

Collective Houses: An Expanding Architecture

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Abstract— This paper mainly examines the historical development of collective houses around the end of the 18th century and early 19th century. As indicated by Dune Vestbro and Dolores Hayden, the necessity for collective dwellings was revealed with the beginning of women to work. Thus, ‘the central kitchen’ idea created the main spatial revolution in domestic architecture during the industrial revolution time. Over years, common areas have been developed as; dining halls, living halls, children’s playgrounds, markets...etc. and these areas act as service spaces for the small houses, indicating the expanding feature of houses from inside to outside, from spaces of existenzminimum to common spaces. As highlighted by Ezio Manzini, ‘Existence-Minimum as a design quality must be minimum in m2 but maximum in comfort’ indicates the high-quality common areas of today’s mass houses. Today, in metropolitan houses especially, expanding architecture; the expanding of spaces, socially and physically, from inside to outside, constitutes the main idea of housing projects.

Key words: Collective Houses, Modern Period, Working Class, Common Areas, Contemporary Houses, Expanding Architecture

I. INTRODUCTION

The current development of alternative housing types with common areas and shared facilities called shared housing, has been influenced by utopian visions, practical suggestions, and implemented projects in the past. This article, traces the driving forces behind various models of communitarian settlements, central kitchen buildings, mass housing, and collaborative housing experiments, while specifically focusing on the design and gender aspects of these models. It emphasizes feminist arguments for communal housing as well as discusses patriarchal resistance to various forms of housing and life based on equality and neighborhood cooperation. Focusing on the spatial evolution processes of collective housing from the past to the present, it explores the collective-based planning styles of shared housing and trendy small housing of the contemporary period. When we think of collective housing, we immediately think of a planning approach that emerges from the central kitchen. The development of collective housing, which is a feminist spatial approach aimed at increasing the female workforce, has transformed from the central kitchen to the dining hall and then into projects as a social palace consisting of a school, playground, theater, sheltered closed areas, and gardens. From this point of view, collective housing was seen especially in Denmark, Netherlands, Germany, and Sweden with the transition of women to the proletarian lifestyle. The idea was based on designing houses without an individual kitchen, from the concept of a shared kitchen to reduce the female workforce.

Later, this idea was developed and the concept of collective was expanded by adding social spaces such as children’s playgrounds and theaters in addition to the ‘common kitchen’. With this study, the intersections and contrasts of collective housing and small housing projects that diversify in today’s metropolitan cities were tried to be revealed.

II. HISTORICAL REVOLUTION OF COLLECTIVE HOUSES

A. Definitions and Terminologies

Mass housing is most commonly found in countries such as; Denmark, Sweden, Netherlands, and Germany. A large number of projects were completed in the 1970s and 80s in Europe and in the 90s cohousing grew in the USA and Canada. Based mainly on Scandinavian experience, a number of models can be distinguished collective from traditional housing under the broader concept of collective home forms and housing with more common space or collectively organized facilities. [9][10][11]

The term mass housing encompasses slightly different types of housing in Europe than in the United States; therefore a clearer definition; it is a mass housing unit with a central kitchen and other collectively organized facilities and is often connected to individual apartments by indoor communication. The Swedish Word Kollektivhus (collective housing unit) refers to three subgroups of this housing model, all with shared facilities and a central kitchen:

-The first subgroup is the classical mass housing unit, based on services through employed staff, which aims to reduce housework to enable women to combine productive work with family responsibilities.

-The second group is the Swedish co-dwelling (det lilla kollektivhuset) based on communal work (self-study model). (Small Housing unit). It is a unit of 15-50 flats and residents take care of catering and other chores with joint efforts.

-The third subgroup is service housing for the elderly combined with shared housing, where shared facilities are used by both categories of residents. All three housing estates in Sweden are another type of shared housing: the Danish shared housing called bofaellesskab. (Vestbro,2000) [9][10]

The difference between Swedish and Danish shared housing is one degree. Bofaellesskab is typically a low-rise residence born from the movement to create a stronger sense of community rather than to reduce the housework load, as in the case of Sweden. (Vestbro,2000) The third mass housing model is the service block or integrated service center. They are residential areas where collective services are provided in order to facilitate housework, care, and social participation. The

fourth model is public housing for special categories such as the elderly, students, and residents with various dysfunctions. The fifth model is the commune, where more than four unrelated people live and dine together, often in a large single family unit. Communes are often housed in large single-family households or large flats, meaning that this model is often not associated with custom design practice. [9][10][11]

