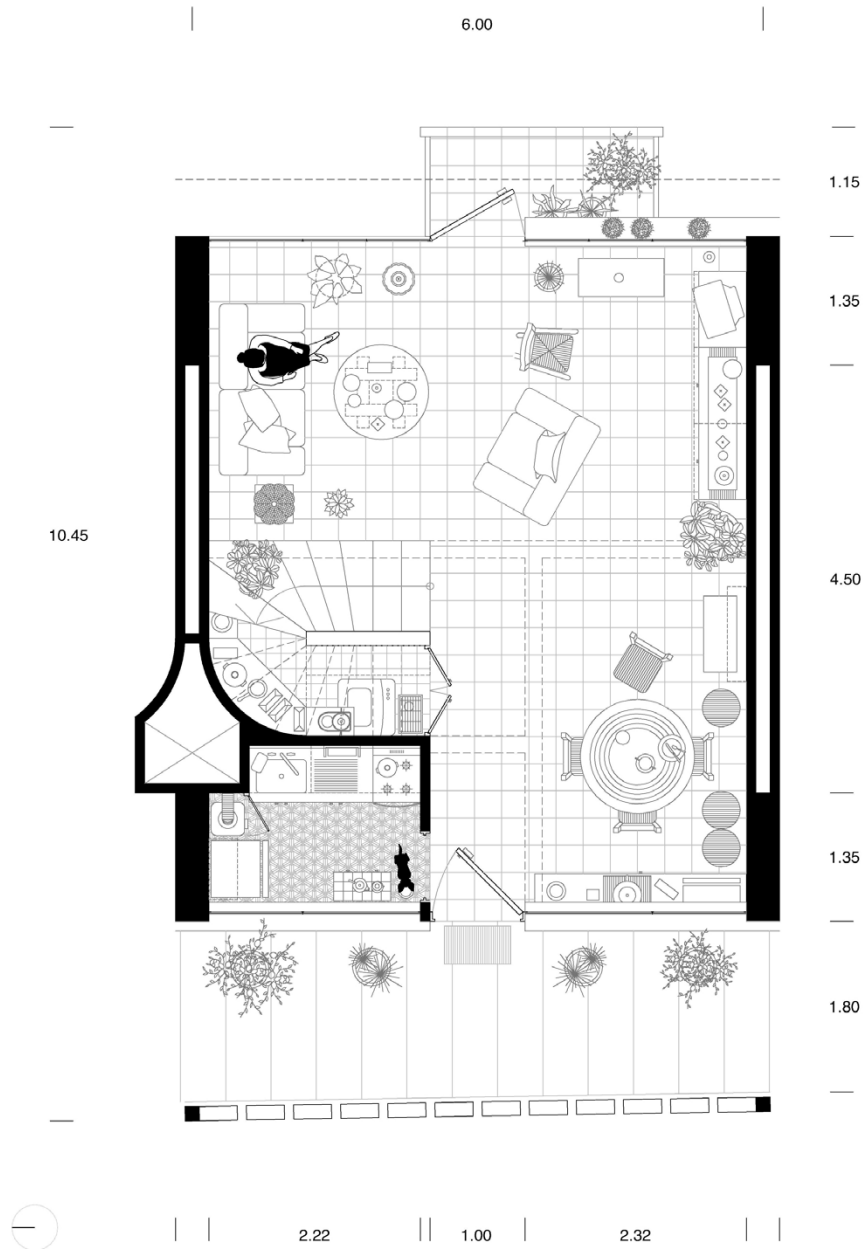
Gaceta de la Universidad announced the entry into service of the Multifamiliar Universitario, 'University apartments' (and not Multifamiliar para maestros, Faculty apartments, as the project was called and the finished Pani-Ortega building has always been referred to). The use of the term "university" was ideal, since it enabled university employees, together with academics, the benefits offered by UNAM of living within the campus. The text carries on to talk about how the Multifamiliar (without any adjective) would be occupied by people who "provide their service in Ciudad Universitaria," either as "faculty members or

employees."<sup>22</sup> Although it is mentioned that full-time academics would have a preference, from the beginning it was clear that faculty members would not be the only protagonists and that the building would house both faculty members and UNAM staff with lower incomes.

The property, from the very first moment of allocation of housing units, was managed by Dirección de Pensiones Civiles. That makes us think that the project would have not only an academic character (for its location and planning) but above all a social



Figure 9. Corridor comparison between 1953 and 2018.



