

# The effects of western housing practices on Turkey's social housing experience

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## Abstract

Social housing emerged as an inevitable yet late response to the changes brought about by industrialization. The sudden population influx caused by mass migration towards expanding old cities and newly developed industrial towns resulted in poor living conditions and the lack of proper accommodation. The evolving response to housing problems paved the way for social housing, which eventually turned into common practices worldwide to provide adequate accommodation to those in need. This paper examines the evolution of Western housing policies and practices, their limitations in the modern social context, and the impact of Western housing practices upon Turkey's social housing experience. |The analysis aims to highlight the adaptability, challenges and opportunities presented by Western housing policies in a distinct cultural and socio-economic environment.

Keywords: housing policies, industrialization, social housing, western influence on Turkey

## 1. Introduction

The rise of industrialization during the 19<sup>th</sup> century led to an increase in urban populations as low-income workers were drawn to industrial cities by economic opportunities. This unprecedented urban growth created a demand for affordable housing, leading to the development of social housing policies (Marcuse, 1995). However, these early initiatives in Western Europe and the United States failed to resolve issues (Lim, 1987). Many of these policies struggled with challenges such as environmental degradation, social upheaval, poverty and crime.

# 1.1. The Problem Definition

In Turkey, the founding of the Republic intensified the need for housing, primarily in the new capital Ankara, to accommodate bureaucrats and officials (Habib, 1951). Early Turkish housing models heavily influenced by German practices, were generally well received. However, following WWII, mass internal migration triggered a housing crisis, prompting a shift in Turkey's approach to housing policies (Munro, 1974). While Western housing policies introduced standardization and regulations for mass housing, their direct application has led to mixed outcomes in Turkey. In addition, difference in economic structures, social dynamics greatly affected the adaptability and efficiency of some policies.

This paper will examine the evolution of social housing policies in the West, with a primary focus on Germany and the United States. It will examine the strengths and shortcomings of these models, considering their social and economic implications. Building on this analysis, the paper will explore the Western influence on Turkish social housing policies. This paper will compare the advantages and limitations of each model, evaluating their effectiveness in meeting housing needs in different socio-economic contexts.



## 1.2. Hypothesis

This study hypothesizes that the initial housing needs of Turkey differed greatly from Western countries due to its distinct socio-economic conditions, leading to a unique adaptation of Western housing policies. However, over a period of time, Western and Turkish developments began to prioritize quantity over special quality, with a focus on mass housing production to meet demands. However, this large-scale approach often disregarded the social needs of communities, contributing to discontentment and in some cases, playing a role in the increase of poverty and crime. As a country located between Eastern and Western influences, Turkey has continuously modified Western housing models to align with its distinctive socio-economic environment. Overtime, these evolving policies led to the establishment of TOKI as a central mechanism for mass housing development.

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#### 2. Literature Review

# 2.1. The Industrial Revolution and the Housing Problem

The Industrial Revolution, originating in the 18th century in Britain and spreading globally, marked a decisive turning point in history, transforming the economy, transportation, and production methods (Allen, 2011). Factory-based systems and the adoption of new materials replaced many traditionally handcrafted industries (Floud & McCloskey, 1994), introducing the concept of standardized goods, which streamlined production and improved efficiency., and later extended beyond manufacturing to influence housing policies, shaping regulations and the development of social housing projects.

## 2.1.1. Developments and Urban Changes Brought About by Industrialization

Industrialization also reshaped the urban landscape by creating a massive demand for labor, prompting widespread migration to industrial cities (Lawton, 1979). Older cities struggled to accommodate the sudden population influx resulting in chaotic slums lacking in essential amenities such as clean water, and basic infrastructure (Polyzos, 2012). Alongside this growth, new industrial towns emerged near factories, mines and trade routes, mirroring the British and German industrial town model (Reeder & Rodger, 2000).

As factories expanded, so did the need for housing and amenities to accommodate the growing workforce, ultimately prompting government intervention. The population of London increased from 900,000 to 4.5 million, while that of Berlin from 190,000 to 2 million, and of New York from 60,000 to 3.4 million in the 19<sup>th</sup> century (Fishman, 1982). Such rapid increase in population resulted in overcrowding and unsanitary conditions which impacted workers productivity.

In Britain, poor slum conditions became a critical issue in the late Victorian era (Stewart, 2005), as reformers began addressing poverty as a social issue, leading to the development of the 1875 Public Act, which improved sanitation, street lighting and water supplies, with cities like Liverpool leading these efforts (Clarke, 1931). Despite these reforms, lower-income households continued to live in poor conditions.

In the France, early urban developments in the 18<sup>th</sup> century with building codes in cities like Paris and Marseilles, paved the path for Baron Haussmann's 19<sup>th</sup> century urban renewal project (Papayanis, 2004). Appointed in 1853, Haussmann sought to modernize Paris by introducing wide boulevards, parks and promenades to replace existing narrow streets and constructing an extensive sewage system improving public health (Chapman, 1953). While these reforms modernized Paris, they failed to address the underlying poverty and housing problem because of Haussmann viewing the issue as a secondary concern.

