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Havana's houses of apartments, 1900-1940

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Abstract: Casas de apartamentos (houses of apartments) built for renting to lower-middle-class tenants and workers proliferated in Havana's high-density areas during the first decades of the twentieth century. Despite its significant amount within the city, the Houses of apartments has not been identified as a multi-family building alternative and it is mentioned very little in the bibliography on Havana architecture. This led to the development of a historical investigation that aimed to identify and characterize this architectural type from the spatial and formal points of view. Documentary analysis methods were used, supported by field work and historical-logical analysis.. It is concluded that Casas de apartamentos constitute a multi-family type of housing that multiplied the traditional type of side patio house and that were decisive in the urban development of the urban sector studied.

Key words: workers' housing; affordable housing; multi-family type of housing; Havana 1900-1940

1 Introduction

When looking at a map or an aerial view of Havana, one's attention is drawn, within the compact grid pattern characteristic of the city as it took shape during the period of Spanish rule, to buildings that occupy a large portion of a city block and, in many cases, the entire block. These clusters comprise dozens of individual dwellings built all at once by a single owner, following the design of a single architect. These dwellings, built mostly during the early decades of the 20th century, individually correspond to the traditional type of house with a side courtyard, and as a whole were preceded by the proliferation of row houses; however, they represent a different type of construction, a form of multifamily housing, resulting from the boom in the rental business.

In the applications for building permits, they were referred to interchangeably as "apartment buildings," "independent apartment buildings," "apartment complexes," "family homes," "upper- and lower-level homes," "workers' housing," "small family homes," or "laborers' housing." In this text, they are identified as "apartment buildings," as this was the most common term used to describe them (Figure 1).

Despite their significant presence within the city, "apartment buildings" have not been recognized as a distinct type in studies on multifamily housing. Hence the need for this study, which aimed to characterize "apartment buildings" as a type of multifamily housing in Havana, as well as to demonstrate the role they played in the historical process of urban consolidation in the capital's central areas.

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Figure 1. Apartment building at the intersection of Manglar Avenue and Lindero, Centro Habana. Source: photo by the authors, 2016

2 Materials and methods

This is a historical study conducted in three stages. In the first two stages, the method employed was documentary analysis, supported by fieldwork. The study area selected was a sector of the capital that, while continuing the layout of what were once extramural neighborhoods and possessing a similar urban morphology, was developed during the first four decades of the 20th century amid a different construction dynamic than that which shaped 19th-century expansion, a factor that led to a high concentration of apartment buildings in this area (Figure 2).

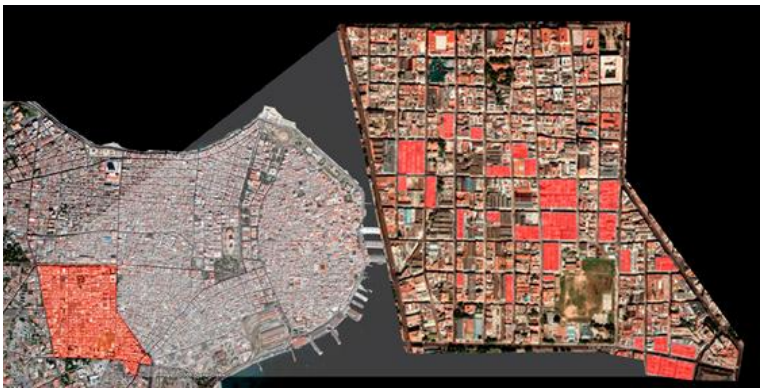


Figure 2. Study area bounded by Carlos III, Belascoaín, Infanta, and Manglar streets, Centro Habana.: Satellite image. July 2020. Source: Apple Maps, processed by the authors

The fieldwork was complemented and informed by searches of satellite images and the analysis of historical maps of the area, which made it possible to identify an initial sample of 40 apartment buildings of different dimensions. Using this preliminary information, the authors consulted 34 files from the Urban Planning Collection of the National Archives of Cuba, the journals of the College of Architects, and the urban regulations in effect during the period under analysis. Although there is no specific requirement regarding the number of dwellings, the analysis focused on buildings ranging in size from one quarter of a block to a full block, constructed between 1907 and 1941, a time-frame defined by the dates of construction of the first and last apartment buildings in that sector. Four additional buildings outside the area but very close by, which fit this type, were included. Following a process of refinement based on the documentation found and a purposeful selection, a sample of 21 apartment buildings was chosen, representing nearly 50% of the initial identification.

In the third stage, quantitative, qualitative, and comparative analyses were conducted, which allowed conclusions

based on historical-logical analysis, relying primarily on the consultation of primary sources of information.

3 Results and discussion

3.1 The study area

At the dawn of the 20th century, what was then the municipality of Havana had expanded westward to the Calzada de la Infanta, with an irregular perimeter and extensions along the Calzadas toward the west and south, while from the Almendares River, moving in the opposite direction, part of the Carmelo and Vedado neighborhoods had been occupied.

Although by 1890, some 17 city blocks had been occupied in the area between Zapata Street and Carlos III Avenue, the sector under study, known as Pueblo Nuevo, constituted an uninhabited gap, such that its subdivision and settlement took place during the first four decades of the 20th century. Regardless of the official names of each neighborhood—which have varied over time up to the present—the superimposition of historical maps of Havana made it possible to reconstruct the sequence of urbanization in that sector, which developed with blocks measuring approximately 80 m by 80 m, bounded by 10-meter-wide streets, within a very regular trace (Figure 3).

