



Housing in transition: The first apartments of the New capital city, Ankara

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Abstract

Housing production busied the construction industry in Ankara during the 1920s as the small Ottoman town was transformed into the new capital city of the Turkish Republic. To accommodate the rapidly increasing population, alongside traditional houses, new housing types emerged, and 'apartments' were introduced for the first time to the new capital city. The transformation of traditional houses into apartments was not direct but gradual with the duality of historicist facades and modernized interiors and with the ensemble of 'traditional' and 'modern' characteristics. With five apartment cases exemplifying this transformation, this article demonstrates that despite the formal characteristics of the 'national' style, the manifestation of modernization began with technical advancements and changes in the spatial configuration of the housing units. This manifestation is presented by analyzing the technical and spatial characteristics of the selected cases as empirical evidence of modernization of the construction industry and the transforming usage schemes in housing due to the changes in the family structure and sociocultural aspects in the daily lives of the inhabitants of the city. With the introduction of the service spaces within the residential interiors via the retrofitting of infrastructure, with transforming polyvalent traditional spaces into 'defined' spaces and by creating hierarchies in residential interiors with publicity-privacy-based spatial configuration, the new houses constructed fulfilled the requirements of newly modernized families of the 1920s' Ankara.

Keywords Apartments · Residential interiors · Spatial transformation · Predefined spaces · Technical advancement · Ankara · 1920s

1 Introduction

At the beginning of the 1920s, Ankara was a small, neglected city with traditional neighborhoods scattered around the historic citadel. Soon after the War of Independence (*Kurtuluş Savaşı*), and the establishment of the Turkish Republic in 1923, Ankara, being the headquarters of the struggle years, was established as the new capital city on October

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13, 1923, and began to transform with an encompassing building agenda of the new government with public buildings and housing projects. The architectural style of the period followed the 'First National Architectural Style' with historicist exteriors, monumentality, and extravagant architectural details: a style loaded with 'national' meanings (Sözen, 1984; Aslanoğlu, 2010; Bozdoğan, 2012).

The necessary development of the residential architecture was the result of comprehensive thinking and planning. Due to the urgent accommodation requirement of newcomers to the city, the limited numbers of traditional houses or new single-family houses in the Old City, Ulus, were insufficient to accommodate the new immigration wave. The historic city was already dense with traditional houses, and there were few construction sites for new houses; moreover, faster and more efficient ways of providing accommodation were required.

As the Old City could not meet the accommodation demand of the rapidly increasing population, the lands towards the south of the Old City were expropriated by the municipality (*Şehremaneti*) after 1924 (Cengizkan, 2004, p.47). Here, a new settlement area was proposed called *Yenişehir* (literally the *New City*), and single-family housing production continued (Figs. 1 and 3).

Until construction began in *Yenişehir*, the newly developing quarters of the Old City were called Karaoğlan, Hacıbayram, Anafartalar, Hisarönü, Gündoğdu/Dumlupınar, which were within the boundaries of the historic city, and the Youth's Park quarter, which was towards the train station southwest of the historic core (Fig. 1). The new commercial area developed around an axis that divided the Old City, called Anafartalar Street, known as Balıkpazarı (Fish Market), Yeğenbey and Çocuk Sarayı (Children's Palace) Streets during the 1920s. Moreover, a new neighborhood was constructed in the Hisarönü quarter at the foot of the citadel, completely reorganized after the '1916 Great Ankara Fire' (Esin and Etöz, 2015) as a residential neighborhood, divided by its primary street (Işıklar Street). This area was seen as an opportunity to create a new city within the old, adorned with new apartments and single-family houses (Fig. 2). Simultaneously, the New City (*Yenişehir*) developed as a residential neighborhood, mostly targeting wealthy buyers with single-family houses in gardens following the 'garden-city' concept of the period (Akcan, 2009, p.67) and without any restrictions of land, very few apartments were constructed in *Yenişehir* during the 1920s (Fig. 3).

With the shortage of housing and demand for fast, easy and multitudinous housing units to accommodate the rapidly increasing population, the construction of 'apartments' was a logical solution, introduced to Ankara as the new housing type during the 1920s (Figs. 1 and 2). This study aims to assess the transformation of housing from traditional houses to new apartments and to analyze the advancements of their technical and spatial qualities that separate them from the housing of the previous decades via five apartment cases that are representative of the overall apartment construction boom in Ankara during the 1920s.¹

¹ These exemplary cases are part of a larger documentation and typological analysis and selected as the ideal representatives of the overall apartment production in Ankara during the 1920s; see the doctorate dissertation of Deniz Avcı Hosanlı titled 'Housing the Modern Nation: The Transformation of Residential Architecture in Ankara during the 1920s'. METU Graduate Program in History of Architecture; 2018, Supervisor: Prof. Dr. T. Elvan Altan.



Fig. 1 The Plan of Ankara During the 1920s; Exemplary Apartment Cases Are Shown on the Plan (prepared by the author by merging the 1924 Ankara Plan, Lörcher's [1924–25] and Jansen's [1928–30] Ankara plans and the current Ankara map [2016–2017]). (1) Apartment on Alataş Street No. 1, Ulus, Ankara; (2) Apartment on Işıklar Street No. 22, Ulus, Ankara; (3) Apartment on Mevsim Street Nos. 6–8a, Ulus, Ankara; (4) Children's Protection Agency Rental Apartment on Anafartalar Street No. 68, Ulus, Ankara; (5) The Lodgings of the Agriculture Bank, Adakale Street, Yenişehir, Ankara.

1.1 Selection of the exemplary cases

To draw the general image of Ankara's apartment production during the 1920s, the selection of the exemplary cases follows certain criteria. The first criterion is the location; these exemplary cases are solely from the new development areas. Four of them are from the following areas: the new blocks within the Old City, in the area rebuilt after the 1916 Great

Fig. 2 The 1916 Great Fire Area, Hisarönü Quarter, Ulus, 1920s. The framed apartment on the left is Işıklar Street No. 22 and on the right is Alataş Street No. 1, which are two exemplary cases of this study (*frames are added by the author*). Source: Österreichische Nationalbibliothek [Available at: <http://www.kulturpool.at/plugins/kulturpool/showitem.action?itemId=124554838557&kupoContext=default> (Accessed January 2019)].



Fig. 3 The Single Houses of Yenişehir, during the 1920s. Photograph date: 1926. Source: Ankara Photograph Postcard and Engraving Collection (0036). Koç University VEKAM Library and Archive, Ankara

Ankara Fire, the Hisarönü quarter, and the fifth one is from the New City, Yenişehir. The allocation of the examples starts from the north in the Old City and spreads towards the south to the New City, descending topographically from the foot of the citadel to flat lands, following the development and growth direction of Ankara (Fig. 1). Furthermore, as the second criterion, each apartment example varies in size from small, modest apartments to large luxurious apartments offering alternative residential units for diverse family types and social classes.