**Figure 10.** Microarchitectural survey of a duplex apartment unit (L.'s apartment), lower floor.

one. Therefore, the Multifamiliar Universitario became a social laboratory with problems arising from the heterogeneity or wide array of the social profiles of its inhabitants, which became particularly visible when the ISSSTE (Instituto de Seguridad y Servicios Sociales para Trabajadores

del Estado, which replaced the Dirección de Pensiones Civiles) was removed from the building's administration (under the decree published on August 11, 1982),<sup>23</sup> and the apartments' tenants were faced with the conjuncture of realizing effective self-management. The estate after these

changes became a distant reality to the original, with the occupation and livelihood of new tenants that did not necessarily have a direct relationship with the University and with an administration little committed to the property's conservation. This was reflected in spatial transformations produced by occupants who found themselves in a regime of administrative autonomy conducive to transforming the apartments and adapting them to their respective needs. It is on these transformations that we have placed our attention when studying a property that, in addition to a work of remarkable quality and heritage interest is, in our opinion, also an example of the material culture and society of modern Mexico.

Interviews held with inhabitants who wished to collaborate with this work, showed a diversity of characters that has made up the living community of the building, since its foundation until today. Among all interviews, the dialogue with C. was particularly valuable, for she is one of the oldest inhabitants, a true pioneer in Mexico's high-rise housing drive. C's family was attracted by an unusual domestic experience considered at that time as a dream of "modern life" for a minority and peculiar social group. C. is the daughter of an Italian-Mexican marriage, her father was a painter, friend of Diego Rivera, and teacher at San Carlos Academy (later part of UNAM, the reason why C. was granted the apartment. She was just a little girl in those days). C. comments: "We were at risk because there were no stores (...). There was nothing yet, just the market in San Angel, quite far away. Everything was dark, there were no lights and it was dangerous (...). Then they [the rest of the neighbors] came when they saw that there was certain security, they put a streetlight and a guard..." The novelty of the building was not a problem for them, but just the opposite, "because all the apartments were different from what they were used to. All the front

windows, from ceiling to floor, was pure glass... and the bedrooms also, pure glass, something that architects don't do now, they just make a little hole like that and that's the window..."

Another elderly inhabitant L., who collaborated in this work, allowed us to carry out a survey in her interior apartment unit. L. comes from a Spanish Civil War refugee family who stayed in Mexico after the war and was more used to and open to an apartment way of living than most Mexicans at that time. L.'s family had already lived at the Ermita Building, a big and very controversial construction belonging to the late twenties, which had apartments without a kitchen... ("I lived there until I got married, and I came here, I've always lived in the apartment and I think it's wonderful)." L. combines expressions of satisfaction with signs of discomfort: "the first telephone didn't arrive until forty years ago, we all neighbors paid for the first telephone line installation. Today, the internet fails all time, it is a very bad service..." Physical communication with the city (implying car dependency) is a topic with which L. has managed to come up with solutions with some improvements ("to go shopping, I have to go by car, the shop that was near here in Avenida Universidad has recently closed... When we came, there was a store named San Francisco, in the San Angel neighborhood... it was no man's land...").

The apartment unit allows L. to lead an active life (L. goes to the gym every morning), with less concern about safety than her friends who live in single-family houses ("I see my friends who have their traditional family house, if they are going out for a long time... someone has to look at it... here, I do not have any kind of such problems)."

L.'s apartment interior (Figures 10, 11 and 12) has a traditional character, revealing rustic taste, which contrasts with the modern aspect of the building.



**Figure 11.** Comparison of the duplex's lower floor between 1958 and 2018. On top, view of Professor Rodolfo Stavenhagen and wife María Eugenia Vargas duplex apartment in 1958; below, view of L.'s apartment in 2018.

The dining table, a typical fifties design in varnished wood, stands out as an aesthetic element. "The floor was changed, it was ugly, like linoleum" (she preferred colonial-style tile to "match the decoration"); "the room was not comfortable, I changed it" (it has a simple geometric color design painted on walls). In general, major reforms and modifications were made in the first years of inhabiting the space. Walls are full of decoration items and "don't offer any more place left for pictures or crafts." There is an old television that no longer works, but it has not been removed, since it is now a "vintage gadget" appealing to L's niece. This does not mean that the maintenance of the apartment is neglected. L. takes care to avoid the furniture getting direct sunlight and drags the furniture at specific moments, generating a certain noise painfully perceived by the neighbor below.