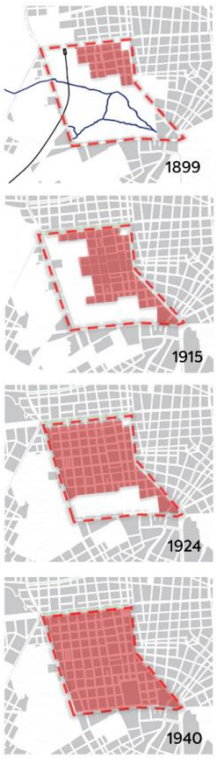


Figure 3. Urban evolution of the study area. Source: prepared by the authors

3.2 Legal constraints

Any analysis of the period under study must take into account the provisions of the Building Ordinances for the city of Havana, enacted in 1861 [1], which remained in effect until 1963[1]. The Ordinances classified streets into four categories based on their width. First-order streets were those 25 m or wider; those between 14 and 25 m were second-order; those between 9 and 14 m were considered third-order; and those between 6 and 9 m were fourth-order. Thus, the study area was bounded by three arcaded carriageways: Carlos III, Belascoaín, and Infanta, plus Manglar Street, while its interior consisted of a network of third-order streets without arcades.

The Sanitary Ordinances enacted in 1906 constituted another set of regulations that defined many of the capital's defining features. In July 1914, they were supplemented by the Regulations for Sanitary Facilities in the Municipality of Havana, promulgated by Presidential Decree, and updated by the same body in 1926. The construction boom that

characterized the early decades of the 20th century in Havana and other nearby municipalities was conditioned by the requirement in Article 54 of those Sanitary Ordinances that, from 50 meters west of Calzada de Infanta and Calzada de Jesús del Monte to Arroyo de Agua Dulce, and from the south of this point to Ensenada de Atarés—the boundaries of the consolidated city during the colonial period—buildings must be freestanding on their lots, separated by at least a side passageway, and with 33% of the lot left unoccupied [2, p.55]. In the area under study, although it was developed in the 20th century, this provision did not have to be followed, as it fell within the area where shared walls were still permitted, with only 15% of the land area open to courtyards, which favored the survival of the typology of the side-courtyard house between party walls, replicated time and again, giving rise to the apartment building, an ideal rental option for workers employed in the many factories located in the area, most of which were involved in tobacco processing (Figure 4).



Figure 4. In the study area, which in the 20th century featured a compact type of urban development, a large number of apartment buildings and industrial facilities were concentrated. Source: prepared by the authors

3.3 Apartment buildings, a rental option for workers

In the study area, construction was predominantly geared toward rental housing, with buildings of various sizes and housing capacities. Many of them were two-story structures intended for the lower-middle class of workers, students, professionals, and small business owners. These were speculative rental properties, almost always featuring corner units that were rented out separately for commercial use, described in building permit applications as "…corner house for a business," "project for a business and houses," or "…permit requested for the construction of houses and a corner business." In other words, the buildings were constructed for the purpose of renting, including both housing units of varying standards and commercial spaces or workshops for various uses.

It was repeatedly stated, using different terms, that these were houses intended for workers, and although it was never specified that the potential tenants had to be workers at any specific factory, it can be assumed that the occupancy of these buildings was driven by the housing needs of the labor force required by the many industrial facilities in the area. It is striking that, in the nearly 340 files consulted, only two housing complexes were found, which contrasts with what

occurred during the urban consolidation process that took place in other central areas of the capital at that same time. Like the rest of Havana's compact neighborhoods, the study area contains buildings with row houses holding up to 10 or 15 units, along with what makes it unique: the large apartment buildings analyzed here, which housed more than 50 units each. Everything seems to indicate that the economic power of some property owners allowed them to build a larger number of rental units at once, unlike those who did not own such large plots of land or have the means to undertake such ambitious projects.

Pedro Martínez Inclán, Chair of the Department of Architecture, Cities, Parks, and Gardens at the School of Engineers and Architects of the University of Havana from its founding in 1927 until his death in 1957, believed that these were the appropriate types of buildings for workers. In Chapter VII of his book, *La Habana Actual*, dedicated to "affordable housing," he proposed two options for workers' housing: one on the outskirts, in suburbs with dwellings grouped in pairs, fours, or sixes; and the other, which is the subject of this study, which he defined as:

... "Large houses within the city, divided into small apartments with three bedrooms and a bathroom, with enough staircases to prevent too many residents from congregating in common areas, … like blocks of houses separated by partition walls, yet forming a single multi-story building" [3, p.76].

Of the two alternatives he proposed, he noted that these were more closely tied to local traditions and, furthermore, offered better access to the city center. To illustrate his point, he cited a house designed by architect Marino Díaz[2], adding that it was never vacant, which he took as proof of the potential success of what he called "large, affordable buildings for workers," such as those used in Europe.

Likewise, Luis Bay Sevilla, another Cuban pioneer in the study of workers' housing, designed a building with similar characteristics in 1926, which was reviewed in the magazine *El Arquitecto* as "the first serious step taken in Cuba to solve the problem of healthy and affordable housing" [4].

3.4 Private developers

The apartment buildings analyzed here were not built with the backing of laws and institutions for the working class or lower-middle class, through government assistance or low-interest loans, as had been the case in Europe since the late 19th century with what were then called "affordable housing." Although some documents referred to them by that term, and they were intended for the same demographic, in Havana these apartment buildings were private investments of a speculative nature.

The research conducted has revealed that the main owners of the apartment buildings in the area under study were the wealthy Pedro Gómez Mena and his son Manuel Gómez Mena Waddington, who owned five and two, respectively.

The Gómez Mena family became one of the wealthiest families in Cuba during the Republican era, with thriving businesses in various sectors, particularly in the sugar industry. The banking firm "Pedro Gómez Mena e Hijo" was one of the most reputable and important on the island during the first two decades of the 20th century, but with the crash of 1921, it was absorbed by The Royal Bank of Canada. Furthermore, the Banco Nacional, of which Pedro Gómez Mena was vice president, went bankrupt, causing him to lose his sugar mill [5, p. 267]. It is likely that this was the reason he began, starting in 1922, to construct buildings intended for rental, a business less susceptible to stock market fluctuations and more secure in the face of fluctuations in the foreign market.