To represent the active actors of the construction industry in Ankara during the 1920s and their divergent styles and approaches, as the final criterion, the construction initiatives of the apartments are considered in the selection of the cases. Three of the exemplary cases were built by private initiatives, investors and entrepreneurs, who constructed apartments for themselves or as rental apartments. The other two examples were built by public institutions, supported by the government, which initiated housing production to contribute to

Fig. 4 The Apartment on Alataş Street No. 1, Hisarönü Quarter, Ulus, 1924–26. Photograph by the author (2019)



the construction of the city, to allocate budget amounts to their institutions and to provide lodgings for their workers and their families. The influence of architects is also noteworthy in the new housing constructions. They followed the technical advancements in the construction industry, preferred refined formal characteristics and demonstrated rigorous attention to the publicity-privacy-based spatial configuration; thus, two examples have known architects, and the other three examples have anonymous architects; these three examples are only known as the works of private initiatives.²

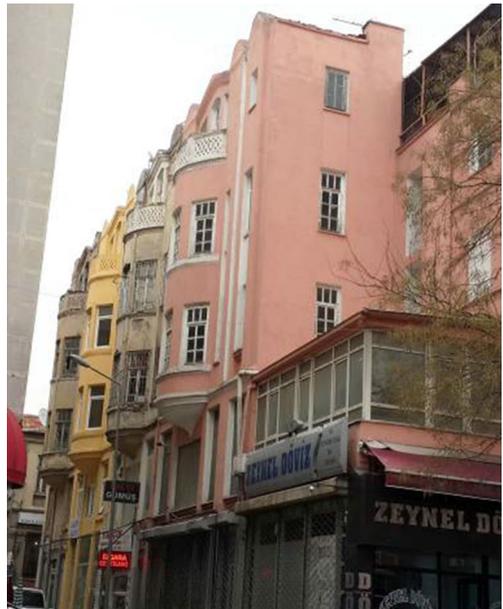
The first apartment is on Alataş Street No. 1 in the new Hisarönü quarter, on a side street leading to its foremost street called Işıklar, sloping up to the historic citadel (Fig. 4), and the second apartment is on this street (Işıklar Street No. 22) (Fig. 5). The third apartment is on the southern part and topographically lower part of the Hisarönü

² The active architects of the 1920s' Ankara were Vedat (Tek) Bey (1873–1942), Kemalettin Bey (1870–1927), Arif Hikmet Koyunoğlu (1888–1982) and Giulio Mongeri (1875–1953) (Sözen, 1984; Aslanoğlu, 2010; Bozdoğan, 2012).

Fig. 5 The Apartment on Işıklar Street No. 22, Hisarönü Quarter, Ulus, before 1927. Photograph by the author (2019)



Fig. 6 The Four-Block Row Apartment Building on Mevsim Street Nos. 6–8a, Hisarönü Quarter, Ulus, 1924. Photograph by the author (2017)



quarter on Mevsim Street, Nos. 6–8a, closer to the commercial street called Anafartalar (Fig. 6). These buildings were built by private initiatives, and their architects are unknown. The fourth apartment example, the Children's Protection Agency Rental



Fig. 7 The Children's Protection Agency Rental Apartment, Anafartalar Street No. 68, Ulus, 1926. Photograph by the author (2015)



Fig. 8 The Lodgings of the Agriculture Bank, Adakale Street, Yenışehir, 1925–26. Photograph by the author (2017)

Apartment (Fig. 7), is on the primary commercial street of the Old City, Anafartalar Street (No. 68), on the part defined as Children's Palace (*Çocuk Sarayı*) Street during those years. It was initiated by the Children's Protection Agency and designed by Arif Hikmet Koyunoğlu in 1926 next to the agency headquarters, which was also designed by him (in 1925). The fifth apartment is one of the few apartment examples in Yenışehir from the 1920s, built by the Agriculture Bank (*Ziraat Bankası*) to accommodate its

workers (Fig. 8), designed by Giulio Mongeri, who also designed the Agricultural Bank Headquarters in the Old City in 1926.

Exemplary of the divergent sized apartments of the 1920s, the first apartment on Alataş Street No. 1 is the smallest with four stories (Fig. 4). The second example apartment on Işıklar Street No. 22 with six stories is the tallest of all five examples (Fig. 5). In the third example, the apartment on Mevsim Street is formed by four blocks attached to each other, each with four stories, forming a unified facade as the first row apartment of Ankara (Fig. 6). The fourth example, the Children's Protection Agency Rental Apartment with five stories and a basement used for technical purposes, is the largest of the five examples and is exemplary of the apartment complexes of the period, having advanced technical appliances and luxurious qualities considered innovative for the era (Fig. 7).³ All the apartment examples in the Old City, regardless of size, have commercial shops on their ground floors since the Old City was still commercially viable during the 1920s when Yenışehir was only a residential zone (Figs. 2 and 3).

The last example, the lodgings of the Agriculture Bank is in Yenışehir, and because of the wide construction sites there, with two stories, it could expand in its width instead of its height with the commercial purpose of the ground floor also eliminated. Providing alternate housing units for diverse users with three distinct types of housing units doubled, it is called a 'six-unit type' (*Altıtip*) (Fig. 8).

1.2 Methodology

The new housing production boom in Ankara was subjected to comprehensive transformation during the 1920s, since Ankara was also in the midst of great transformation into becoming a modern capital city that would set example to the rest of the country. With their formal characteristics, these apartments follow the principles of the 'national' style of the period with historicist exteriors. Nonetheless, the housing production of the 1920s' Ankara is actually noteworthy of reflecting the actual modernization behind the formal appearances with the advancements of technical and spatial characteristics. The aim is to analyze the modernization in housing from every field in an order of scale from the construction techniques, use of materials to infrastructure and from the plan layouts, usage schemes to the service spaces and in situ furniture.

The most influential aspects of this transformation in housing was the change in the family structure from extended (grand) families to small (nuclear) families and the change in gender roles. In the first decade of the Turkish Republic, with the acceptance of the Civil Code (*Medeni Kanun*) in 1926, the roles of women within families and society changed irrevocably with legalized equal rights protected by law (Bozdoğan, 2012). Women were no longer homebound but rather, with the modernization agenda of the Republic, became part of society by being able to work and by being active in social life of the city. Nevertheless, the reflection of this change in households was not immediate but gradual, and social rules and traditions of the pre-Republican period continued to some extent; for instance, women still continued their active roles as homemakers and domestic housekeepers (Toker

³ Other apartment-complexes are the First Foundation Apartment ([*Belvü Palas*], 1926–30), the Second Foundation Apartment (1926–28/30) and the Building & lodgings of the State Railways Administration (1925–28), all designed by architect Kemalettin Bey.

and Toker, 2003). Thus, this study does not analyze gender roles within residential interiors nor does it discuss the formation of gender occupation norms in individual spaces.