In general terms, the apartment unit conserves the original zoning adapted to single-person's needs. The lower floor has maintained the dining room position and services; however, a living room fills what was conceived for the workspace (Figure 11) within the same area.

In a 1958 photograph, it is possible to see the space where Professor Rodolfo Stavenhagen used to work, accompanied by his wife, María Eugenia Vargas. The period's scene supposes the idealization of the full-time professor who extends his academic work into the domestic sphere, living in a specially designed building for maestros, teachers (Figure 11).

Regarding the small kitchen, defined by L. as "minimal," it shows an ambivalent appreciation. L. says it is a comfortable size, although "when I have a visitor for dining, I hate cooking... because I do not know where to put things... The stove is perfect, but the other thing, where do I put it... but ok... I manage with it." The storage space has been expanded

to the space below the staircase, which acts as a cupboard and laundry ("it has been a blessing)." Also, L. comments on the variability in climate comfort, very ventilated ("too much"), but paradoxically very hot, particularly the duplex's upper floor ("and in the room where I sleep is quite hot." L. put a fan in it. "Downstairs is more pleasant)." According to each façade orientation, the room's temperature can be very different ("this part has a climate and that part another)."

The upper floor maintains, in general terms, the same layout of the original project: that is three bedrooms equipped similarly despite their difference in dimensions. It is interesting to note the smaller flexible room used as a study (Figure 12). On this floor, an important change has been made, expanding the living area over a cantilever, the added terrace previously commented, creating a kind of balcony facing west towards Jardines del Pedregal. Diverse vegetation and furniture enrich this new space, very appropriate for resting and relaxation. This modification is present in many apartments, as seen in the west façade (Figure 7).

The upper part of the building, starting from the fourth floor, is occupied by inhabitants who pay monthly maintenance charges promptly ("everyone says it, from the fourth floor, all is better... The first floor, the contrary...") As it seems, the first floors, about which it was impossible to gather more information, have been a place of invasiones, informal housing occupations. O., another resident, remembers and repeatedly quotes the name of illustrious professors that inhabited the building and gave it prestige. In O.'s speech it is perceived that, over the years, intellectuals have gone away, some units have been registering illegal occupation, or have been rented informally ("the original tenants died, no relatives emerged, no one claimed the property"). Due to the remote location of the building and the lack of surveillance, security has been a