The Gómez Mena apartment buildings are located close to one another and were constructed in a shorter time frame than the rest. They began construction on the first building in 1922—a 56-apartment building—which was completed in one year and four months [6]. Shortly before that project was finished, Pedro Gómez Mena applied for a permit for another 14-apartment building, "a two-story building with seven apartments on each floor." Two years later, he continued the

business with the construction of two other apartment buildings that occupied a significant portion of their respective blocks. The first project, begun in July of that year, consisted of 15 units spread over two floors, and the second was started a month later. In 1926, he completed another apartment building, notable for being crisscrossed by interior passageways.

Manuel Gómez Mena Waddington inherited the Vitoria sugar mill and, until January 1937, owned the Ulacia sugar mill and the Caribbean Sugar Producing Company; he also continued his father's leasing business [5, p. 267]. In 1940, he completed one of the city blocks on which his father had built, with a development consisting of 106 "small detached houses" [7]. Four months after the first project was finished, Gómez Mena Waddington began construction on a second building that also occupied an entire city block; it was completed in 11 months from the time the permit was granted. The record was set by the building he constructed in 1941, which contained another 106 units distributed over two stories and took only approximately five months to complete [8]. The use of a reinforced concrete frame facilitated the construction process, and it can be assumed that the owner's availability of resources also played a role; nevertheless, the speed with which it was built is striking. Considering the number of units these buildings contained and how relatively well-preserved they have remained to this day, it can be said that speed was not synonymous with poor quality (Figure 5).



Figure 5. In the foreground, on Oquendo Street between Benjumeda and Santo Tomás, are two apartment buildings owned by Pedro Gómez Mena, built in 1922 (right) and 1924 (left). In the background (left), between Santo Tomás and Clavel, one of the buildings belonging to his son, Manuel Gómez Mena Waddington (left), built in 1941, can be seen. Source: illustration and photo by the authors, 2016

3.5 The designers

Architecture education began in Cuba in 1900, at the same time that the School of Master Builders, founded in 1871,

was closed. The first architects to earn degrees in Cuba joined other graduates from abroad—particularly from the United States—which spurred a change in national architecture. These professionals gradually took on the construction of new public buildings erected in Cuba's major cities, as well as the residences of the wealthiest property owners.

However, the Master Builders continued to work for more than two decades and were the professionals responsible for the construction of most middle-class homes during the early decades of the 20th century in Havana.

In the sample analyzed, nine apartment buildings were constructed between 1907 and 1913 based on designs by five Master Builders. The descriptive reports from this early period were brief, and the plans provided very little information.

The earliest plans provided little indication of what the building would look like, lacking dimensions or elevation details. They were limited to including the floor plan and the facade, with the occasional cross-section, without further details, and very few specified the project's location or micro-location. As municipal authorities' requirements for approving permits became stricter, with applications being denied due to such omissions, more complete documents began to be submitted.

Beginning in 1922, a second phase of apartment building construction began in the study area, during which architects took the lead; another 11 buildings were constructed that were larger than the first ones. It is significant that, although master builders were still active in the capital, the new apartment buildings in this sector were designed by architects. This was likely due not only to the growing establishment of the architectural profession but also to the fact that the owners of the buildings constructed during this second phase were more affluent and preferred to engage professionals.

By then, the documentation submitted when applying for permits was much more comprehensive and of higher quality in terms of drawings, details, and technical specifications—a fact evident even in the handwriting on the plans—while the specifications in the descriptive reports were much more exhaustive regarding construction methods, including data on structural calculations.

The architects responsible for these types of buildings had graduated only a few years earlier when they worked in the area, but some of them went on to oversee major public works projects later on. Each architect designed only one house, with the exception of Roberto C. Agüero, who was hired in 1924 for two different projects, both for Pedro Gómez Mena. Although the Gómez Menas favored changing architects, their houses share a familiar style (Table 1).

Table 1. Source: compiled by the author

Year	Owner	Architect. Year of graduation	Master Builder
1907	Severo Redondo y Vega		José Mató
1909	José Llinás		Tomás Bustillo
1911	Juan Fonallar		Alberto de Castro
May-12	José Llinás		José Mató
May-12	José Llinás		José Mató y José Planes and Rivas
Jul-12	José Llinás		José Mató.
Nov-12	José Rodríguez and Gonzalo Cañaveral		
Aug-13	José Llinás		Alberto de Castro
Nov-13	Conrado E. Martínez		
1922	Pedro Gómez Mena	Francisco Valliciergo, 1919.	
Mar-23	Pedro Gómez Mena	Enrique Biosca Jordan, 1915.	
Jul-23	Manuel de Urbizu	José M. San Pedro Xiqués, 1923.	
Jul-24	Pedro Gómez Mena	Roberto A. Agüero Pichardo, 1918.	
Aug-24	Pedro Gómez Mena		
1928	The trust Company of Cuba	Marino P. Díaz Quiñonez, 1919.	
1936	Camilo Méndez	Emilio Enseñat Macías, 1916.	
May-40	Baldolomero Guash	Raúl Vélez de la Torre, 1928.	
Sept-40	Hortensia Suarez	Siro del Campo, 1928.	
Oct-40	Manuel Gómez Waddington	Mario F. Jiménez, 1938.	
1941	Manuel Gómez Waddington	Agustín Sorhegui Vázquez,1934.	

3.6 Spatial and formal characterization of apartment buildings as a type of multifamily structure

3.6.1 Background of Havana's apartment buildings

The side-courtyard house

Havana, founded in the late 1520s, quickly attained significant importance due to its strategic geographic location. Enclosed between the sea and a ring of walls, the city was laid out in a semi-regular grid pattern with a system of plazas and small squares serving different functions, reflecting the Spanish tradition of a compact city with buildings separated by party walls, in which the courtyard served as the primary source of light and ventilation. In the area near the squares, beginning in the 18th century, stately homes with cloistered courtyards became popular as residences for the wealthiest families; the ground floor was used for storing goods, while domestic life took place on the upper level. But the type that became widespread and predominated in terms of numbers was the house with a side courtyard, typical of narrow, elongated lots approximately six meters wide, where the entrance hall was rarely used, with variations depending on the

depth of the lot.