Moreover, the first to experience the new housing units were the upper and upper-middle classes since the financially and physically war-weary Ankara natives continued to live in their traditional houses. The Ankara natives called the new inhabitants of Ankara 'foreigners' (Şenol-Cantek, 2011), which resulted in obvious urban segregation; the new settlement areas as manifestations of modernization opposed the immutable traditional neighborhoods. The foreigners were the bureaucrats and the government officials, mostly educated in İstanbul and Europe, and they settled in new houses and apartments constructed in the new settlement areas of the city. Thus, since this study aims to analyze new housing production, the focus is on the new settlement areas experienced by the middle and middle-upper classes rather than the traditional neighborhoods experienced by the poor; accordingly, all the sociospatial changes in housing concern the former group.

Only after becoming the capital were technical improvements introduced to the building context of Ankara with the aim of creating a new and modern capital city. Residential architectural development introduced many innovations, from the use of new construction systems and materials to the retrofitting of technical infrastructure. The aims of technical analysis are to identify these advancements in construction techniques and the use of new materials⁴ that accelerated housing production and resulted in the establishment of high-rise buildings and apartments, efficiently answering the accommodation demand and to specify the introduction of contemporarily innovative installation of infrastructure⁵ that eventually eased the insertion of service spaces within residential interiors, becoming one of the determinants of spatial transformations.

To understand the transformation of spatial configuration in residential interiors, the exemplary cases are compared with their predecessors in the pre-Republican period by analyzing their plan layouts and usage schemes.⁶ They are analyzed with several approach scales starting with the changing spatial configuration and transformation of polyvalent spaces of traditional houses, which were replaced by the newly introduced spaces defined according to specific functions (i.e., service spaces introduced for the first time to residential interiors and the transformation of in situ furniture demonstrating the adaptability of traditional architectural elements), all the while considering the nonnegligible sociocultural novelties brought about by the modernization agenda. Overall, the main objective is to analyze and assess all factors of change, from physical factors (technical advancements) to social factors (family structure, enlivened social life, demand of privacy) that shaped the housing production of Ankara in the 1920s.

⁴ The construction techniques and use of materials are established with a site survey conducted by the author, the Inventory of Koç University, VEKAM Library and Archive and the Inventory of Natural and Cultural Heritage Protection (*Doğal ve Kültürel Varlıkları Koruma Envanteri—D.K.V.K.E.*) prepared by the General Directorate of Cultural Assets and Museums (*Kültür Varlıkları ve Müzeler Genel Müdürlüğü*) in 1996 and 2010.

⁵ In terms of infrastructural analysis, the apartments are analyzed via the findings of the Inventory of Natural and Cultural Heritage Protection; see Footnote 4.

⁶ The plans of the apartments in this study were acquired from the indicated sources below, supported with documents from the archives of Ankara Municipality Directorate of Public Works and documentation through site surveys conducted by the author: (1) Alataş Street No. 1 and (2) Işıklar Street No. 22 (Nalbantoğlu, 1981, 2000); (3) Mevsim Street Nos. 6-8a (Kefu, 2001); (4) the Children's Protection Agency Rental Apartment and (5) the lodgings of the Agriculture Bank (Aslanoğlu, 2010; Sözen, 1984).

2 Technical advancements in the construction industry

Residential architectural development after the establishment of the Republic introduced many innovations from the use of new construction systems and materials to the retrofitting of infrastructure. Instead of traditional constructions with timber frame and masonry systems, new methods were introduced to the construction industry of Ankara during the 1920s. Additionally, with the newly gained ability, equipment, and knowledge of application, amenities such as electricity, town gas, proper water supply and drainage systems were installed during the production of new housing.

2.1 New construction techniques and materials

To revitalize Ottoman industry, small industrial companies were formed in the second half of the nineteenth century by small holders, and there had been a gradual but definite change in Ottoman architecture under the influence of westernization (Enginsoy, 1990, p.105). The main materials introduced at the turn of the century were cement and concrete, and the newly introduced construction technique was reinforced concrete systems (Kula Say, 2016, pp.161–191). Cement became prevalent even in buildings that were not concrete structures; for example, cement was used in floors, masonry walls and as plaster (Sey, 2003, p.13).

The new construction techniques and materials were introduced to the construction industry of the 1920s' Ankara only after becoming the new capital city, and housing production continued with traditional and new techniques simultaneously. With new materials, the construction industry accelerated its housing production; thus, new houses and apartments were constructed in less time and with more housing units rather than constructing single houses over prolonged periods, solving Ankara's accommodation problems considerably.

Traditional construction systems also continued to some extent, including masonry and timber frame structural systems with brick or mud brick as infill materials. However, the new techniques came to dominate the construction industry, which included steel or concrete structures with brick used as infill. In some new examples, masonry systems were mixed with concrete elements, such as floor plates or concrete slabs. In others, even though the buildings were designed with concrete or steel structure systems, a stone masonry appearance was given on the facades with the use of plaster, or these buildings were enveloped with local stone, especially on the ground story level. Iron and steel construction systems were new to Ankara during the 1920s, and these could be complete steel structural systems or iron and steel elements (locks, window ledges, railings, shutters, ovens, screws, and bolts) could be used together with masonry systems.

With a planned development agenda following Lörcher's plan (1925–28), concrete structures with brick walls became widespread in modernization attempts, and principally, apartments, initiated by public or even by private means, were constructed as such. For example, the apartment on Alataş Street No. 1 is a stone masonry building with concrete slabs and floor plates, and the apartment on Işıklar Street No. 22, even though it is the tallest of all five examples, is another example of this technique. These two apartments suggest that the traditional masonry technique was not fully abandoned during the 1920s and was used together with concrete. The third example, the four-block row apartment building on Mevsim Street, is one of the few examples of steel structures with brick infill (Kefu, 2001), providing a high ground story with a mezzanine level for commercial purposes and

projecting upper floors with circular sides creating ostentatious facades. The Children's Protection Agency Rental Apartment, designed by Koyunoğlu, one of the 'apartment complex' projects of the 1920s' Ankara, is an example of concrete structural systems with brick infill, demonstrating the contemporary technical advancements of the construction industry (Yavuz, 2000). The lodgings for the Agriculture Bank in Yenışehir, designed by Mongeri, is yet another example of a stone masonry building with concrete slabs and plates, demonstrating the use of old and new techniques together in the lower structures of Yenışehir. These examples demonstrate that in the Old City, a variety of construction techniques were implemented simultaneously, varying according to the size (height) and luxurious quality of the examples, whereas in Yenışehir, low-rise housing production did not require fully advanced construction techniques. After these initial experiences, from 1928 onwards, concrete construction became the sole application method throughout the new capital city.