In Germany, by the 1840s, the housing crisis was increasingly recognized as a part of a broader social crisis threatening "family life, religion, morality, patriotism" (Honhart, 1990). This understanding led to the introduction of "Schwabe's law". This law highlighted the disproportionate burden of rising rent rates on low-income households, often spending a substantial amount of their

earning on rent compared to middle- and upper-income households (Brown 1989). During the mid to late 19<sup>th</sup> century, many companies in Germany provided worker housing, but the financial collapse in 1873, left many companies unable to sustain these efforts (Brown 1989). Berlin's Statistical Office reported declining housing density, yet overcrowded and unsanitary conditions persisted until WWI. To address the housing shortage, *Meitskaserne* as seen in Figure 1 (Epstein et al., 1929) or rental barracks were introduced, however these units typically lacked toilets, and proper ventilation (Kuck, 2010). The project's focus on maximizing profit and cutting costs were evident and indicated "capitalist greed and the rise of proletarian culture" (Rousset, 2021). By 1901, the overcrowding was formulating into a public issue where *Meitskaserne* structures had approximately nine people per unit (Rousset, 2021). The government established guidelines for city expansion, regulating building height and density, and the placement of public infrastructure. However, the specifications for residential units were left to private developers and eventually failed to address housing demands or affordability, resulting in authorities reevaluating housing policies.



Figure 1 Mietskaserne, Berlin 1929 (Epstein et al., 1929)

In the U.S, social housing policies emerged to address slum formation, population growth, and rising crime. The 1901 tenement law protected tenant rights, ensuring fair rent while allowing landlords 4 – 6% profit margin (Karr, 1992). In 1910, the National Housing Association was founded to address common issues, such as slum conditions, though these early initiatives focusing on affordable housing construction, were targeted the needs of the middle class (Hubka & Kenny, 2006), inevitably widening the income gap. Initially, "most reformers believed that poverty usually resulted from individual depravity" (Karr, 1992), therefore clarifying the initial focus on middle households. This perspective began to weaken later, as the conditions of the slums were recognized as an environment that hindered economic development. During the Great Depression, rising poverty and unrest, including the 1935 black community riots, led to the adoption of the Public Housing Act and housing projects like Harlem River, boosting employment and improving living conditions, albeit minimally (Marcuse, 1995).

# 2.2. Urban Utopias in Relation to Housing Problem from 19<sup>th</sup> to Early 20<sup>th</sup> Century

When industrial developments strained expanding or newly emerging cities, there also emerged utopian responses to overcome the negative aspects of industrialization. Social reformers such as

Robert Owen and Ebenezer Howard promoted sustainable community-oriented living (Dunhill 1964; Edwards, 1913), while architects such as Le Corbusier, Frank Lloyd Wright and Tony Garnier focused on modern, technological-driven cities (Shelton 2011; Wiebenson, 1960).

## 2.2.1. Ebenezer Howard, Garden City

The Garden City movement introduced by Ebenezer Howard envisioned a utopian city integrating nature with industrialization to reduce social alienation from the natural environment (Blanc 1974; Morris, 1971). Howard proposed self-sufficient green cities for 32,000 residents interconnected by a transportation network (Batchelor, 1969; Eden, 1947) (Fig.2), featuring residential, industrial and commercial zones divided by green spaces, leading to a central garden with essential amenities (Llano, 2020) (Fig.3). Howard (1898) emphasized the importance of public or community land ownership to ensure equitable distribution and uniform living standards. This principle extended into town planning: while Howard (2003) proposed fixed placements for housing, he encouraged individual creativity in the appearance of homes (Osborn, 1946).

However, Garden City faced criticism regarding its economic feasibility and implementation. The residential houses outlined in the plan required high rent, with those located on the outskirts struggling to find tenants. Moreover, the large green spaces reduced community interaction and diminished the sense of community (Edwards, 1913). However, many elements of Howard's vision influenced modern housing solutions in several cities.



Figure 2 A layout of the proposed Garden City (Llano, 2020)

Figure 3 Garden Cities of Tomorrow diagram (Howard, 1902)

## 2.2.2. Le Corbusier, Radiant City

Le Corbusier, a key figure in shaping modern European architecture, had a significant influence on urbanism. Amid high population density within industrialized cities, the prevailing approach to solving urban congestion was vertical construction. He proposed high-rise housing blocks for all segments of society, asserting "that all classes were poorly housed" (Marmot, 1981). This perspective contrasted with other urban planners, as Le Corbusier envisioned skyscrapers as revolutionary solutions to urban congestion. In 1922, he introduced the Radiant City (Fig. 4) a utopian plan designed to attain societal and urban harmony for three million residents, aimed to create balance between the environment and its inhabitants, promoting better living (Curtis, 2009). Through this concept, Le Corbusier sought to integrate high density living yet still reserving large greenery by reducing the building blocks' footprint, utilizing modern materials and methods. The model of Radiant City featured a grid pattern with central towers, defining areas for work, home,

and leisure (Montavon et al., 2006) (Fig. 4). These structures consisted of 17 stories, a limit Le Corbusier imposed to maintain a connection between family living and vertical circulation (Montavon et al., 2006).