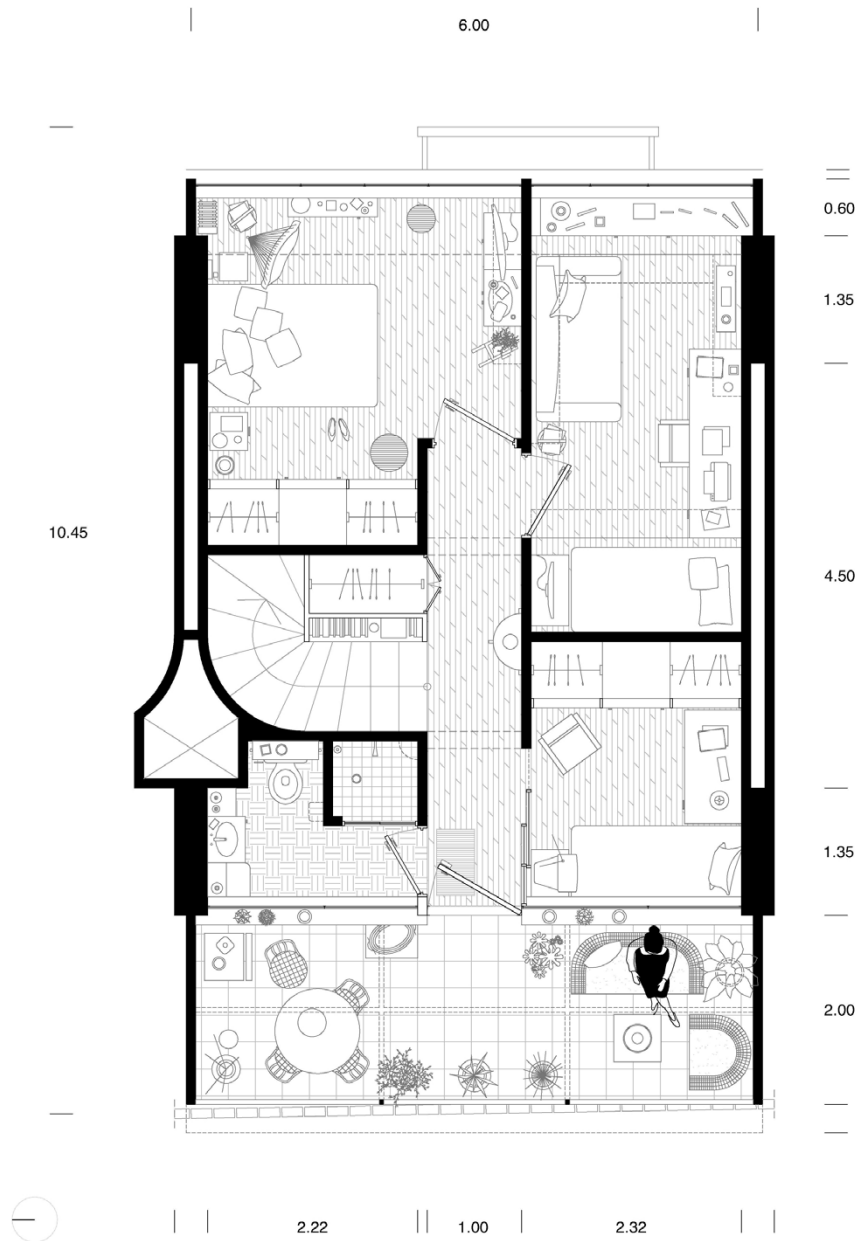


Figure 12. Microarchitectural survey of the duplex apartment (L's apartment), upper floor.

growing issue: the installation of a security booth, at the entrance, has not been possible due to the lack of cooperation from neighbors, but a vehicular control barrier has been installed at the car parking entrance, as well as a perimeter fence that impacts the idea of the original building of open space. O. tells us, confidentially, that outsiders' cars have arrived with romantic couples inside (some suffered tragic assaults), as well as homeless people looking for garbage. O.'s narrative about the building contains a dose of pessimism including a critique to the additions on the back façade ("they have distorted the structure"). This contrasts with the opinion of L., for whom the terraces allowed a greater enjoyment of the open views at sunset, over the west part of the campus, being an additional ventilated space and a gain of quality of life ("my granddaughters had a plastic pool there").

## DISCUSSION

Examining again, now, by contrast, the original project plans, and the recent micro-survey, transformations become even more evident. Multiple improvisations and adaptations, derived from its occupants' daily struggle for comfort and functionality, show clear traces of the difficulties in the original project to satisfy the changing need and the evolutions in behavior. The clearest example of this is the terrace added by many dwellers, which allows gaining a private area but modifies profoundly the façade's physiognomy, since, originally, a cantilever was provided for protection from the intense afternoon sunlight. While it is legitimate to question the lack of coordination among inhabitants to keep the aesthetic coherence of the work, the operation is also understandable in terms of environmental comfort control. The balcony, integrated into the living area with a perimeter glass, obtained an almost equivalent area to a quarter of the whole space on the upper floor. The alteration denotes the value of each

square inch within the modern Existenzminimum. The same logic operates in the small residual area below the stairs, not considered relevant in the original project, or at least, not registered there as a storage device (Figure 10). Despite this, its value was identified and recognized through everyday experience and, as a result, it was cleverly assigned a laundry place, one of the most laborious domestic tasks, planned originally in a laundry area on the roof. By doing so, displacements, time, and useless efforts are minimized. At the start of the staircase, a linens closet was inserted next to a bookshelf, serving also as stair railing. It's particularly interesting how the third dimension above the staircase is exploited (under the staircase, laundry, and above, storage).

With regards to the upper floor, the survey shows a 'bedroom' with a sliding door and a new closet at the opposite wall to the window, not present in the original project. This is more storage space, but in this case, quite relevant, being addressed to the bedroom's inhabitant personal objects, such as intimate clothes. At this point, it is worth recalling Charlotte Perriand, who described the storage spaces that generate a "void" when absorbing all everyday objects, with the valuable function of freeing what the Modern Movement appreciated most: free space. Other appropriation devices are visible through the collective corridors where pots, plants, but also benches have been installed, resulting in a place that encourages informal conversations between neighbors (Figure 9).