In the Scandinavian context, the first and second models have received the most attention among researchers. For a more detailed discussion of the differences between the various models. The commonly used North American Term 'co-housing' usually refers to the Danish *bofaelleskab* and the Swedish *kollektivhus* (self-study model). As an alternative to 'community housing', the term 'cooperative communities' is used. It includes subgroups such as 'Co-Housing', central living, and shared facilities. (Fromm,1991) Franck and Ahrentzen use a slightly different definition in their *New Houses and New Housing* anthologies. They define 'community housing' as housing containing spaces and facilities for the common use of all residents who also maintain their own houses. (Franck and Ahretzen,1989) [8] [9][10][11]

B. Historical Developments

Collective housing practices gained maturity in the 1930s, starting with the idea of a central kitchen inspired by the utopias of the 19th century, which developed in Scandinavian countries and led full employment societies at the beginning of the 20th century. In the 60s, the result of conceptual discussions of a Danish group, co-housing practices evolved into cooperative community development. In the 70s and 80s, a large number of shared housing projects were implemented. In the 90s shared housing practices increased in the USA and Canada. When researching the common points in the programs, it is seen that the origin is based on the utopias of the 19th century. The strong changes came with the industrialization in Europe. The common characteristics of 20th-century collective houses and 19th-century utopias; are the common shared spaces located at the intersection.[12][13]. Spatial planning of collective houses can be summarized historically as;

* Utopia, Thomas More-1506: Thomas Moore in his book 'Utopia', published in 1506, conveys the ideal society he constructed against the existing one. In More's utopia, people live in neighboring groups, on campuses with communal dining halls and communal spaces that allow for a variety of leisure activities. [12][13].

*Phalanstere, Charles Fourier-1825: Charles Fourier's Phalanstere (1825) Project is architecturally inspired by the Palace of Versailles, one of the best-known examples of the buildings of his period. In addition to the communal kitchen and dining hall, the school was conceived as a 'social palace', where agricultural and non-agricultural production was carried out collectively and everything was owned by the workers, including playgrounds, theater, sheltered closed areas, gardens, and other communal equipment. (Oskay,2021) [12][13].

*Parallelogram, Robert Owen-1840: Robert Owen, in his Parallelogram Project, developed in the 1840s, proposes an arrangement in which the surplus gained by the collective production of workers in settlements each home to 2.000 settlers is returned to them. In addition to housing units, there

are communal kitchens and dining rooms, playgrounds, libraries, and sports fields. [12][13]

*Familistere, Andre Godin-1858: The Familistere complex included a factory building and very large family residences that were interconnected under a huge glass roof. Workers were conceived as both the owner of the factory and the collective areas. Due to the failure of women in factory work, single-family kitchens were built later and the Project lost its collective character. [12] [13]

* Fick's Collective, Otto Fick, 1903: The effect of technological innovations in Europe, the idea of the use of kitchens went an obstacle has become widespread. Although the 19th-century ideal of a middle-class family was conceived along with households, maids, and babysitters, hiring maids proved too costly for these families. Thus, the idea of a central kitchen was born. In the 20th century, central kitchen buildings were built in European centers. The first of these is the 'Fick's Collective' Project, built in Copenhagen in 1903 with the initiative of Otto Fick. [12][13] (Fig 1)

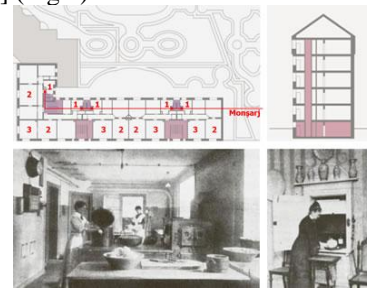


Fig.1 Otto Fick's Service House Project plan, section, central kitchen and mon-charge detail

* Hemgarden-1907: Another example of service residences is the Hemgarden Project, which was built in Stockholm between, 1905 and 1907, consisting of 60 flats without a kitchen, where food service is provided from the central kitchen to the flats on the ground floor. The basic idea in such projects is that the servants maintain a collective working environment. There is no participation of residential users in collective activities. The advantage it provides to the residents has been to make the integration of women's labor into the national economy more efficient by easing the burden of housework, which is seen as a domestic duty of women in society.[12][13].