Despite its visionary nature, the Radiant City plan was never realized, primarily due to its sustainability and cost. Critics largely agreed that "psychological, structural and economic difficulties rendered higher apartment buildings quite unfeasible" (Marmot, 1981). Nevertheless, partly by the aid of advances in technology and by the rationale to increase habitable land on multiple floors, high-rise housing blocks have spread all over the world.



Figure 4 Radiant City Model, Le Corbusier, 1925 (Musset, 2023)

## 2.3. Policy Based Responses to Need for Housing until WWII

Urban utopias formulated in the first quarter of the 20<sup>th</sup> century influenced urban planning greatly, however it was evident that not all housing issues could be solved through idealized visions alone. Governments began to take practical measures to address the increasing housing problem by developing organized social and economically feasible approaches to tackle the issue.

The housing crisis in Britain worsened after WWI. The Housing Act of 1919 aimed to construct 500,000 dwellings in 3 years but failed due to economic decline. The Ministry of Health, established in 1919, linked better housing to improved public health (Stewart, 2005). The 1924 Housing Provision Bill marked a shift towards housing for low-income households, followed by the 1926 Housing Act, which provided financial aid for construction (Engle, 1937). During the 1930s further housing policies were introduced focusing on slum clearance. Despite budgetary constraints, these policies resulted in the construction of 700,000 dwellings and long-term improvements in living conditions (Clarke 1931).

After WWI, Germany faced a severe housing shortage estimated at 1,5 million units due to widespread destruction (Silverman, 1970). The Weimar Republic (1918-1933) pledged reforms to provide housing for all Germans under Article 155 (Clingan, 2000). However, widespread financial hardship limited the funding (Silverman, 1970). A rent tax established in 1921 failed to generate

enough funds causing the government to rely on private investments to produce public income. Between 1924 and 1931, only 50% of housing construction was publicly funded (Silverman, 1970). The lack of action from the Weimar Republic aggravated the public leading to uprising as the economy declined further and the housing crisis began to increase.

These conditions fostered a new typology of housing for the working class, called *Seidlung* as introduced by German architect Bruno Taut (Droste & Knorr Siedow, 2014). Taut aimed to reunite Germany by improving urban layouts and housing, inevitably reducing poverty in the process (Ludwig, 2020). Taut's early designs followed a circular pattern segmented into zones such as housing, commercial and industrial (Canniffe, 2015). Most *Seidlung* housing shared similar features such as ensuring the availability of health and educational amenities, to form an ideal community (Kafkoula, 2013). The layouts of the housing projects were constructed in similar formats with each group of apartments or housing forming a neighborhood.



Figure 5 Gardenstadt Falkenberg Berlin, Master Of Colourful Architecture (Altenmüller & Mindrup, 2009)

As an example of *Seidlung* housing, the Falkenberg Garden City designed by Bruno Taut was completed between 1913-1916, and consisted of 128 housing units, with 80 single family dwellings and 48 apartments spread across 6 buildings. It accommodated approximately 740 individuals. (Fig. 5) The Falkenberg project exhibits many of Bruno Taut's vision along with the influence of the Garden City Movement, with emphasis on organization, control, and community focused development (Drew, 2024; Lucarelli, 2019).

Under the Nazi regime, the focus on housing shifted from public to private ownership, reversing the Weimar Republic's 7:3 public-private balance (Störtkuhl, 2021). By 1937, 315,698 new units were built which aided in reducing the unemployment crisis (Störtkuhl, 2021). However, in late 1936, a four-year plan was introduced by the Nazi regime redirecting national funds toward military endeavors instead.

# 2.4. Post World War II Cases for Social Housing

After WWII, Germany faced widespread devastation with the division of Germany into East and West. East Germany came under Soviet rule, adopting a communist approach, while West Germany

became a democratic state under the United States (Wertheimer, 1958). Housing policies also diverged. The case of West Germany illustrates a clash between an established housing system and the introduction of a foreign standards.

In 1947, The U.S. military invited Walter Gropius, a German American architect and the founder of the Bauhaus, to assess the damage to German cities and provide guidance (Lupfer & Sigel, 2004). Gropius proposed the establishment of small towns with 5,000 – 8,000 residents, allowing people to settle, develop a working environment and economic growth, ultimately generating funds for rebuilding city centers (Krohn, 2019). Gropius's plan aided the framework for federal and local housing policies.

Between 1945-1950 the majority of the population was living in temporary housing or overcrowded conditions (Staub, 2014). In 1950, the government passed the first housing law, setting the criteria for sanitary living conditions (Busch Geertsema & Kofler, 2000). By 1951, the Economic Cooperation Administration (ECA) utilizing the Marshall Plan to provide housing in 15 West German cities (Knapp et al., 1981; Staub, 2014). Compared to housing provided by the Weimar Republic, the ones offered by ECA were relatively small, with enough kitchen space for one person (Staub, 2014). High rise construction was also utilized as a solution to accommodate the middle class and reflecting American influence on Germany's housing landscapes towards single-family dwellings (Einem, 1982). This new standard, aimed to maximize the number of units within a limited space under the Marshall Plan (Knapp et al., 1981).