2.2 Retrofitting of infrastructure

The contributions of the technical advancements to the production of new housing were not limited to the construction techniques and materials but were most evident in the improvement of the infrastructure, eventually providing all the modern amenities required to the residential interiors. The first apartments of Ankara were designed to provide comfortable living standards with technical advancements in infrastructure by providing water supply and drainage to service spaces, thus introducing service spaces into residential interiors and increasing the quality of life in living areas with electricity and heating. Almost all apartments and especially the apartment complexes were designed with modern technical and functional amenities, such as elevators, radiators, electricity, bathtubs, and European-style toilets (Yavuz, 2000, p.239).

The distribution of electricity and town gas to Ankara started with the establishment of the electricity and town gas factory in the Maltepe quarter at the end of the 1920s. The Maltepe quarter, between the southern (new) and northern (old) parts of the city, became the only preferable location with its proximity to the settlement areas and pre-existing storage units around the train station (Fig. 1). The factory provided electricity for the first time on September 26, 1928 (Saner and Severcan, 2009, p.55), and in October 1929, it provided town gas (Cengizkan, 2004, p.46). The locations of these factories and their technical distribution can be seen on the gas and gas-pipe distribution map prepared for the New City, Yenışehir, in 1928, with a connection/pipe network to Yenışehir houses.⁷ Unfortunately, very little is known about the installation of town gas in the Old City, Ulus, during the 1920s.

The inventory prepared by the General Directorate of Cultural Assets and Museums demonstrates that almost all the housing examples from the 1920s lack heating, either as town gas or as central heating systems; instead, the residential units were heated with heating stoves. On the other hand, in the apartment complexes with the most luxurious housing units, such as the Children's Protection Agency Rental Apartment, there were central heating systems with radiators (Yavuz, 2000, pp.238–239).

Efforts to establish a water supply network started even before the 1920s in the nineteenth century, and by the mid-1920s, the water supply network was almost installed

⁷ Yenışehir Gas Pipe Distribution Document, showing the layout, dated 12.04.1928, with scale and signed, and 'Anschluss Blatt 2' (Gas Connections) annotated (Cengizkan, 2004, pp.45–46).

Table 1 Infrastructure: Water Supply, Electricity, Town Gas and Water Drainage

	APARTMENT ADDRESS	WATER SUPPLY	WATER DRAINAGE	TOWN GAS	ELECTRICITY
1	Alataş Street No.1, Ulus, 1924-26.	●	●		●
2	Işıklar Street No.22, Ulus, before 1927.	●	●		●
3	Mevsim Street Nos.6-8a, Ulus, 1924.	●	●		●
4	Children's Protection Agency Rental Apt., Anafartalar St. No.68, Ulus, 1926.	●	●	●	●
5	Lodgings of the Agriculture Bank, Adakale Street, Yenışehir, 1925-26.	●	●	●	●

throughout the entire city⁸; however, the water drainage/sewage network was not installed in the Old City during the 1920s and was solved with cesspools (Yavuz, 2001, p.296).

The infrastructural development of Ankara can be followed by studying the exemplary representative cases undertaken here. For example, since the water supply problem of Ankara was solved at the end of the nineteenth century, as one of the first small private apartments in the Hisarönü quarter, Alataş Street No. 1 had water installation, as its service spaces demonstrate, and the other amenities were provided before the end of the 1920s (Table 1, no. 1). The inventory shows that the second example, the apartment on Işıklar Street No. 22, had water, electricity and water drainage installed but lacked town gas since the heating of the residential units in the Old City were solved with heating stoves during the 1920s (Table 1, no. 2). The four-block row apartment building on Mevsim Street shows similar properties as seen from the inventory (Table 1, no. 3).

For the examples built by public initiatives, technical infrastructure advancement can be expected, and the inventory shows that the Children's Protection Agency Rental Apartment provided every amenity. Yavuz (2000, pp.238–239) states that there was a central heating system with radiators in the apartment (Table 1, no. 4). In the final example in Yenışehir, the lodgings of the Agriculture Bank, all the amenities, including heating, were provided as seen in the gas-pipe distribution plan of Yenışehir (Table 1, no. 5). These examples demonstrate that the new advancements in construction techniques, materials and infrastructure provided a considerable leap in the modernization of housing production, eventually contributing to the spatial transformations with the inclusion of service spaces in residential interiors.

⁸ In the last quarter of the nineteenth century, the governor of Ankara (Abidin Pasha, 1883–1894) and municipal authorities solved the water supply problems of the city by constructing a plumbing system to carry water from surrounding sources into the city. The municipality agreed with a French engineer for the casting of the iron pipes in 1893, which solved the problem considerably. For more information, see Aydın, et al., 2005, pp.248–263.

3 Spatial transformations of the residential interiors

With modernization, other than social laws defining public behavior, unofficial regulations became definitive in organizing residential units, and thus forms and arrangements of spaces started to create hierarchies (Baydar, 2005, p.38). Accordingly, with the advancements in the construction industry and infrastructure of the city along with the social and cultural changes brought about by the modernization agenda, changing family structure and the individuals' demand of privacy, the spatial configuration of the inveterate traditional houses changed irrevocably with the production of new housing.

In the residential architecture tradition of the late nineteenth century and earlier, the traditional houses of Anatolian towns were built for extended family structures (grand families) with two and three generations living together. For instance, a newly married couple lived with the husband's family in order of the patrilocal family structure (Toker, Toker, 2003, p.55.3). The ground or the basement stories of these houses were used for ancillary functions such as storage spaces and service spaces. The most integrated space of these acted as the circulation and workplace called *taşlık*, and this space was connected to the staircase leading to the upper or the 'living' stories of these houses. In these houses, rooms (*odas*) of the same size and characteristics allocated to individual couples were placed around a large space called the *sofa* (projecting right over the *taşlık*) which functions as the principal living room and the sole circulation space, connecting all the other surrounding spaces (Kuban, 1995; Eldem; 1984).

In the 1920s, the traditional extended family structure started to change with the detachment of small (nuclear) family units requiring smaller housing units in apartments or detached houses. With increasing independence, houses have become tools for representing the new lifestyle of modernized families, who are active in social circles and nightlife by entertaining guests and have a demand for privacy among the individual family members. These changes demanded a new spatial configuration of the units with publicity-based front rooms as living rooms (*salons*), dining rooms and grand reception halls and with separated private sections including bedrooms and bathrooms. Thus, the new plan layouts and usage schemes became more complex with intricate spatial connections according to the changing notions of publicity/privacy. These concepts will be further discussed in the following section with the plan typology of the apartment housing units in Ankara in the 1920s.