In the area outside the city walls, which began to be settled in the second half of the 18th century and was filled in throughout the 19th century, a grid-like layout was established, similar to that of the old city, with slightly wider streets, compact and small city blocks, subdivided into narrow and deep lots, in which the traditional house with a side courtyard was adopted, consisting of a main room and a smaller room, bedrooms connected to the courtyard, and, on the longer lots, there was an additional transverse bay housing the dining room and service areas, often connected to a rear yard (Figure 6).

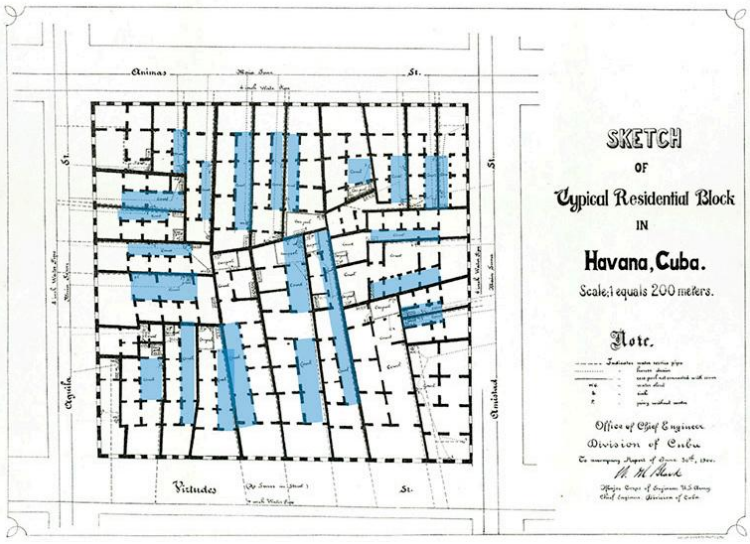


Figure 6. A city block bounded by Virtudes, Ánimas, Amistad, and Águila streets, entirely occupied by houses with side courtyards of varying sizes and proportions. June 1900. Source: courtesy of Juan de las Cuevas Toraya

The construction boom that characterized the early decades of the 20th century in Cuba's capital led to the neighborhoods that had once been outside the city walls, which largely correspond to what is now the Centro Habana municipality, becoming established with this typology, which was once again flexible enough to accommodate other functions, particularly commercial ones, on the ground floors of buildings located on main streets or thoroughfares, while the second and third floors were used for residential purposes.

The proliferation of the side-courtyard house has its roots in the so-called "semi-detached houses" or "pairs of houses," which spread in the 19th century due to the rising value of land. Consequently, a close relationship developed between urban lot planning and these dwellings, situated on rectangular blocks subdivided in depth, with the narrower front facing the street [9]. Larger lots were subdivided, giving rise to two more modest dwellings as a result of increased land subdivision—an alternative that originated with single-story houses on narrow lots and was later replicated in two-story houses of higher social standing. Likewise, in the middle of that century, the "Casa comunera" [10, p. 67] appeared, whose design replicated elements of small mansions, but only in its exterior appearance, as it departed from the warehouse-house model and, in response to urban speculation, housed multiple residential units across its various floors, which could be owned by one or more owners.

The apartment building constitutes a different type of structure. It is a building that was designed and constructed all at once and was owned by a single individual.

a) Layout and spatial arrangement

Analyzing the spatial distribution of the apartment building requires studying the types of housing units it contains, while also viewing them as an integrated whole. Despite the consistency and similarity of these buildings' features—

characteristic of the traditionalism that persists in them—throughout the period under analysis, which spans nearly four decades, one can observe the chronological evolution of certain aspects of their spatial distribution, changes from a technical and construction standpoint, and, most notably, the ornamental shifts that occurred over those years. Hence, understanding the behavior of this architectural type over time requires studying each of these parameters.

The complex

Apartment buildings consist of independent dwellings, arranged according to basic combinatorial rules that multiply the initial module—a traditional house with a side courtyard. They are composed of a variable number of units, almost all similar, which are transformed into modules that are repeated over and over again in a mirrored, rotational, or serial pattern, depending on the design. It begins with a floor plan that unfolds and multiplies to form the building's overall layout. No uniform rules of repetition were identified, beyond what can be inferred from the intention to achieve maximum land use through the use of axes of symmetry, which organize the modules on the floor plan, aligning the entrances, courtyards, and the arrangement of the facades (Figure 7).