* John Ericssonsgatan 6, Sweden Markelius, Alva Myrdal-1935: Architect Sven Markelius and social scientist Alva Myrdal came together at the Professional women's club meeting for this purpose and formed the first collective house to ensure equal distribution of the roles imposed on women by the patriarchal society such as; dishes and laundry, child care...etc. in the family. The John Ericssonsgatan 6 project, realized in Sweden, has 54 flats, a central kitchen, and restaurant on the ground floor, a convenience store with food service to the floors, a laundry, a small store, and a kindergarten. [12][13]. (Fig 2)



Fig.2 a)Plan of the Project, b)sketches, c)interiors; central kitchen, laundry, childcare area. [17]

C. From Collective Housing to Common Housing: Cooperation and Collective Life

Discussions on shared housing started with a group led by Danish architect Jan Gudmand-Hoyer in the 1960s, when community-based participation, equality, and justice demands determined the spirit of the era and discussed the possibility of building alternative sustainable living environments to the current housing production approach. After months of discussions, community members bought land around Copenhagen towards the end of the year and developed the Skovbakken Project, which consists of terrace houses located around the swimming pool and social facilities. Co-housing practices also develop in different parts of Europe, such as France, Spain, Belgium, and Italy. In North America, the Danish term living community (bofaellesskab) was adapted to co-housing in the 1990s by American architects Kathryn McCamant and Charles Durrett. The Muir Commons Project, the first co-housing community in America, was settled in 1991 after several years of planning. Accommodates 45 adults and 35 children, the campus is predominantly used by landlords, some of whom are tenants. Each of the 26 single residences on the campus has a kitchen and private courtyards. Located in the center of the Project, the shared residences include a large communal kitchen and dining room, as well as children's playgrounds, gym, sitting areas with fireplace, recreation room, office, laundry, and guest house. [12] [13] (Fig 3)



Fig.3 Skarplanet housing campus with central kitchen, common living room, swimming pool, single residences and common gardens

In recent years, many researchers point out that contemporary shared housing practices are a pragmatic solution for new lifestyles that have emerged as a result of demographic changes. Co-housing now not only serves purposes such as energy/efficient living and social integration, but also aims to reduce the cost of housing and utility bills, prevent post-retirement loneliness, and enables young middle-class families to organize their limited time effectively. [12] [13]

III. GENDER ASPECTS OF COLLECTIVE HOUSES

Many mass housing studies have a feminist perspective. As mentioned previously, Dolores Hayden provided a theoretical basis for later studies in the books written in 1977, 1981, and 1984. Hayden states that in the first half of the century, patriarchal and capitalist power structures consciously promoted male homeownership and single-family life in the

suburbs. The spatial organization is an important material basis for the social roles of women and men. When we compare; there is a situation where spaces arising from need present a spatial diversity that evolves toward socialization. The collective residences that emerged and developed around the central kitchen and modern women today exhibit planning that concentrates on social opportunities and increases the quality of life considerably, regardless of women, men, young or old. As Hayden and Dolores stated, collective housing existed with the modern woman and was created for her, it was based on a democratic and egalitarian distribution of work within the family. Dolores made significant contributions to residential architecture with her book titled 'The Grand Domestic Revolution: a history of feminist designs for American Homes, Neighborhoods and Cities'. Dolores bridged the modern era interpretations of Handlin & Wright & Keller, and approached a different perspective with the concept of 'material feminists'. [1][4][5][6][7]

The concept of 'material feminist' that she coincided with the emergence of the collective housing planned for the modern woman in this period. According to Dolores, collective dwellings were born out of the needs of the modern era for the modern female figure. In particular, the material that Dolores refers to in 'Grand Domestic Revolution', the material feminists defined by Hayden were determined to undertake the complete transformation of the spatial design and material culture of American homes, neighborhoods, and cities. They called for functional changes in physical structures. They sought to relocate domestic activities so as to free females from unpaid, household labor. Finally, they demanded control over the ensuring designs. They presented this functional change in society with physical planning. And by changing the place of indoor activities, spatial solutions were started to be taken to reduce the unpaid and extra workload of the modern woman in the house. [1]

On the other hand, through the discourse of Heynen H. and Baydar G. (2005); in residential architecture, the intricate relationships between gender concepts and domesticity become visible. Negotiating domesticity explores the many complex themes evoked by the interconnections between these terms. Baydar G. with her studies on women as subjects of modernity states that in the 19th century, it was not possible for women to participate in the act of wandering around the city unobtrusively, observing the hustle and bustle, and enjoying chance encounters. According to the customs and traditions of the time, women did not have much freedom of movement. [4][5][6][7]