3.1 Plan typology, usage scheme and new predefined spaces

One of the methods used to analyze and identify housing typologies is to look at the 'living' stories (*piano nobile*) (Asatekin, 1994, p.66). In terms of identifying the plan typology of traditional houses of Ottoman towns, traditional polyvalent *sofas* are the predominant identifier, as the circulatory, living and the gathering space used by all family members (Eldem, 1954, 1984; Asatekin, 1994). The secondary identifier is the spaces surrounding the *sofa*, rooms (*odas*) which are used as sleeping quarters of the individual family units in extended families during the night (the beds are put away during the day). The final determinant of the plan typologies is the relation between these rooms with the most integrated *sofa* space.

In the 1920s' Ankara, the initial spatial transformation of residential interiors began with the change in the horizontal/vertical circulation and usage activities of traditional single-family houses into the solely horizontal circulation of the housing units in apartments.

With a similar approach of looking at the 'living' stories and their circulation spaces as the major identifiers in the previous studies (Eldem, 1954, 1984; Kuban, 1995; Asatekin, 1994), the plan typology of this study is also prepared according to the principal circulation spaces and the spatial connections of these with the other spaces (public, private and service spaces). During the 1920s, the adaptation to a new plan layout was not direct but gradual, and resultantly, the usage schemes showed variety, which was archetypal according to their circulation spaces, *sofas*, halls, and corridors, and three types of plan layouts emerged.

The first type of plans is in the 'traditional' style with central *sofas* surrounded by other spaces similar to that of traditional houses. *Sofas* remained the central living room with circulation functions. The continuity in the use of traditional spaces such as these play a functional as well as a commemorative role during the period; they provided a solution to the heating difficulty of the period when central heating was not established and stoves were placed in the central living rooms.

Sofas with minor differences led to the formation of new spaces (*halls*) in the 'in-between' plan layouts. Halls with apparent dominance in the plan layout preserve the traditional aspect of the *sofas*. However, they are not equivalent to *sofas* with the living room function eliminated; rather, they are smaller and without any connections to the outside and merely preserve their circulation function similar to the corridors of the modernized usage schemes, only larger and more integrated. Directly connected to the street doors (entrances), they acted as the 'reception' spaces leading to the public/social spaces (the living rooms and dining rooms), thus requiring a secondary passageway leading to the private spaces in this type. Eventually, *sofas* and halls were replaced by corridors characterized only by the circulation function in the new 'modern' plan layouts, and all spaces surrounding these corridors were arranged according from decreasing publicity to increasing privacy from the entrance.

The use of *sofas* and halls as counterparts to 'corridors' in the modern plan layouts caused the formation of distinct types of plans, and the use of traditional and new spaces together formed the 'hybrid' character of the production of housing in the 1920s' Ankara. These three types of plans, that is, 'traditional', 'in-between', and 'modern' plans, are further analyzed according to the number of housing units per floor (Table 2): apartments with one residential unit per floor, apartments with multiple residential units per floor and apartment complexes.

This classification scheme demonstrates a correlation between apartment size and spatial advancement. Smaller apartments have traditional plan layouts, and vice versa; larger apartments, such as apartment complexes, have fully modernized plan layouts. Traditional plan layouts are seen, especially in small apartments with one residential unit per floor, and even though *sofas* are still dominant, the surrounding rooms show differences in size, hinting at the formation of predefined spaces. For example, in the residential units of the apartment on Alataş Street No. 1 (Table 2, no. 1), the entrance doors open to *sofas*, which are the central circulation and living room spaces. Nevertheless, new spaces also emerged that served as the actual living rooms, existing alongside *sofas* even though they have similar functions (Table 3, no. 1). These new spaces, such as the new living rooms or *salons*, became the front rooms of the house with salient features and size, exhibiting the wealth of the family. For instance, in the units of this example, the rooms with towered corners, which were also the largest, became the living rooms, indicating that this room type is indeed the front room of the house used for entertaining guests. Another example of predefined spaces in this example is the main bedrooms, having the only access to the bathrooms, forming adjacent spaces in enfilade (i.e., chain rooms where one room cannot be

Table 2 Plan Typology of the Residential Units of the Apartments from the 1920s in Ankara