The same standard put into force by the American rule in West Germany to maximize the number of units in limited spaces and within high-rise blocks seems to be valid also in the United States after World War II. The 1940s and 1950s saw a shift in public housing objectives, with approximately 200,000 units built during this decade. The 1946 Lanham Act focused on housing for war laborers while the 1949 Housing Act aimed to provide quality homes for families, prioritizing displaced families due to urban renewal (McCarty, 2014; von Hoffman, 2000).

The 1960s introduced new public housing legislations, and ending discriminatory housing applicant selection, with section 236 established to serve low-income families and elderly (McCarty, 2014). These laws expanded public housing access to disadvantaged groups and prohibited denial based on race or ethnicity. Yet, the implementation of such principles did not match with the intentions.

Pruitt-Igoe was probably the best case to prove how housing was not just a problem of architecture or urban planning. The complex, designed by Minoru Yamasaki and constructed in the early 1950s in St. Louis, Missouri, consisted of 33 identical 11 story buildings in a linear layout, built on a former slum area as a part of a federally funded post-WWII renewal program (Bolukbas, 2016). Shaped with modernist intentions not just to create a high number of housing units in high rise blocks but also to shape the society via ideal architectural and urban methods, the project stood so short, and blocks began to be demolished in 1972 to reset the social crisis spoken loudly through the architecture of the housing blocks. The demolition was broadcasted live on TV, marking a symbolic moment often described as the "death of modern architecture" (Bristol 1991). Yet even though it was the architecture that was blamed, high-rise point blocks of mass housing spread all over the world as efficient solutions to housing shortages. Even though the modernist aspirations to change society through architecture has faded away, Corbusian housing blocks remained.

## 3. Social Housing in Turkey

The initial cases of mass housing if not social housing in Turkey date back to late Ottoman period where the housing needs of not the overall public but only of some upper classes of the society and mostly of some bureaucrats and tradesmen were met with some housing projects. Even though incomparable in scale and in the number of houses produced with the western cases of the time, the row houses in Beşiktaş Akaretler of the 1870s, Taksim Surp Agop row houses, or Harikzedegân Apartments (also known as Tayyare Apartments) in Laleli dated to 1921 were initial mass housing

projects which had differentiated from Ottoman house layout and had been designed to suit a western lifestyle (Tapan, 1999). The reason why mass housing typology had not appeared in Turkey before the foundation of the new Republic was that there had not been mass migration to existing or newly emerging centers and consequently had not risen a need for large number of houses produced in shorter times, as had been witnessed in industrializing west. Yet, such migration cases and subsequently the need for mass houses were experienced in Turkey, initially with the term "low-cost housing", beginning with welcoming nearly 500 thousand immigrants from the Balkans shortly after the end of the War of Independence (Sey, 2005).<sup>1</sup>

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## 3.1. Housing in the Early Republican Period

More or less spontaneously with the relocation of migrants, the new Turkish Republic witnessed another wave of migration, this time upon the designation of Ankara as the new capital city. Before WWI, Ankara was a small town with around 25.000 residents. Its status as the new capital brought about sudden changes in Ankara's social and political landscape, spurred by the relocation of government institutions (Batuman, 2013). Housing for the relocating state officials and also for the masses migrating to the new capital was among the primary problems faced in the first few years of the construction of Ankara.<sup>2</sup> To be able to respond that need for housing and also to ease the construction of the new capital as a modern city, not only first development plans for the city was prepared by Carl Christoph Lörcher for the old city in 1924 and for the new in 1925 (Cengizkan, 2004) (Figure 6), but also 4 million square meters of land was expropriated by the Ankara Municipality in 1925 (Tankut, 1993). However, this expropriated land was not developed by the central government or the local authority to respond to the housing need, most probably because of the economic deficit that the new republic suffered but was purchased in parcels for individual house production.





Figure 6 Lörcher Plan of Ankara with annotations (Cengizkan, 2024)

Figure 7 Jansen Plan (Çalışkan, 2009)

Lörcher's plans for Ankara were implemented maybe not in terms of public funded mass housing projects but still in terms of infrastructure and macroform of the city until the beginning of the 1930s. In the meantime, a competition was held in 1928 to obtain a new development plan for the city, where only three foreign architects were invited. The winning proposal belonged to Hermann Jansen, and it was extensively implemented until the 1940s (Figure 7). In terms of housing, Jansen plan included new zones for this purpose while not erasing what had already been offered by

<sup>&</sup>lt;sup>1</sup> It should be noted that despite in both western and Turkish cases social housing emerged as a response to the rapid population increase due to migration, the reasons behind the migrations deeply differed. In most western cases it was the outcome of socio-economic factors that moved masses from the rural areas to new industrial centers as workers, whereas in Turkey the reasons behind the mass migration were more socio-political decisions, such as the population exchange after the War of Independence or establishing Ankara as the capital city of the new Republic, at least until the mid-20<sup>th</sup> century (Munro, 1974).