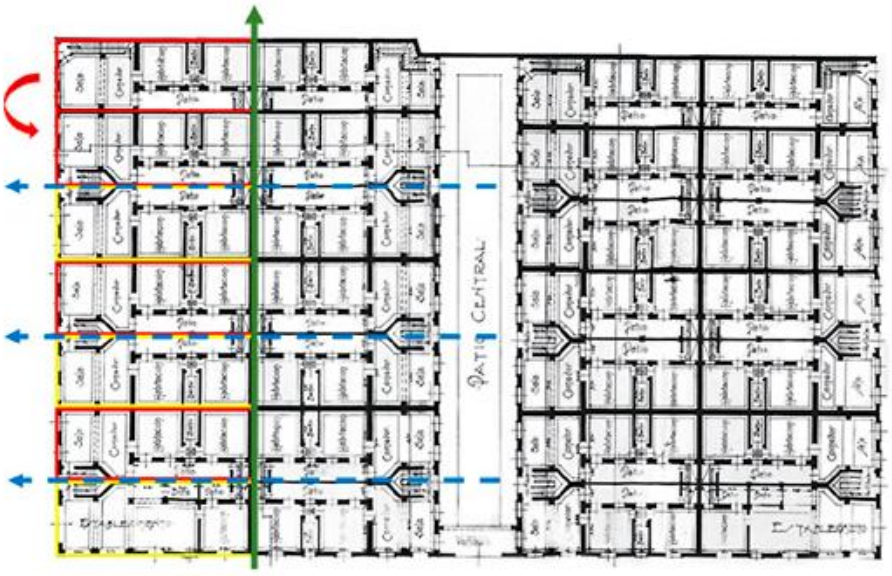


Figure 7. Example of the replication of the side-courtyard house to form an apartment building. Santo Tomás between Franco and Oquendo, 1922. A two-story building with 56 apartments on each floor. Source: graphic prepared by the authors based on a plan contained in a file from the ANC Urban Planning Collection

A common feature in most of these buildings is the distinction between two types of apartments, intended for different tenants, which is reflected in the dimensions and number of rooms and patios, and, above all, in how each type is accessed. This distinction was made explicit even in the terminology used when applying for permits, as seen, for example, in the statement: "We intend to build five houses with a ground floor and a main story, and eight small houses at the back with a passageway at the front….". The terms used varied over time. They were referred to interchangeably as "casitas" or "small houses" in 1907, "apartments facing interior courtyards" in 1924, "detached casitas with an entrance via a central hallway" in 1928, and in 1940 and 1941, they were distinguished from one another as "interior or exterior houses." Access to these "casitas" could be from the same street as the others, interspersed among the facades with similar decorative treatment, or relegated to less important streets, since higher-standard dwellings are accessed from the sidewalk, while the others are reached through shared central courtyards or hallways; and although they may have similar entrances, they are not

"citadels"—they are small dwellings containing their own bathrooms and kitchens (Figure 8).

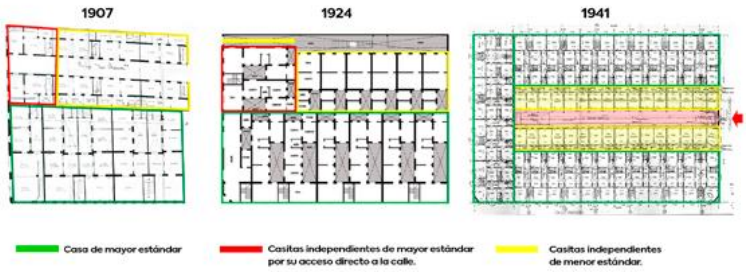


Figure 8. Apartment buildings included two or three housing types distinguished by their dimensions, their position within the block, and the way they were accessed. Source: chart prepared by the authors based on plans contained in files from the ANC Urban Planning Collection

The same entrance design with double doors, typical of row houses with different owners, was repeated: one for the ground floor and another for the staircase leading to the upper floors. Regarding this, Martínez Inclán remarked, "…Nothing can shock foreigners more than this arrangement of a half-door or a door without a vestibule in our houses" [3, p. 47]. In some cases, there are double doors, both leading to staircases serving two upper-floor units. Thus, no common spaces were designed, nor was there a single access point to the upper floors.

Generally, the staircases were located along the axis of symmetry along which the dwellings were replicated in pairs—the same axis that divides the courtyards. The position of the staircases relative to the courtyard was maintained even for dwellings with a ground-floor unit, shifting to the left or right along with it, depending on the variations in the replication of the modules.

Subtle changes in the layout of these vertical circulation routes can be observed over time; beginning around 1928, the use of staircases—with either one or two flights—shared by every two apartments became widespread. They almost always featured a window for lighting and ventilation, and when the small vestibule in front of the doors faced the facade, some had balconies resembling tiny projections, with double doors featuring slats.

The Gómez Mena apartment buildings were the largest in size and the greatest in number of units, all offering two or three standard layouts depending on the building, differentiated by floor area, the number of courtyards, access arrangements, and, at times, their location on the block in relation to orientation.

The residences

Homes facing the street

Homes with street access follow the side-courtyard house style typical of the area. In this sense, their inclusion in these complexes did not represent any departure from the traditional layout, characterized by a sequence of spaces along a corridor connected to the private courtyard typical of long, narrow lot boundaries, as established by the Sanitary Ordinances.

These are houses organized longitudinally, with one or two courtyards depending on the depth of the lot: the first, rectangular, onto which the bedrooms open, and the second, almost always square, connected to the dining room and the service area located at the rear in the higher-standard homes with higher rental value.

Notable in this regard is one of Gómez Mena's properties, in the project proposal for which it was stated: "…the project consists of building seven two-story houses facing Santo Tomás, and each house will consist of: a living room, dining room, three bedrooms, a family bathroom, kitchen, servants' quarters, and a courtyard, with all dwellings being

completely independent, such that both the upper and lower levels will have their own separate entrances" [11].

These street-facing dwellings were larger than the rest, with living rooms illuminated and ventilated through the facade openings, which varied in size but were floor-to-ceiling in most cases. In the oldest houses, the first room was almost always about 17 m² , and the subsequent rooms were slightly larger; in these, the area-to-height ratio exceeded the requirements set forth in Article 138 of the Health Ordinances, which established a minimum of 36 m³ . Since the heights required by the Building Ordinances were respected, this requirement was easy to meet. In houses built from the 1920s onward, the floor area of each room was reduced by about 2 m², and over time, ceiling heights dropped by about 50 cm; however, the regulatory requirement of 36 m³ per room continued to be met.

Ventilation and lighting for the rooms were provided by the side courtyards, although a few were designed with a room that had no direct connection to the courtyard, supposedly ventilated through the dining room or living room. The dining room was designed to be about 10 m², sometimes sharing the width of the lot with a bedroom, but more often than not it occupied the entire width.