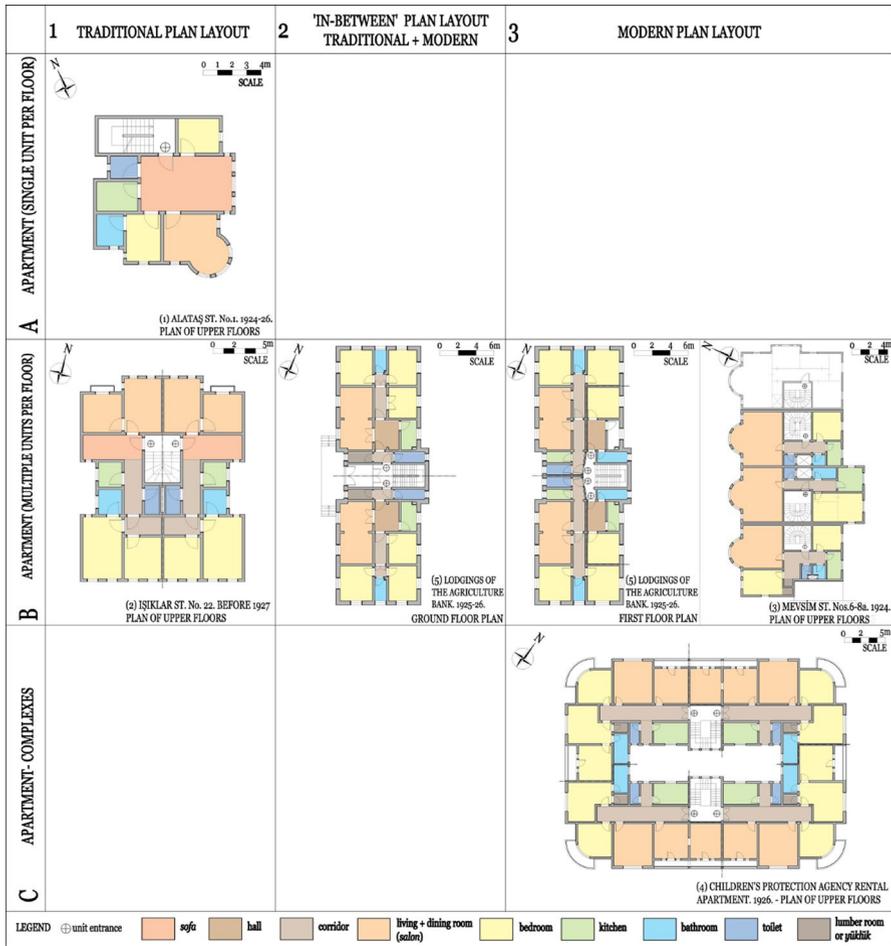


Table 3 Use of Spaces: Predefined Spaces, Service Spaces and In Situ Furniture

BUILDING ADDRESS	BUILDING INITIATIVE	SOFA	HALL	CORRIDOR	LIVING PL.	DINING PL.	OFFICE PL.	MAIN BEDROOM	SMALL BEDROOM	MADRS BEDROOM	STORAGE / LUMBER R. "SANDIK ODASI" ROOM	TRADITIONAL CUPBOARD "TÜKLÜK" ROOM	KITCHEN	BATHROOM	BATHROOM OR BEDROOM or "GÜSLEHANE"	TOILET	BATHROOM + TOILET
1 Alataş Street, No. 1, Ulus 1924-26.	PRIVATE	●			●			●	●				●		●	●	
2 İşıklar Street, No.22, Ulus, before 1927.	PRIVATE	●			●	●		●	●				●		●	●	
3 Mevsim Street, Nos. 6-8a, Ulus, 1924.	PRIVATE			●	●							●	●	●			●
Children's Protection Agency Rental Apt. Anafartalar S., No.68, Ulus, 1926.	PUBLIC			●	●	*		●	●	●	●		●		●	●	
Lodgings of the Agriculture Bank, Adakale Street, Yenisehir, 1925-26.	PUBLIC	●		●	●	*					●		●	●		●	●

● present * fits the def. in terms of the location and size of space

reached without traversing another). This phenomenon suggests that the deepest space from the main entrance becomes the most private as the new nuclear family structure demands privacy among the family members. These adjacent spaces in enfilade became customary in the residential units of the 1920s with spatial connections of living/dining rooms, main bedroom/bathrooms, and the connection of two private rooms.

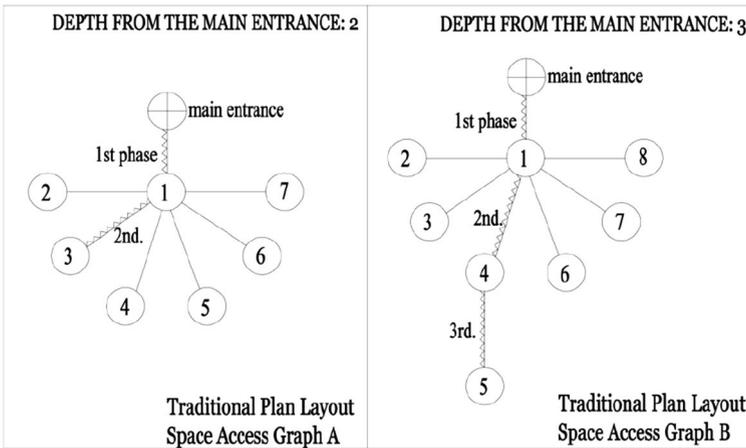
The traditional plan layouts are also customary in the larger apartments that have multiple residential units per floor. In these examples, the dominant central spaces are still *sofas*; however, the surrounding spaces around these *sofas* show major differences with their predefined quality and publicity/privacy-based allocation. For example, in the units of the apartment on Işıklar Street No. 22 (Table 2, no. 2), the entrances open to *sofas* and these give access to public spaces such as living/dining rooms with street views. Although they have functions similar to those of *sofas*, living/dining rooms are clearly more prestigious. Moreover, these two rooms are adjacent in enfilade (i.e., chained spaces where one of them cannot be entered from the *sofa* directly). This phenomenon shows levels of publicity within the public spaces, meaning there is a formal reception/entertainment section (the living room) followed by the dining room with a more intimate gathering space after the introductory reception. Regarding private spaces, *sofas* lead to private corridors, which provide access to service spaces and private bedrooms. The bedrooms are distinguished from each other by size (i.e., the main and children's bedrooms), which are private predefined spaces introduced in Ankara for the first time (Table 3, no. 2). In these areas, there is a chained connection from the smaller corridors to bedrooms and from the larger bedrooms to the bathrooms, indicating an increase in the level of privacy in private bedrooms. The main bedroom has the only direct bathroom access, as the space with the uttermost privacy, within the units.

An example of the second plan type, defined as in-between plans, which are no longer traditional in terms of the transformed central *sofas* and have a variety of predefined spaces, is the lodgings of the Agriculture Bank in Yenışehir (Tables 2 and 3, no. 5), with its residential units on the ground floor having halls as the front reception and circulation spaces. The living/dining rooms (adjacent rooms in enfilade) and the kitchens are accessed from this hall, forming the public heart of the house. The public and private spheres are clearly divided into two sections, with further hierarchical alignment among the public spaces: the reception (the living room or *salon*) and the more intimate social space (dinner room). The hall then leads to a private corridor, the second part of the house surrounded by private rooms and a bathroom. This example demonstrates that the in-between housing type yields a clearly defined hierarchical organization of privacy, as halls and corridors are used according to the publicity or privacy of the surrounding spaces.

The modern plan layouts became predominant especially after 1926; these layouts are characterized by corridors as the circulation spaces with all public, private and service spaces opening to them with the elimination of *sofas* and halls, and the spatial connections are arranged according to an allocation of spaces with a deliberate hierarchy from public to private. For example, the architect Mongeri offered alternative housing units for different-sized households in the lodgings of the Agriculture Bank (Tables 2 and 3, no. 5) with two types: moderate and small-sized units. The former, intended for a small family, has two corridors instead of halls and one of the corridors (replacing the hall of the larger units on the ground floor) opens to the public spaces, and the other corridor opens to the private spaces.

Another example of the modern plans is the four-block row apartment building on Mevsim Street (Tables 2 and 3, no. 3). In each block, there is a separate staircase and one residential unit per floor. The plans of these units are similar, and the entrances open to

Table 4 Traditional Plan Layouts Analyzed with the Notion of Depth



small corridors, which are surrounded by all the public, private and service spaces. However, the publicity/privacy-based spatial configuration is again clear even without the public/private separation of the circulation spaces. Instead, here, this organization is established with the orientation of public spaces towards the street (and vice versa) and their physical characteristics. For example, living rooms, *salons*, are distinguished by their large size, semicircular forms, and view of the street, and private rooms are distinguished by their smaller sizes and location with views of the private courtyard.