However, according to Wilson, in the 19th century, women in metropolitan areas attained a life far from being limited to the home. Towards the end of the century, spaces began to appear, offering women new spaces and thus justifying their presence on the streets; numerous dining halls and shops ensured the integration of women with the city. Charlotte Perkins Gilman is probably the best-known example of a woman advocating a domestic revolution and dreaming of new arrangements of daily living that would allow women to participate fully in public life and cultural activities. (Heynen, H. & Baydar, G., 2005) His proposals concerned the provision of communal household services such as communal kitchens, laundries, and childcare that would rationalize the extent to

which each woman had to provide for her family, thereby freeing them from the tight bonds of a single-family household. The difficult situation of women as both the subject of modernity and the guardian of domestic life once again comes to the fore in the image of the modern woman. It emerged in the United States in the late 19th century as a result of new opportunities for women in higher education and occupations and the increasing number of women entering the workforce and the public sphere.[4][5][6][7]

IV. DESIGN ASPECTS OF COLLECTIVE HOUSING

In this section, two important design parameters as a must for the collective houses are presented. The first one is the individual living units as existenzminimum, and the second one is the common collective areas, where these small houses expand to these external spaces when necessary. Two of the most influential studies dealing with these design aspects of collective housing are the books by Caldenby and Wallden (1979). In their early books, they highlight the symbolic expression of collectivity and its origins in the modernist design ideas behind pioneering housing estates in both Sweden and the Soviet Union. According to Caldenby and Wallden, one of the important design parameters of collective dwellings was rationality. After using the time of rational citizens after work for physical exercise and civic education, they used their dwellings only for basic needs such as sleep and personal hygiene. These minimally rational dwellings had become the ideal part of a minimum dwelling cell with furniture fixed to the wall and flexible spaces that can transform. In the 1st Swedish housing unit of this type, built-in Stockholm in 1935, apartments were so small that radical middle-class families who moved there soon had to move in again. Caldenby and Wallden viewed public housing as a tool to promote the new lifestyles of the occupants and argued that it should be presented in architectural forms that can Express these ideals publicly. [8]

The common areas, which is the second important design parameter, could differ in different buildings. In some buildings, separately planned eaves, dining halls with large windows and large meeting rooms could create these common volumes. The same report shows that the share of common areas can vary between %10 and %21 of the total floor area of the building. [8]

On the other hand, concentrating on the 1st design parameter as 'existenzminimum'; Karel Teige's book 'The Minimum Dwelling', recently released in English describes this utopia. Moreover, Teige explains how the house is built on gender and identity. Teige quotes Marx and Engels at length on how the bourgeois family and this specific structure of the family endure the overt and covert slavery of women, as they have to take on the burden of housework that prevents women from participating in public production. *"Unlike the bourgeois family, the order of the bourgeois dwelling is equally based on the enslavement of women. Today's woman does not realize how oppressed she is by this form of purification. Today's family homes, whether villas or rental apartments, enslave women and housewives in equal measure with their uneconomical housekeeping routines. Private life in today's dwellings must strictly obey the dictates of bourgeois marriage"*. [15][16]

This is why Teige argued that the new minimum housing for the working classes should be envisioned in a radically different way, taking into account the fact that proletarian families do not already have a family life. Because the reality of production conditions forced them to devote too much time to commuting and working hours, turning the only time they spent at home into rest and sleep. This situation should be evaluated as an opportunity to develop a new collective lifestyle. According to Teige, Minimum Housing should include a living cell with a bedroom for each adult, but without a kitchen or other facilities. All these amenities should be offered as collective services so that a pattern of family life will not be broken and every individual, male or female, can be relieved of this burden to use their full potential. In short, partnership in public life. [15][16]

V. TODAY'S METROPOLITAN HOUSES

The concept of working-class housing, which started with collective housing, was derived from the idea of a common central kitchen and expanded gradually with additions in the following years. The shared central kitchen space of the collective residence, in addition to the kitchens, the first dining rooms, and living rooms with fireplaces, participated in the spatial development. In the following years, we are starting to see that these common areas have been added to kindergartens, especially for working women with children, and then collective spaces for social facilities and recreation/entertainment with the minimum needs have been added.