In the earliest houses, built between 1907 and 1913, the rooms were ventilated and lit through large door and window openings facing the courtyard, separated by a solid party wall with no openings, so there were no direct views between them. However, in those built between 1922 and 1941, the window openings between adjacent houses faced each other, resulting in a loss of privacy. Likewise, there was a reduction in the depth of the apartments with the elimination of the small living room that occupied a second bay and of the dining room, as that function was transferred to the living-dining room (Figure 9).

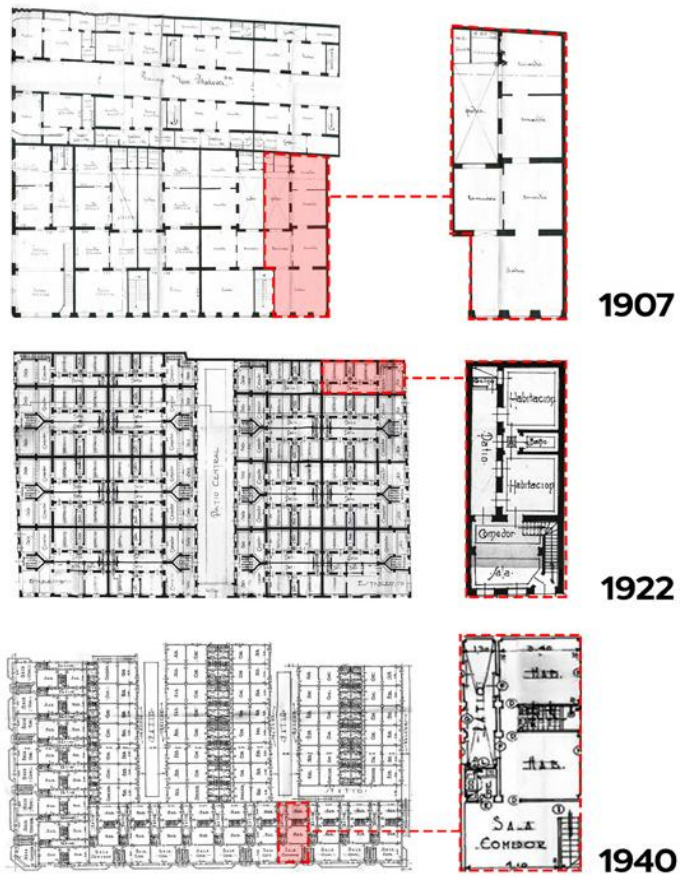


Figure 9. The side courtyard was a constant feature in the apartments within these buildings. Source: graphic prepared by the authors based on plans contained in files from the ANC Urban Planning Collection

The most significant change in these dwellings, compared to the spatial layout inherited from the colonial period, relates to the area now identified as the bathroom, which evolved in size and location over time, reflecting a new ideal of comfort and privacy. At the beginning of the century, it was a small outbuilding located at the end of the side courtyard, next to the kitchen, but it was never considered a single room equipped with sanitary fixtures. It was divided into a space for bathing and another for relieving oneself, set apart from the bedrooms. With the expansion of toilet sales that occurred as ties with the United States grew closer, the use of this sanitario fixture was introduced into the new customs of Havana's population from very early on, initially still in these outbuildings, which were identified on floor plans as "Sanitario," "Retrete," "Excusado," or "W.C." (Water-Closet) (Figure 10).



Figure 10. The main change that occurred within the side-courtyard house type was the location of the bathroom. Source: graphic prepared by the authors based on plans contained in files from the ANC Urban Planning Collection

Beginning around 1912, this space moved from the courtyard into the house, located at the end of the longitudinal row of rooms and connected to them via a long hallway parallel to the courtyard. In the sample analyzed, the bathroom appears interspersed among the rooms for the first time in 1922, although at that same time, and for several years thereafter, it continued to be located at the end of the hallway. Like the bathrooms, the location of the kitchens changed, moving closer and closer to the dining room (Figure 11). However, these changes were not exclusive to the dwellings in the apartment buildings; they were common to this type of housing in Havana at the time.

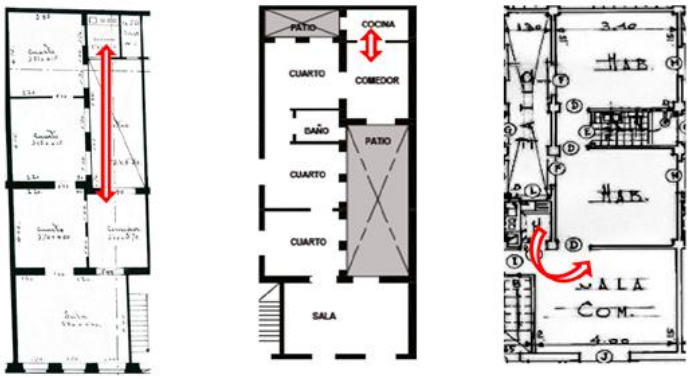


Figure 11. Over the period under analysis, the relationship between the kitchen and the dining room became closer (1907–1924–1940). Source: graph prepared by the authors based on floor plans contained in files from the ANC Urban Planning Collection

Interior dwellings

The spatial analysis of interior dwellings is of interest because they departed from the traditional linear layout, although they were at a disadvantage in terms of floor area and, above all, due to their marginalized position within the city block. Their proportions, which were closer to a square, eliminated spaces intended for circulation; and regardless of whether this was due to speculative reasons aimed at maximizing profitability in the rental business—rather than a deliberate design choice—the result established direct connections between the living room, the dining room, and the kitchen, as well as between the bedroom and the courtyard.

Likewise, among the lower-ranking dwellings there was further stratification, as some are not actually "interior" units, they have direct access to the street and a facade similar to those of higher-ranking dwellings, including the aforementioned double door. Thus, although they had smaller floor areas than the higher-ranking units, they surpassed the strictly "interior" ones in terms of status, despite having a similar floor plan.