<sup>&</sup>lt;sup>2</sup> The rapid increase in the population of Ankara in the first decade of the Republic is revealed in numbers as such: it had risen to 47.727 in 1926, 74.533 in 1927 and to 107.641 in 1928 (Cengizkan, 2004).

Lörcher that had already started to be implemented. In the Republic's early years, one can hardly speak of an overarching policy related to housing. There were initiatives to respond to housing needs though. For instance, the 1930 Municipality Law no. 1580 aimed to promote affordable housing construction but faced setbacks due to budget constraints (Sari et al., 2022). Nevertheless, efforts continued throughout the 1930s, notably with the 1935-1944 cooperative housing movement, where 50 housing cooperatives were erected - 22 in Ankara, 8 in Istanbul and the remainder in other cities (Şahin & Şener, 2021). Among them, one of the best examples to demonstrate the approach to housing problem has been *Bahçelievler* in Ankara.

Designed by Hermann Jansen as an addition to the city plan, *Bahçelievler* was an outstanding housing district on the western outskirts of the proposed development areas (Tümtürk, 2017). (Figure 8) Jansen emphasized integrating residential areas with nature while maintaining proximity with the city (Akcan, 2019). Realized in the mid-1930s, the project embodied Garden City principles, incorporating greenery with communal spaces and reflecting the ideas of the Republic. (Sönmez, 2023). Planned as a low-density neighborhood with row houses and central amenities, it primarily served the bureaucratic class yet failed to address Ankara's growing housing problem (Kılınç, 2012).

Even though Ankara as a city and Bahçelievler as a realized housing project based on garden city principles were more apparent in the housing history of Turkey, there had been many other significant projects that showcase the mass housing attempts in the early Republican Period. Among them were "low-cost houses" design by Seyfi Arkan in 1933. These single-storey row houses were designed to be workers' houses as indicated by Jansen on the city plan at the northern outskirts of the city (Akbulut & Akay, 2012). Sey (1998) states that Arkan, not just with design but in his other low-cost houses designs, was heavily influenced by then current architectural movements in Europe, and especially by the Bauhaus principles to promote functionality and mass production in housing to minimize building costs. Another method in mass housing production of the time was the houses specifically produced by a factory (almost always a state factory) for its workers or by a state institution for its employees, such as the ones in Ereğli, Karabük, Hereke, and İzmit (Tapan, 1999). Seyfi Arkan's workers' neighborhood for Zonguldak and Kozlu coal miners and even Saraçoğlu Neighborhood in Ankara designed by Paul Bonatz for upper class state officials fall into this category. The design principles in these projects were again found to be influenced by the similar cases in Europe, and by Bauhaus and/or De Stijl movements that prolonged to that time (Tapan, 1999).



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Figure 8 Ankara Bahcelievler Site Plan, Museum of Architecture at Berlin Institute of Technology (Jansen, 1937)

## 3.2. Housing in the 1950-1980 Period

The radical and extensive social transformation that had been experienced by the industrialized countries since the 19<sup>th</sup> century started to be valid for Turkey after the Second World War (Bilgin, 1992). The transformation had been multifaceted. In the postwar period, the United States were emerging as a dominant economic force in the global economy, that was leading to a polarization of the world economy between them and Russia. In the meantime, Turkey was passing from the single party regime to a multi-party democracy, that was going to result with the Democrat Party government between 1950 and 1960. Setting strong relations with the United States politically and economically, the Democrat Party government was aided by Marshall Plan during the 1950s, which led to an economic upturn that was demonstrated in the mechanization of agriculture and flourishing industries. These two factors freed masses from the rural areas and paved the way for mass migration towards big cities like Istanbul, Ankara and İzmir, where industries had also invested in. the rate of population growth that had been 20,1% between 1940 and 1950 jumped to 80,2% between 1950 and 1960 (Sey, 1998). The city became a key destination for migrants seeking jobs in expanding industrial sector (Dincer, 2011). By being the particular focus of most private sector industrial investments and by being at the center of political preferences, Istanbul, who lost its importance to Ankara after serving as the Ottoman capital for centuries, regained attraction in the 1950s. That is why both housing shortages were at their utmost and also attempts to respond to them were more evident in Istanbul.

The responds to housing shortage should first be classified into two: legal or illegal. Since the state did not take on the role as the chief producer of mass/social houses and since at the same time migration was at its peak, *gecekondu*<sup>3</sup> type of houses spread rapidly in major cities. Despite the first cases of *gecekondu* neighborhoods were seen in Ankara since the 1940s, they turned into a major issue in the post-war period. The estimated number of *gecekondus* that had been around 25-30 thousand in 1948 increased drastically to 80 thousand in 1953 and even more so to 240 thousand in 1960 (Sey, 1998). Initially, these houses lacked basic infrastructure, including access to electricity, water and sewage, and failed to meet basic sanitary requirements (Erman, 1997). Despite overcrowding and challenging terrain, they provided essential shelter for rural migrants near urban centers. By the 1950s, *gecekondus* began transforming into established neighborhoods (Demirtaş & Şen, 2007). While early urban planning targeted *gecekondus* for urban clearance (Yalçıntan & Erbaş, 2003), their growth eventually forced authorities to recognize their existence and legalize them.