With the apartment complexes, the fully-transformed modern plan layouts replaced the traditional ones, and these set examples for other houses constructed in the following decades. In the Children’s Protection Agency Rental Apartment (Table 2, no. 4), the primary circulation space of each unit is a T-shaped corridor, eliminating *sofas* and halls altogether, indicating the impact of fully modernized plans in the largest and most ostentatious units executed by public institutions. The spaces can be identified by their location in the hierarchical spatial organization according to publicity/privacy; the living/dining rooms are right next to the entrances and across the kitchens, and the main bedrooms are defined by bathroom access as well as being in the secluded private areas. It is curious that even though the central *sofa* space is eliminated, there are large family-living room spaces equivalent to *sofas* without the circulation function that are right next to the actual *salons* (living/dining rooms), perhaps suggesting that the traditional characteristics are still appealing to most users (Table 3, no. 4). Moreover, here, the architect Koyunoğlu considered diverse user profiles and offered alternative housing units; in one type, the living/dining room is in enfilade right next to the entrance, forming a large *salon*; however, in another type, this space is half the size and there is an additional bedroom, which can be accessed only from the main bedroom.

Accessibility offers salient clues of how public and private spaces are spatially distinguished (Özgenel, 2007, pp.239–240), and this accessibility is related to the depth of the spaces from the entrance. When the spatial configuration of the residential architecture of the 1920s’ Ankara is analyzed with the notion of depth (Hillier and Hanson, 1984), the examples demonstrate advancements with new spatial connections according to the notions of publicity/privacy, as access to private spaces from the entrance is hampered by other pass-through spaces (increasing the depth from the main entrance).

Table 5 The Exemplary Apartment Cases Analyzed with the Notion of Depth

	<p>(1) ALATAŞ ST. No.1. 1924. DEPTH FROM THE MAIN ENTRANCE: 3</p> <p>Traditional Plan Layout Space Access Graph B</p>
	<p>(2) IŞIKLAR ST. No.22. BEFORE 1927. DEPTH FROM THE MAIN ENTRANCE: 5</p>
	<p>(3) MEVSİM ST. Nos.6-8a. 1924. DEPTH FROM THE MAIN ENTRANCE: 2</p> <p>Traditional Plan Layout Space Access Graph A</p>
	<p>(4) CHILDREN'S PROTECTION AGENCY RENTAL APT. 1926. DEPTH FROM THE MAIN ENTRANCE: 3</p> <p>Traditional Plan Layout Space Access Graph B</p>
	<p>(5) LODGINGS OF THE AGRICULTURE BANK. 1925-26. DEPTH FROM THE MAIN ENTRANCE: 5</p>

In the four-block row apartment building on Mevsim Street, despite the transformed *sofa* space in both size and form, the depth from the entrance is two (2), which is defined as 'traditional plan layout A', and the spaces have the predefined characteristics only with the size, form, location and spatial connections (Table 4 and Table 5, no. 3). The traditional plan layout starts to show a slight variation when the depth from the entrance increases to three (3), which is defined as 'traditional plan layout B' (Table 4). Here, the first space is usually a *sofa* or a hall, and from these spaces, all the other spaces except for one can be accessed. This exceptional space is a chain space in which one of the spaces can only be accessed from another space. This phenomenon is exemplified by the spatial connections of 'main bedroom—private bathroom' in the housing units of Alataş Street No. 1 (Table 5, no. 1, depth 3) and 'main bedroom—private bathroom or private storage space' in the housing units of the Children's Protection Agency Rental Apartment (Table 5, no. 4, depth 3).

The first significant variation began when the depth from the main entrance increased even more, and accordingly, the publicity/privacy articulations of the predefined spaces became more intricate. For example, in the units of the apartment on Işıklar Street No. 22, the farthest and most private space is five spaces away, and the main bedroom and the private bathroom cannot even be perceived from the entrance (Table 5, no. 2, depth 5). The units of the lodgings of the Agriculture Bank are similar, and all the circulation spaces are surrounded by rooms reflecting the privacy/publicity levels of their corresponding circulation spaces (Table 5, no. 5, depth 5).

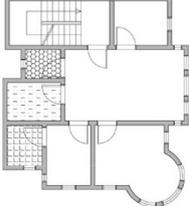
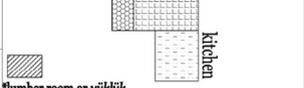
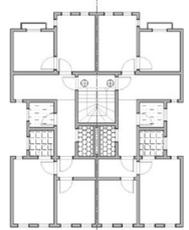
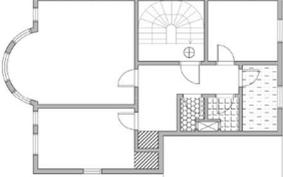
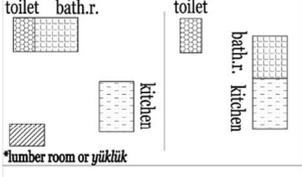
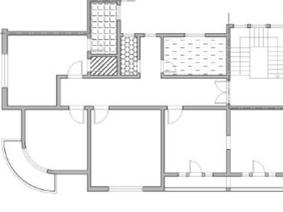
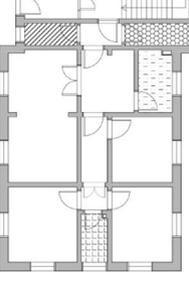
This analysis of depth demonstrates that the public/social spaces of the houses are shallower from the entrance with only the primary circulation space in between. On the other hand, private spaces are farther from the entrance and are usually reached by an additional corridor as the secondary passageway. Overall, after the 1920s, the housing units demonstrate increases in the level of privacy and the complexity of the usage scheme according to the notions of publicity/privacy, which are both correlated with the change in family structure and social life.

3.2 New service spaces and transformation of in situ furniture

The service spaces and their relation with the other spaces of the new houses constructed in the 1920s show a considerable transformation when compared with the service spaces of the traditional houses in Ankara, which were placed in courtyards or in spaces surrounding *taşlıks* (the circulation and service space on the basement and ground floors of traditional houses). In traditional houses, a fountain was located in a corner of a courtyard, and a toilet/washroom (*abdesthane*) was located in another corner. The kitchen was located in the basement or ground floor or in a separate building within the courtyard, having an in situ oven or floor furnace (*tandır*) and water cubes embedded in the ground. For bathing purposes, small bathing cubicles (*gusülhane*) in traditional cupboards (*yüklük*) were used in rooms (Kömürcüoğlu, 1950).

Contrary to traditional houses, service spaces became part of the interiors of houses constructed in Ankara during the 1920s with the retrofitting of infrastructure. All the housing examples of the 1920s were constructed with fully equipped kitchens, bathrooms and toilets. In particular, bathrooms served as rooms in which to implement ideals of comfort and hygiene equivalent to Western norms (Gürel, 2008, p.215). Furthermore, as a novelty in contemporary Ankara, most of the toilets were of the European type (*alafranga*), rather than the traditional-style closet embedded in the floor (*helataşı*) (Yavuz, 2000, p.234).