The interviews reveal several adversities experienced by the first occupants when communicating with other areas of the city, by telephone, and currently the internet. This confirms the idea that, in the achievement of status by buildings to become dwellings, as well as interiors to become homes, it is important not only appropriation and personalizing space, but also the social link with technical means that gives habitability quality, the connection to infrastructure (water, gas, electricity) being

as important as the connection to communication networks, (telephone, internet). This last aspect allows the possibility of being part of the urban network and creates rich social bonds (possibilities of going out with or inviting people...). In this sense, the need to connect new socio-technical possibilities has triggered a renewed community life in an effort by the residents to achieve a better quality of life. We can see in this how habitability and appropriation never end because both are historically constructed, and historical conditions change over time. The process of a building becoming a dwelling (or an interior becoming a home) depends not only on their design but also on their position in a broad social, technical and cultural net in permanent transformation. At this point, the use of network theory exposed at the beginning of this paper enriches the habitability and post-occupational analysis applied to the domestic material culture.

In summary, we can say that architects knew how to provide the exterior of the building with remarkable quality if we think about social housing standards of the time; nevertheless, they lacked the vision of everyday life, given by interiors and residents whose logical aim was to maximize the availability of space and the connection with the outside, which lead to colonizing the hollow strip of the rear façade, in a free spirit typical in informal self-management of many Mexican homes.

## CONCLUSIONS

Following the idea of architecture in action and transformation in architecture, the focus was towards the analysis of Pani and Ortega's Multifamiliar para maestros building, specifically on morphological variations, but also the inhabitant's experience of it. The modifications that have been pointed out echo those described by Philippe Boudon for Le Corbusier's Pessac (built in 1926, Bordeaux), this time in an architectural Mexican

icon recognized under UNESCO's world heritage: UNAM's Ciudad Universitaria Campus. This paper complements previous research,<sup>24</sup> when we focused on processes before its construction. The current post-occupation observation of the building sought to offer a comprehensive understanding of space design complexities not before but after construction. We have avoided observing architecture as an autonomous object but in connection with the actors who have produced and lived in the building. This approach required qualitative micro-sociological exploration that has been added to architectural standard observations. Together with the previous work mentioned above, we obtain a complete and dynamic vision of this piece of modern Mexican architecture. At the same time, the data discussion has benefited from the architecture in action approach, an attractive theoretical approach in architecture that reinforces the interdisciplinary spirit in housing studies, a constant concern in the last century. It provides and justifies exciting methodological possibilities, with the idea of "living" and "change" as a strong starting point, in opposition to timeless and "finished work," quite common in many architecture analyses. The practical implications of an approach like this lie in the inclusion of a user's understanding, and their changing needs in the design and conservation process of buildings with a complex history. This socio-spatial understanding shows that places do not simply "exist," but rather they "arise." We could even call them "events" or "experiences," emphasizing a reality that is, as physics tells us, a space-time that articulates and is articulated by the interaction of people, places, and things. As Giedion put it: "never has mankind possessed so many instruments for abolishing slavery. But the promises of a better life have not been kept."<sup>25</sup> In the mechanistic illusion of progress that the Multifamiliar para maestros embodies, it could be added, progress should not be understood as a final goal but a constant exercise of dissatisfaction.