Against such spread of gecekondus and increasing shortage of housing, there were some precautions by the central authority to prevent more of them or at least to limit illegal housing and to promote legal housing instead. Among them was providing individual low-rate credits via Emlak Kredi Bankası (Real Estate Credit Bank) or Sosyal Sigortalar Kurumu (Social Insurance Institution) for the construction of mainly middle-income family houses, which resulted with successful housing projects like Levent (1947-1951) and Koşuyolu (1951) cases (Tapan, 1999). Although there were some other precautions formulated at laws or legislations level, like the establishment of Ministry of Construction and Settlement in 1958, housing standards and credit legislation of the early 1960s, or the five-year development plans that were initiated by 1962. But perhaps none of them were as effective on the housing market as the Condominium Law (Kat Mülkiyeti Kanunu) that had been first passed in 1954 and gained its current situation as of 1966. Instead of single land ownership including the house built on, the condominium law allowed shared ownership of land and of separate flats to be built on. It was no coincidence that multi-storey apartment blocks began to rise instead of single-family houses all over major cities of Turkey by the mid-1950s. The case of Levent neighborhood and Ataköy housing projects demonstrated this passage clearly. While the first stage of Levent housing project included single family houses exclusively, as also evidence of prolonging garden city movement influences in the late 1940s, Ataköy housing project designed in 1955 and the fourth stage of Levent neighborhood included multi-storey apartment blocks alongside the lowrise housing units (Tapan, 1999).

The Ataköy housing complex began construction in the 1950s and continues with additions until the 1990s in eleven phases, resulting in a district size neighborhood with 12.000 units in apartment blocks. These projects emphasized quality over quantity, with units being relatively large in size (Balamir, 1996). The governments focused on home ownership with the aim of creating a sustainable source of capital and aimed at attracting a specific demography to newly expanded neighborhoods.

Apart from such comprehensive projects, not the government who had limited financial means as there was no steady source of public housing fund (Öcü, 1988), but the housing market in Turkey produced another alternative for home ownership: build-and-sell. With the availability of flat ownership upon the condominium law but without the sufficient capital both to own the land and to complete the construction, two actors appeared on the market to complete the process: on the one hand, there were multiple owners of a single land who did not have enough financial resources or the technical knowledge to realize the construction, and on the other hand there appeared small scaled contractors, who neither owned the land nor had the enough resources yet had the capacity

<sup>&</sup>lt;sup>3</sup> Gecekondu could be described as the Turkish type of squatter houses. Meaning "landed overnight", it gives the impression how hastily these houses were built.

to realize constructions. Thus, with an agreement between the two sides in exchange for apartment flats to be produced, this model spontaneously proved itself to be valid for Turkey. The landowners would eventually end up owning houses in apartment blocks without any payment other than what they already had paid to own the land, where the contractor would carry on the construction by selling the incomplete houses beforehand and making his profit by selling the remaining houses after completion of the project. This whole process called build-and-sell has reached its peak in the mid-1960s and lived its golden era during the 1970s and served the housing market until the 1980s. (Işık, 1995).

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# 3.3. Housing Between 1980 and Today

Housing sector in Turkey that was left unsupported and vulnerable after the 1980 coup has negatively been affected by the new economy policies followed that increased the construction costs and that weakened the profitability of investments on housing (Sey, 1998). However, upon realizing the negative effects of a recess in the housing sector on other sectors, new policies were put into force immediately. The Mass Housing Law No.2487 was passed in 1981 and the Mass Housing Administration (Toplu Konut İdaresi – TOKİ) was founded in 1984 to meet the need for social housing in Turkey (Tapan, 1999). TOKI's early policies demonstrated a transition from government regulation towards an active role (Bölen, 2004). Responsibilities for governmentfunded housing were gradually transferred to TOKI, which adopted a distinct financial model. The Mass Housing Fund, became the primary provider for public housing construction, aiming to provide homes in "current market conditions" (Demirci & Zengel, 2023). Between 1984 and 1989, the fund supported the construction of 584,000 dwellings (Türel & Koç, 2015). Additionally, since it was foreseen with the Mass Housing Law that cooperatives were to be given priority in distribution of funds for housing construction, a number of cooperatives were founded in the early-1980s alongside the already existing ones like the Batikent, Ankara case that revived and started extensive construction in this period (Sey, 1998). As an overall, 85,7% of 950.00 houses that were supported with credits from mass housing funds were houses produced by cooperatives (Özüekren, 1999).