A. Contemporary Metropolitan Houses Developed with Trends

In this section, contemporary housing projects consisting of; high-density, mixed-use, 1+0/1+1/1+1.5 type small housing units located in metropolises are presented. From the 'central kitchen' theme which was the first common&shared space placed in collective housing in the past, today contemporary houses located in metropolia occupy the superior developed and diversified version of these common shared spaces and are too far away from the past. Today, the concept of housing has become a whole and even identified with the common areas. Especially in big cities, in Turkey's metropolitan cities such as İstanbul/Ankara/İzmir, developing housing projects are gathered around 2 important planning criteria; planned as a mix-use form and offered common areas.

These two criteria have become the main planning principles of contemporary residences in Turkey today, housing is no longer just a sheltering problem, it has become integrated with the social environment and the richness of the options it offers has set a criterion. Therefore, the residential user owns a small 1+1 type residence, as well as common areas and extra spaces. These extra spaces make a significant difference for small working-class households, especially for metropolitans, and attract residential users with the alternatives they offer.

B. Cases Analysis

In this direction, in the article, three current sample projects for communal areas are presented to demonstrate the power and diversity of these common spaces; 1) Nef 03 Kâğıthane, 2) DKY-ON Kâğıthane which both projects are located in İstanbul.

***NEF 03 Kâğıthane/ Fold-Home Concept:** Nef 03 Kâğıthane is a brand housing project located in the center of the city. It is a project designed by world-famous designers. It is an expandable, connected, and downsizing housing system with shared collective spaces. It consists of the add-on and removable small housing units built on the concepts of modularity and flexibility. An economic system solution and a contemporary housing project. Fold-Home an invention of Nef, and is being used for the first time in Turkey and in the world. The fold-home system offers you extra spaces in addition to your room or office that you want but cannot afford. These extra rooms vary according to the segment it appeals to, such as; for youth people there are; a music room, game room, private rentable cinema, painting room, dining and kitchen room, and meeting room... according to the Fold home concept, all extra rooms can be rented whenever you want. The architectural approach of the Foldhome&Foldoffice system allows the features of a range of different units which could not fit in a normal home. Typical recreational facilities of residences to be enjoyed in a 5.000 m² house or a 23-room office. With the Use-Pay System, and by adapting the kitchen spaces, the common center of the collective housing, with a new system in contemporary brand mass housing; guest room, business room, private cinema, music room, playstation room, private fitness room, art room, basket room, karaoke room, terrace, open party area, open cinema, roof garden, ski pist, gusto-room, Vespa rent, pet center, activity room, chief table, squash room. Therefore, those who buy 1+1 type residence in this branded project gets an extra 24 room freely. [19]

Nef Fold Home Concept, offers you to buy a studio apartment of approximately 60 m², but you need much more space to realize your dreams. With this folding house concept, you can have an extra 24 rooms with different possibilities when you need it, or your 60 m² house can turn into 1900 m². With this slogan announced by the brand housing project, we are revealing the point that collective housing has reached today. In other words, with the women from the household starting to work outside the home for the purpose of contributing to the national income, the central kitchens planned to prevent the workload that the woman already has outside to bear at home. The assemblies serving each flat, are now available as 23 extra rooms included in addition to the small 1+1 residence and used whenever desired. [19] (Fig.4)

The fold home concept is suitable for spatial expansion and offers the opportunity to add or remove other areas to your residence whenever you want. Thus, you will have an economical housing model. All you have to do is use your own residential and rent others whenever you want. Therefore, there is no wasted payment, maximum comfort can be provided when requested in minimum space. In addition, with the modular system, large families can buy 4 combined 1+1 and 4+1 large residences and rent 23 extra rooms whenever they want. For example, you can add a yoga studio to your home today. In the project, the standard housing type is 1+1, 44 m² total area with 5 m² storage. In addition, there are varieties with gardens, terraces, and balconies. The 1+1 types can be converted into 2+1 and 3+1 types for large families. All houses in the Project are designed in 1+1 type, including a flexible system that can be adapted into a modular system and can be transformed into 2+1 or 3+1 types upon request. [19](Fig.5)



Fig.4 a-b-c;music room,guest-room,,cinema-room,fun-room



Fig. 5 a) alternatif 1+1 with 65m2, b) modular system, 2 1+1 type forms 2+1 type with 86m2 [19]