## Notes and References

- <sup>1</sup> María Teresa Esquivel, "El uso cotidiano de los espacios habitacionales: de la vecindad a la vivienda de interés social en la Ciudad de México," *Scripta Nova* 7, no. 146 (August 2003): 29.
- <sup>2</sup> Mikkel Bille and Tim F. Sorensen, *Elements of Architecture* (London: Routledge, 2016), 3.
- <sup>3</sup> Antoine Picon and Alessandra Ponte, *Architecture and the Sciences: Exchanging Metaphors* (New York: Princeton Architectural Press, 2003).
- <sup>4</sup> Bruno Latour and Alben Yaneva, "Donnez-moi un fusil et je ferai bouger tous les bâtiments: le point de vue d'une fourmi sur l'architecture," in *Explorations in Architecture: Teaching, Design, Research*, ed. Reto Geiser (Basel, Switzerland: Birkhäuser, 2008) 80-89.
- <sup>5</sup> Marianna Heikinheimo, "Paimio Sanatorium under Construction," *The Artist and Journal of Home Culture*, no. 7 (2018): 18.
- <sup>6</sup> Kjetil Fallan, "Architecture in action: Traveling with actor-network theory in the land of architectural research," *Architectural Theory Review* 13, no. 2 (April 2008): 80-96.
- <sup>7</sup> Adrian Forty, "The modern hospital in England and France: The social and medical uses of architecture," in *Buildings and society: Essays on the social development of the built environment*, ed. Anthony D. King (London: Routledge & Kegan Paul, 1984), 61.
- <sup>8</sup> Fernando Domínguez Rubio, "On the Discrepancy between Objects and Things: an ecological approach," *Journal of Material Culture* 21, no. 1 (2016): 59-86.
- <sup>9</sup> Multifamiliar translates literally as a "multifamily," a "multifamily dwelling." In Mexican Modern Architecture history, it constitutes a specific term regarding a particular social (cheap) housing design, financed by public institutions in midcentury Mexico, in which multistory housing solutions were the norm, in contrast to a single-family house.
- <sup>10</sup> Luis E. Carranza and Fernando L. Lara, *Modern Architecture in Latin America: Art, Technology and Utopia* (Austin, Texas: University of Texas, 2014).
- <sup>11</sup> Zoë Ryan, *In a Cloud, in a wall, in a chair: Six modernists in Mexico at Midcentury* (Chicago: Art Institute of Chicago, 2019), 27.
- <sup>12</sup> Enrique de Anda, *Vivienda colectiva de la modernidad en México, los multifamiliares durante el periodo presidencial de Miguel Alemán, 1946-1952* (México: UNAM, 2008), 270.
- <sup>13</sup> Mario Pani, *Los multifamiliares de pensiones* (México: Editorial Arquitectura, 1952).
- <sup>14</sup> Teodoro González de León, "La ciudad universitaria," in *La UNAM en la historia de México*, ed. Fernando Pérez Correa (México: UNAM, 2011), 183.
- <sup>15</sup> Teodoro González de León, "La ciudad universitaria," in *La UNAM en la historia de México*, ed. Fernando Pérez Correa (México: UNAM, 2011), 184.
- <sup>16</sup> *Archivo de Arquitectos Mexicanos* (AAM) and *Archivo Clara Parset* (ACP), both part of UNAM's Architecture School archives, and *Archivo Histórico de la UNAM* (AHUNAM), the university archives.
- <sup>17</sup> In the strictest sense, five interviews may seem too little a number, nonetheless the aim here is not to engage the subject in a detailed and exhaustive manner, but rather paint a general pattern or picture of the processual nature of architecture. It must be said that it was not an easy task to interview the inhabitants, though we did see the whole community of neighbors three times during the study period when their community meetings were held.
- <sup>18</sup> Enrique de Anda, *Vivienda colectiva de la modernidad en México, los multifamiliares durante el periodo presidencial de Miguel Alemán. 1946-1952* (Mexico: UNAM, 2008), 270.
- <sup>19</sup> Mario Pani, *Los multifamiliares de pensiones* (Mexico: Editorial Arquitectura, 1952), 109.
- <sup>20</sup> Francis R. S. Yorke and Frederick Gibberd, *The Modern Flat* (London: Architectural Press, 1950), 34-42.
- <sup>21</sup> Francis R. S. Yorke and Frederick Gibberd, *The Modern Flat* (London: Architectural Press, 1950), 35.
- <sup>22</sup> "Multifamiliar Universitario," *Gaceta de la Universidad*, November 1954, 4.
- <sup>23</sup> *Diario Oficial de la Federación*, August 1982, 36.
- <sup>24</sup> Alejandro Leal, Alejandro Pérez, and Bruno Cruz, "Modern apartment culture: multifamily housing at CU-UNAM," *Contexto*, no. 17 (2018).
- <sup>25</sup> Siegfried Giedion, *Mechanization takes command. A contribution to anonymous history, 1948*, Reprint (Minneapolis: University of Minnesota Press, 2013), 715.