The passage of TOKI from a more organizing and funds creating role to more builder since the 1990s has not resulted with very optimistic outcomes though. The abolition of the mass housing fund necessitated TOKI's financial restructuring to operate self-sufficiently and generate its own income by direct constructions. In TOKI way of house production, roughly beginning with the 1990s, the core principles were affordability, often utilizing inexpensive, government-owned plots for its projects and employing "a limited set of ready-made architectural plans" (Bican, 2020). This standardization has become a trademark of TOKI's construction but has drawn criticism for neglecting the diverse landscapes and contemporary needs across different regions. However, this uniformity was not a characteristic of TOKI's early years. During the 1990s, the organization produced higher quality projects such as Eryaman in Ankara.

Eryaman housing project was constructed in response to the growing prevalence of informal housing on the outskirts of Ankara (Çalışkan, 2009). "The aim was to provide low-income households without compromising the quality of the built environment" (Bican, 2020). The project began in 1990, divided into four phases, and completed in 1995, with additional buildings included later to accommodate the growing population. This project symbolized collaboration between prominent architects and the government, aiming to create a harmonious housing environment (Bican, 2020). By 1990, 4.064 dwellings were completed, followed by 670 more in 1992, collectively housing 20.000 individuals (Duyar, 1996). Housing units were categorized based on applicant needs: 392 small, one- bedroom apartments, 1670 two-bedrooms apartments, 2713 three-bedroom apartments and 85 four-bedroom apartments (Alkan, 1999).

Eryaman III was designed to balance public and private areas (Çayır, 2022), incorporating both type A single housing and Type B attached blocks. The site plan strategically positioned various blocks to create a sense of community and "a variety of housing types of different heights is mixed to provide architectural diversity" (Albostan, 2009).



Figure 9 Eryaman III Site Plan (Kavas, 2016)



Figure 10 Partial floor plan 2-bedroom apartment (Eranil & Gurel, 2022)

Figure 11 Site Plan Of Uzundere Project (Bekir, 2022)

However, it is notable that only the early phases of the Eryaman project, as seen in Figure 9 (Kavas, 2016) adhered to its original principles adhered to its original principles (Alkan, 1999). In later stages, TOKI transitioned to constructing uniform single-height apartment buildings, reducing architectural diversity in favor of efficiency and cost-cutting (Yıldırım et al., 2007).

This shift is evident in most of TOKI's recent approaches, such as the Uzundere project in Izmir in Figure 11 (Bekir, 2022) and Figure 10 (Eranil & Gurel, 2022). In 2003, the Izmir Metropolitan Municipality collaborated with TOKI to relocate residents from hazardous areas to safer housing (Demirtas Milz, 2013). By 2005, 1968 houses were demolished and TOKI constructed new cluster housing in Uzundere for the displaced population (Demirli et al., 2015).

The TOKI Uzundere project was constructed on a 469,425 square meter plot and featured highrise units measuring 30.80m, with four distinct housing types. In addition to residential units, the project included essential facilities like health centers, schools, multipurpose halls and other

amenities to support the community (Bekir, 2022). Despite these efforts, several issues arose, including its distance from the city center, being isolated on the outskirts and housing units that were relatively small for the needs of large immigrant families. These shortcomings led to significant community dissatisfaction (Borsuk & Eroglu, 2020; Eranil & Gürel, 2022).

## 4. Western but the Turkish Way

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Turkey's approach to mass or social housing has been heavily influenced by western models from the early Republican period until the post-WWII period and towards the early-90s. However, especially with the inclusion of TOKI as the chief actor in housing sector, the western effects corroded and a new way of mass or social housing started to take over Turkish cities. No longer clearly western, but at the same time not local at all, this model represents the current Turkish way of producing mass housing.

To better understand these housing projects, building density calculations - measuring the number of units or residents per area – will be used to assess the levels of overcrowding. These density figures provide an understanding of the functionality of a housing project, as higher density often associates with strained infrastructure, reduced livability as well as evident social challenges, while moderate density may demonstrate more sustainable living.

The formula for gross residential density is the following:

 $Gross Density = \frac{Total no. of Housing Units}{Total Land Area (Hectares)}$ 

# 4.1. Performance of Existing Building

Garden cities were amongst the first housing methods introduced in Turkey after the foundation of the Republic, influenced by the German *Siedlung* example (Akcan, 2012). Projects like *Bahçelievler* adopted a similar approach towards urban and architectural planning, emphasizing organization, functional zoning, and community development (Tümtürk, 2017). A distinct feature was low- density housing, maintaining a connection with nature. Both Taut and Jansen believed this approach improved community health and contributed to the aesthetic appearance (Akcan, 2012; Lucarelli, 2019).

In both *Siedlung* and *Bahçelievler* housing, spatial requirements were prioritized to ensure adequate living standards. The layouts in both contexts emphasized functionality and efficiency in indoor and outdoor spaces, enhancing community satisfaction (Altenmüller, 2013; Tümtürk, 2017). The dwellings demonstrated free plan, well-lit rooms, and large windows overlooking the greenery, cultivating a strong connection with the environment (Lucarelli, 2019) (Fig. 12-13).