*** DKY-ON Kâğıthane:** The project that is introduced with the concept of; 'we are open to life and we are on', expresses that the housing project with its extra facilities, is open to life, open to adaptation, open to changes and it is flexible with its design. In the mass housing project, the company designs a living platform open to life with the concept of a 'new house, new culture'. It is an accessible and sustainable platform with technology, that puts socialization at the center of life. The project reconsiders the concept of housing, re-evaluating the house not only with its accommodation function but also with its inhabitants. The project is a residential project as well as a lively project with functional diversity. The project, which includes a total of 205 residences and office units, allocated 60% for social areas and landscaping, and 29% for office and commercial volumes. In the project, attention was paid to ensuring that the common areas are changeable and re-functional. There is a variety of types of residences, and 1+1.5 and 2+1.5 flat types can be transformed into different spaces for different uses with their interior arrangements. The flexible open-plan concept draws attention in residences, and integrated workspaces also indicate the concept of working from home has improved especially after the pandemic. On the other hand, indoor/outdoor integration in residences is also transformable, balconies can turn into interior spaces easily when necessary. Flexibility shows itself both inside the houses and in the common areas of the project. [20] (Fig 6)



Fig. 6 a) 2+1.5 type plan, b) 1+1.5 type plan, Open common areas[20]

The common areas in the project are named 'clubON' by the owners of the Project which indicates the common meeting areas that house owners can use and shape whenever they want. In this clubON, different social areas are defined and named according to their functions. ClubON is an organically flexible structure that can be transformed and reshaped according to demands, and new functions can be added. That's why it's 'open to life'. ClubON the common areas are;

- 1) **meetON**: the perfect place to meet, talk and create new ideas.
- 2) **readON**: reading area, whether alone or with your neighbors.
- 3) **learnON**: you do not need to go to another place to teach what you know to others and to take lessons on the subject you want.
- 4) **gameON**: when you want to play games, of course, this is your address, be it console games or board games, chess,

backgammon... etc. 5) musicON: tempo is always where you want it. 6) teamON: for those who want to do teamwork, and brainstorming. 7) cookON: if you say 'i can cook very well'. 8) cookON is for you! You can join your neighbors. 9) eatON: you can have a pleasant evening with your friends by serving the food you cook in CookON at EatOn. 10) workON: Whether you work alone or with your team here, we recommend workON for those who want a creative space with creative ideas. [20] (Fig 7)



Fig. 7 a-b-c-d; Club-ON spaces as common areas; meet-on, readON, eatON, cookON, gameON[20]

C. Findings of the Section

As a result, contemporary branded housing projects, which are the latest version of collective houses, have been examined, especially by focusing on the common areas of the projects. On the other hand, as a result of the examinations and sample analyses, some common design principles have been found in today's residences, especially in metropolises as;

1. Located near the transportation axes and centrally, adapting to the city center.

2. Consist of high-density, modular living types that can be added for larger families, also creates a diversity in housing types.

3. Mix-use Project design, with office blocks next to housing blocks, and accommodating a common commercial block generally located at the ground levels, or designed as a separate low-rise block, includes markets, cafes, hairdressers, and other commercial units.

4. The design quality and diversity in the common areas, present a new lifestyle shaped by; a small house with min.m2 and extra spaces with maximum comfort. As stated by Ezio Manzini, the modern era existenzminimum will not consist of deprivation as in the modern era but will consist of an endless variety of comfort.

As a result, we see today's modern metropolitan residences not only appeal to a wide variety of housing users, but also include socializing-oriented, comfortable, high-quality, and user-friendly common areas compared to collective residences.

VI. CONCLUSIONS

As a result, in the study, collective housing, which has risen especially with the industrial revolution, and the modern period, has been examined. As illustrated by the utopias in the early 1900s, when collective housing is mentioned, residences open to socialization emerge with common areas. In the study, the development of collective residences over the years has been examined and the first versions of the 'central kitchen' concept, which appeals to the working class and modern female figures,

to reduce housework. The diversification of the common areas over the years; mixed-use, mass projects have attracted the attention of users with slogans such as; 'buy a 1+1 type residence, and you will have the right to use 23 extra rooms'. In this way, creating the opportunity for the houses to expand from indoors to non-residential spaces explains the title of the article as 'expanding architecture'. In fact, the concept that is especially emphasized in the article is that indoor spaces or residential square meters can expand outwards in line with needs or requests. In other words, it is the ability of a small m2 house to enlarge its m2 by using outdoor spaces when necessary. This explains the title of the article; collective housing as an example of expanding architecture'. As a result, residences with common areas were examined in the study, and the design principle of these residences, which especially appeal to the working population, offering 'maximum comfort in minimum m2' has been revealed and examined with contemporary samples.

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