Table 6 Service Space Typology of the Residential Units of the Apartments from the 1920s in Ankara

LINED IN JUXTAPOSITION	LINED IN L-SHAPE
<p style="text-align: center;">toilet bath.r. kitchen</p>  <p>*lumber room or yükliük</p>  <p style="text-align: center;">(1) ALATAŞ ST. No.1. 1924-26.</p>	<p style="text-align: center;">toilet bath.r.</p>  <p>*lumber room or yükliük</p>  <p style="text-align: center;">(2) IŞIKLAR ST. No.22. BEFORE 1927.</p>
LINED IN L-SHAPE - ONE SEPARATED	 <p style="text-align: center;">(3) MEVSİM ST. Nos.6-8a. 1924.</p>
<p style="text-align: center;">toilet bath.r. toilet bath.r. kitchen kitchen</p>  <p>*lumber room or yükliük</p>	 <p style="text-align: center;">(4) CHILDREN'S PROTECTION AGENCY RENTAL APT. 1926.</p>
 <p style="text-align: center;">(5) LODGINGS OF THE AGRICULTURE BANK. 1925-26.</p>	

To facilitate the installation of newly improved technical infrastructure (water supply, water drainage, ventilation and electricity), service spaces were grouped together in clusters (juxtaposition) or, more prevalently, in L-forms, or two of them were grouped together and one was separate (Table 6). Grouping the service spaces and separating them from the living areas were considered necessary due to constricted construction sites of the Old City; thus, they could be ventilated by shafts, especially exemplified by

the apartments built by private initiatives: Alataş Street No. 1, Işıklar Street No. 22 and Mevsim Street Nos. 6-8a (Table 6, nos. 1–3).

Because of this problem, even the units of an apartment complex, the Children's Protection Agency Rental Apartment, had service spaces grouped together in L-forms at the corners opening to a central courtyard that could only function as a ventilating skylight when the project was finished (Yavuz, 2000, p.237) (Table 6, no. 4). On the other hand, the construction sites were not as constricted in Yenişehir; thus, as the residential units of the lodgings of the Agriculture Bank demonstrate, the service spaces were no longer grouped around shafts but fully integrated among the living areas according to their most efficient functional use with direct ventilation from windows (Table 6, no. 5).

Furthermore, with the introduction of modernization during the 1920s, most of the in situ furniture seen in traditional houses was abandoned and replaced with movable furniture.⁹ Nevertheless, most useful and functional architectural elements were retained and adapted, such as traditional cupboards (*yüklüks*) and bathing cubicles (*gusülhanes*), with slightly converted functions and variations.

The conversion of *gusülhanes* is an example of in situ furniture, usually seen in private apartments of the Old City. The bathroom spaces (separate from the toilet spaces) are similar to small cubicles in terms of size and shape; furthermore, these spaces are accessed from the main bedrooms, as in traditional houses. Bathrooms resembling *gusülhanes* with only the bathing function accessed from the main bedrooms are exemplified in the cases of the Children's Protection Agency Rental Apartment, the apartment on Alataş Street No. 1 and the apartment on Işıklar Street No. 22 (Table 6, nos. 1, 2, and 4). The use of *gusülhanes* was more customary in the boundaries of the Old City than in Yenişehir, and they slowly fell into oblivion in the following decades.

Yüklüks, as one of the most functional elements of traditional houses, which were placed in rooms in situ for the beds to be put away during the day, continued to be built in their original locations in rooms or were relocated (with the same appearance and function) to the circulation spaces (*sofas*, halls, and corridors). In the final transformation phase, these elements were converted into small spaces defined as lumber rooms (*sandık odası*), accessed either from circulation spaces or from rooms. *Yüklüks* are more prevalent in the new apartments of the Old City than in Yenişehir, since these apartments are closer to the old neighborhoods where the previous daily lifestyle continued, and *yüklüks* can be seen in living rooms or in circulation spaces, as exemplified by the apartment on Mevsim Street (Tables 2 and 5, no. 3).

In luxurious, fully modernized apartment complexes, lumber rooms replaced *yüklüks*, which are accessed from corridors or rooms, and these rooms were included among the service space clusters. In the Children's Protection Agency Rental Apartment, the lumber rooms are accessed from the main bedrooms, resembling *yüklüks*, but in the form of a space rather than a cupboard (Tables 2 and 5, no. 4). In Yenişehir, the *yüklüks* of the Old City were transformed into full rooms exemplified by the ground-floor units of the lodgings of the Agriculture Bank with lumber rooms across toilets, which are both accessed from secluded entrance/service corridors (Tables 2 and 5, no. 5). These examples demonstrate

⁹ The in situ furniture of traditional houses are *seki* or *pabuçluk* (platforms where shoes are placed when entering a space), *yüklük* (traditional cupboards), *gusülhane* (bathing cubicles), *sedir* (couches, divans), *niş* (niches), shelves and sometimes ovens or braziers. With the exception of *yüklüks* and *gusülhanes*, the others were replaced with movable furniture during the 1920s.

that functional in situ furniture, which made up a large part of the daily life of inhabitants, was hard to abandon and was thus adapted into the new residential interiors.

4 Conclusion

During the 1920s, Ankara turned into a city of display with the modernization project of the new Turkish Republic, and the construction of apartments, as the new housing type, constituted a paramount role in this process as the most efficient type of housing for meeting the housing demand of the rapidly increasing population of the city.

As the exemplary apartments demonstrate, despite the historicist exteriors, the actual modernization had already occurred with the retrofitting of infrastructure and with new construction techniques and materials, changing the trajectory of the construction industry in the following decades. Moreover, with the change in family structures due to the gradual reduction in extended (grand) family households, which were replaced by independent households composed of small (nuclear) families, irrevocable changes occurred on the spatial configuration of the residential units. This change in the family structure was followed by social changes in daily life with the emergence of 'house-public' spaces for entertaining guests; 'family-public spaces' as the daily living spaces replacing *sofas*, and most significantly, 'private' spaces for individuals, all with predefined functions, completely redefining the notions of publicity and privacy in the residential interiors.

The formation of these definitions and the transformation of residential interiors epitomize the fact that the acceleration of the modernization process in the social and daily lives of the inhabitants of the city could be achieved by housing projects. Furthermore, the dualities of historicist exteriors/modernized interiors and traditional/modern characteristics of residential units with new layout plans, predefined spaces and even with in situ furniture demonstrate that this transition process was indeed gradual, resulting in the formation of 'eclectic' and 'hybrid' housing types that emerged in Ankara in the 1920s and fell into oblivion after the 1930s.

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