The layout of the interior houses was not as regular as that of the side-courtyard houses and depended on how the property area not occupied by the exterior houses was subdivided to make the best use of it. Access is almost always through a passageway about 3 m wide, located in the center of two rows of houses.

The size of the more modest dwellings is one-third smaller than that of the exterior ones, and the living room is also smaller than those, by a similar proportion. However, in general, the bedrooms are larger, ranging between 14 and 15 m², which is, of course, related to the fact that they have only one room designated for that purpose (Figure 12).

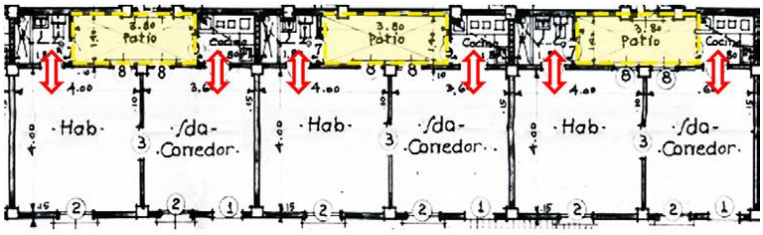


Figure 12. In the interior living spaces, there were direct connections between the dining room and the kitchen and between the bedroom and the bathroom. Source: graphic prepared by the authors based on plans contained in files from the ANC Urban Planning Collection

A substantial change can be seen in the courtyard, which is no longer actually a courtyard but rather a tiny open space, a "patinejo", whose dimensions gradually decreased over the period under analysis. Patinejos ensure ventilation but do not provide sufficient lighting and result in a lack of privacy, as they allow sounds and odors to pass through.

b) Composition

The apartment buildings are large parallelepipeds, cubic two-story structures, pierced only by courtyards, with uniform facades and a layout of regular, continuous openings that lighten the massiveness of the block (Figure 13).



Figure 13. Apartment buildings are two-story cubic structures with uniform facades. Source: prepared by the authors

Parallel to and interrelated with this stylistic evolution were changes in the layout and size of the openings, which gradually became smaller. In the oldest houses, the doors and windows are the same size and alternate in a rhythmic sequence that left almost no room for anything else. As Martínez Inclán would say about this arrangement, "...It is a pity

that, under the pretext of the climate, three openings continue to be installed where only two will fit—openings four meters high by one meter wide" [3, p. 49].

The sequence of openings was arranged with doors in succession, that is, the door to the lower house, followed by the door to the staircase leading to the upper house, and then two floor-to-ceiling windows, with slight variations depending on the design. The decoration of the doors distinguished the exterior houses from the interior ones.

Over time, the openings became more widely spaced; the windows ceased to be floor-to-ceiling, and although they retained their vertical proportions, not all have the same dimensions and are aligned in height according to the use of the different rooms in the dwellings. Similarly, the mullions were reduced in size. In 1940, the 5.28 m required by the ordinances for the ground floor was reduced to 5 m, and the 5.01 m required for the upper floor was reduced to 4.5 m, thereby accentuating the horizontality of these blocks (Figure 14).



Figure 14. The relationship between solid and void elements also evolved over time. Source: photo by the authors, 2016. Graph prepared by the authors based on plans contained in files from the ANC Urban Planning Collection

This was accompanied by a reduction in the visual demarcation of the boundaries between dwellings on the facades. In the earliest Casas, those designed by master builders, the aforementioned rhythm of doors and windows serves to distinguish where each housing unit begins and ends, despite the continuity of cornices, parapets, and balconies. The facade scheme inherited from Neoclassicism remained unchanged, although the dimensions of the openings were smaller. Thus, they appeared to be a collection of houses rather than a single building constructed all at once.

In the houses built starting in 1922, which were already designed by architects, a more unified concept is evident, as they are not formed by the addition of one after another; they lack pilasters or other vertical accents to indicate individuality. This was most evident in the Gómez Mena Waddigton Houses, dating from the early 1940s, which were designed as a cohesive whole, less fragmented, with the spacing of openings and balconies serving as accents in the composition of a continuous facade, where the subdivisions of each individual dwelling are not explicitly shown.

For the first time, the tiny bathroom windows and stairwell windows were incorporated into the facades, playing with the rhythm created by their varying dimensions and heights. The doors are lower than the windows because they do not open directly into the living rooms but rather into small entryways that distribute access to four units—two on the ground floor and two on the upper floor. And as if to compensate for the fact that the doors are not only lower but also narrower than the windows, a discreet canopy was placed above them; although it offers little protection, it highlights them within the complex.

c) The styles of apartment buildings

The changes that took place over the period in terms of the decoration and composition of these apartment buildings

reflect what was happening in the capital at that time; therefore, these structures constitute a small chapter in the history of Havana's architecture during the period under analysis. This type of building did not introduce any notable innovations into the capital's architectural landscape; however, there are some specific local features that have become identifying elements of this urban sector.

The design of these houses reflects the provisions of the Building Ordinances regarding height, alignment, projections, and many other elements that defined their appearance. In the case of third-class streets, which are the focus of this case study, the ground floor had to be 5.28 m high, the main floor 5.01 m, the second floor up to 4.22 m, and the third floor up to 3.8 m, for a maximum total height of 18.31 m. These heights included the eaves or cornice, the placement of which was left to the owner's discretion, but not the parapet of the rooftop terrace, whose decoration had to be similar to that of the facade.

On the other hand, features inherited from earlier domestic architecture persisted in terms of the sequence of door and window openings, with decorative elements "in the classical style," as the designers stated in the descriptive reports they prepared for the projects, thereby gradually shaping a uniform city in keeping with the aspirations of the Building Ordinances.