## BIBLIOGRAPHY

- Anda, Enrique de. *Vivienda colectiva de la modernidad en México, los multifamiliares durante el periodo presidencial de Miguel Alemán, 1946-1952*. México: UNAM, 2008.
- Bille, Mikkel, and Tim Sorensen. *Elements of Architecture*. London: Routledge, 2016. <https://doi.org/10.4324/9781315641171>
- Carranza, Luis, and Fernando Lara. *Modern Architecture in Latin America: Art, Technology and Utopia*. Austin: University of Texas, 2014.
- *Diario Oficial de la Federación*, August 11, 1982, 36.
- Esquivel Hernández, M. T. "El uso cotidiano de los espacios habitacionales: de la vecindad a la vivienda de interés social en la Ciudad de México." *Scripta Nova* 7, no. 146 (2003).
- Fallan, Kjetil. "Architecture in action: Traveling with actor-network theory in the land of architectural research." *Architectural Theory Review* 13, no. 2 (April 2008).

- Forty, Adrian. "The modern hospital in England and France: The social and medical uses of architecture." In *Buildings and society: Essays on the social development of the built environment*, edited by Anthony D. King, 61. London: Routledge & Kegan Paul, 1984.
- Giedion, Siegfried. *Mechanization takes command. A contribution to anonymous history*. Minneapolis: University of Minnesota Press, 2013. First published 1948.
- González de León, Teodoro. "La ciudad universitaria." In *La UNAM en la historia de México*, edited by Fernando Pérez Correa. México: UNAM, 2011.
- "Habitaciones para empleados." Expedientes 1833 y 1836, caja 324. Fondo Universidad, Secretaria General, Archivo Histórico de la Universidad Nacional Autónoma de México (AHUNAM).
- Heikinheimo, Marianna. "Paimio Sanatorium under Construction." *The Artist and Journal of Home Culture*, no. 7 (2018). <https://doi.org/10.3390/arts7040078>
- Latour, Bruno, and Alben Yaneva. "Donnez-moi un fusil et je ferai bouger tous les batiments: le point de vue d'une fourmi sur l'architecture." In *Explorations in Architecture: Teaching, Design, Research*, edited by Reto Geiser. Basel, Switzerland: Birkhäuser, 2008.
- Leal, Alejandro, Alejandro Pérez, and Bruno Cruz. "Modern apartment culture: multifamily housing at CU-UNAM." *Contexto*, no. 17 (2018).
- "Multifamiliar para Maestros." Cajonera 3. Fondo Mario Pani, C.U. Dirección de Pensiones Civiles, Archivo de Arquitectos Mexicanos de la Facultad de Arquitectura (AAM). AAM, Fondo Mario Pani, C.U. Dirección de Pensiones Civiles, Multifamiliar para Maestros, Cajonera 3.
- "Multifamiliar Universitario." *Gaceta de la Universidad*, November 8, 1954.
- Pani, Mario. *Los multifamiliares de pensiones*. México: Editorial Arquitectura, 1952.
- Picon, Antoine, and Alessandra Ponte. *Architecture and the Sciences: Exchanging Metaphors*. New York: Princeton Architectural Press, 2003.
- Ryan, Zoë, ed. *In a cloud, in a wall, in a chair: six modernists in Mexico at midcentury*. Chicago: Art Institute of Chicago, 2019.
- Yorke, Francis R. S., and Frederick Gibberd. *The modern flat*. London: Architectural Press, 1950.

#### IMAGE SOURCES

**1.** Drawing by Erick Muñoz based on *Los multifamiliares de pensiones*. **2.** Drawing by Erick Muñoz based on *Los multifamiliares de pensiones*. **3.** Fondo Ursula Bernath, Centro de Documentación Arkheia, MUAC (DIGAV-UNAM). **4.** Photograph by Erick Muñoz. **5.** Drawing by Erick Muñoz based in *Arquitectura México* 39. **6.** Drawing by Erick Muñoz regarding AAM, and ACP archives. **7.** Photography Erick Muñoz. **8.** Photograph by authors. **9.** Historical photograph IISUE/ AHUNAM/ Colección Raúl Estrada Discua/ Sección: Universidad/ Serie: Edificios universitarios/Caja 12/RED-603, present-day photograph by authors. **10.** Survey and drawing by Erick Muñoz, 2018. **11.** Historical photograph Fondo Ursula Bernath, Centro de Documentación Arkheia, MUAC (DIGAV-UNAM), present-day photograph by Erick Muñoz. **12.** Survey and drawing by Erick Muñoz, 2018.