In their evolution, the houses under analysis illustrate the process by which master builders were replaced by architects, a shift that resulted in the more elaborate designs that appeared starting in 1922 in the Gómez Mena Houses. The earlier ones display a somewhat naive eclecticism, with diverse decoration on a very simple, almost standardized composition (Figure 15) whereas in the later examples, more restrained ornamental motifs are evident and, above all, a more balanced composition similar to that of the examples that Martínez Inclán identified in 1925 as being in the "modern style" [3, p. 49]—eclectic buildings with classical roots, well-proportioned, featuring recesses, openings with semicircular arches, architectural orders, corbels, and balustrades. In addition, the use of iron decreased, both in parapets and balconies, and the design of the railings became less elaborate, based on rectilinear elements (Figure 16).



Figure 15. The houses designed by master builders exhibit a very simple eclecticism, with decoration concentrated on string courses and corbels. Source: photo by the authors, 2016. Elevation included in the file plan from the ANC Urban Planning Collection

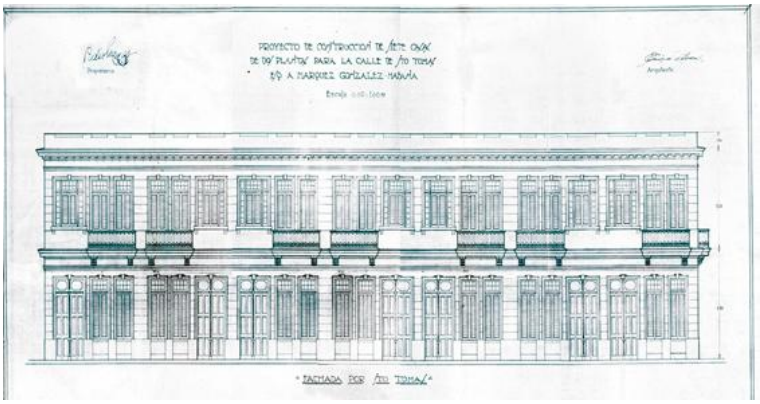


Figure 16. The houses designed by architects display a sober eclecticism with classical roots and balanced proportions. Source: plan from the ANC Urban Planning Collection

One of the distinctive features of the study area and several of its apartment buildings was the extensive use of ornamental elements from the so-called Spanish Renaissance on facades, moldings, and medallions, but above all, on beautiful baseboards made of Sevillian tiles that run along their entire perimeter. This architectural style became fashionable in the 1920s and reached its zenith in 1927 with the construction of the Telephone Company building, designed by architect Leonardo Morales. It was used in various public buildings as well as in single-family homes and numerous apartment buildings. This unique and valuable concentration is of interest, although it was not directly related to the function under study (Figure 17).

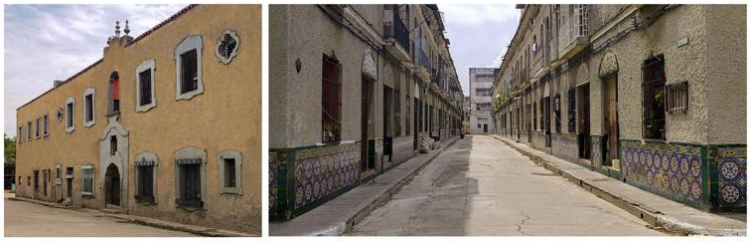


Figure 17. The study area contains several examples of the Spanish Neo-Renaissance style. On the left, an apartment building on the block bounded by Arroyo del Matadero, Manglar, Lindero, and Mercado. On the right, an interior street in apartment buildings located between Desagüe, Plasencia, Peñalver, and Retiro streets. Source: authors' photos, 2021

The last apartment buildings analyzed, built in 1940 and 1941, correspond to what has been identified as proto-rationalism [12, p. 235], as they reflect the period preceding the explosion of modern architecture that occurred shortly thereafter. The only classical element they display is a sort of horizontal incision—actually a drip edge—that runs along the entire building like a cornice, as they have already been stripped of all decoration. Nevertheless, it is a composition still based on symmetry, playing with the volumes of its solid balconies, which contrast with the latticed balconies of neighboring buildings (Figure 18).



Figure 18. Apartment building owned by Manuel Gómez Mena Waddington on the block bounded by Oquendo, Santo Tomás, Marqués González, and Clavel streets, 1941. Source: photo by the authors, 2016

4 Conclusion

The apartment building is a type of multifamily residential structure that expanded upon the side-courtyard house typical of compact neighborhoods. In the study area, despite being a sector undergoing urbanization during that period, which allowed for the use of large lots and entire city blocks, both master builders and architects preferred to replicate the side-courtyard house as many times as necessary rather than explore other spatial layouts.

The history of the studied area favored the proliferation of apartment buildings, and at the same time, that proliferation was a determining factor in the urban consolidation of the sector.

These apartment blocks retained the morphology typical of compact areas in terms of profiles, alignments, and how they relate to the street, but through the intervention of architects, their appearance increasingly and more clearly expressed their status as a single building as the boundaries between individual units disappeared from their facades. The facades of the later apartment buildings were designed as a whole, as a single building encompassing all the apartments.

From a formal standpoint, eclecticism predominated, and one can observe the styles that Havana's architecture adopted in its more modest forms, up until the point when it shed its ornamentation. The strict enforcement of building codes and health regulations made it possible to achieve the uniformity that characterized, and still today defines the studied area.

Conflicts of interest

The author declares no conflicts of interest regarding the publication of this paper.

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Note

[1] Throughout this lengthy period, they underwent amendments in 1907, 1923, 1926 and 1929. In the successive reissues produced from 1903 onwards, annexes were incorporated containing provisions and notes regarding modifications made to several articles.

[2] Martínez Inclán only specifies that it was located on Belascoain, near Cuatro Caminos. Therefore, the Apartment House to which he refers may or may not lie within the study area. However, an Apartment House designed by the same architect with similar characteristics has been documented in the district; it was built in 1928, a date after the publication of the book.