Figure 12 Bahcelievler B type housing (Gökçe & Chen, 2014)

**Figure 13** Falkenberg Housing Plans (Museum of Architecture at Berlin Institute of Technology, n.d.)

Bahçelievler's housing configuration aligns more closely with Seidlung housing than traditional Turkish design (Gökçe & Chen, 2014), signifying a departure from traditional styles and marking the beginnings of the modern Republic (Akcan, 2012). The designs integrate European influences, particularly the Seidlung model shaped by the Garden City utopia. Features such as large private gardens simplified interior layouts and standardized exterior appearances. The emphasis on "nature-bound planning" became a defining characteristic of the new housing approach (Kilinç, 2012), establishing the Seidlung concept as a model for Turkey's new housing developments.

29.1 unit per hectare =  $\frac{128}{4.4}$ 

When evaluating the building density of Falkenberg utilizing the building density calculation, it is evident that the area is intentionally designed to be low-density. The settlements are spread out on a large plot of land with many gardens between the buildings.

12.8 unit per hectare = 
$$\frac{384}{30}$$

The original plan for Bahçelievler proposed by Herman Jansen is constructed on 30 hectares of land (Sevik & Efeoglu, 2022) with aproximately 384 housing units. This plan provided a spacious layout for residents, however was not sufficient enough to cater to the growing population of Ankara, with later projects containing 830 apartments over 6.3 hectares of land demonstrating a large increase in building density.

Mass housing according to garden city principles was prolonged throughout the Early Republican Period's limited cases. When drastic changes in the political and economic landscape of Turkey were happening during the 1950s, the design approach to mass housing was also altered. Upon the condominium law that allowed shared ownership on single lands and on single blocks, together with the spreading implementation of point blocks in the western countries (Bilgin, 1992), the garden city approach was incrementally replaced with high-rise point blocks approach that could be traced back to Corbusian utopias.

#### 4.2. TOKI, High Rise housing and Radiant City

Even though never realized, Le Corbusier's Radiant City concept served as a utopian blueprint that inspired the development of high-rise housing as a solution to the urban housing crisis, influencing many mass housing projects worldwide (Lathouri, 2005). Le Corbusier anticipated standardization as the future of architecture, emphasizing efficiency and uniformity (Millais, 2018). Envisioning skyscrapers large enough to house 5.000-8.000 residents, such housing blocks were supposed to rise so to allow more space for urban open spaces (Marmot, 1981; Montavon et al., 2006).

Responding to housing shortage in a rational and economical way, such high-rise housing blocks are still being built all around the world today. And Turkey is no different. On the contrary, the implementation of high-rise housing blocks is pushed to the limits, by disregarding the basic principle of open and communal spaces, instead shifting the focus towards maximum resident capacity.

$$88.8 unit per hectare = \frac{515}{5.8}$$

Early TOKI projects, such as Eryaman Project prioritize organizing areas into residential, commercial and educational zones with diverse building orientations for better light and ventilation (Kavas, 2016). Eryaman housing project displayed 515 units over 5.8 hectares, however, later additions such as the Eryaman III Social Housing included an additional 2,800 apartment units to cater to the growing demands. Images from various TOKI projects across Turkey reveals a striking uniformity in construction, primarily focusing on maximizing the number of buildings within a plot (Mutlu, 2009). This approach obviously favors quantity over quality, which results in repeating the same or very similar housing block typology. TOKI's objective is to meet 5% to 10% of the Turkish

housing demands and to not only increase the number of dwellings but also provide nearby educational and recreational facilities which many western projects neglect.

62.7 unit per hectare = 
$$\frac{2070}{33}$$

Dense construction is also evident in projects like Uzundere, Izmir. In Bezirganbahçe project, Istanbul, 33 hectares of land was covered to host 2,070 units in 700 buildings to accommodate 8,800 residents (Waite, 2019). This uniform approach has become a trademark of TOKI's architectural identity, reflecting its focus on mass housing production.

## 5. Conclusion

The Industrial Revolution was a decisive break in human history. Transforming modes of production, transportation, and consumption, and radically changing urban life. Modern cities, as we call them today, are drastically different from ancient or medieval cities in terms of density, urban sprawl, and networks. Triggered by mass migration from the rural areas to new and/or expanding old centers. In Turkey, the founding of the Republic triggered a need for immediate housing in the new capital, Ankara. Initially influenced by Western – particularly German- housing models, early developments were well received. However, post-WWII internal migration and rapid urbanization triggered a housing crisis, leading to significant shifts in policy approaches. While Western countries had a longer history of managing urban dwelling requirements through standardized, regulated systems, the direct implementation of these models in the Turkish context often produced mixed outcomes due to the unique economic and social environment.

This study hypothesized that that Turkey's initial needs differed greatly from those in the West, resulting in a unique adaptation from those in the West. The research confirms this: early stages demonstrate the direct importation of Western solutions, such as the adoption of architectural styles in areas such as Akaretler, Istanbul and planning expertise in early Ankara. Overtime, Turkey progressed through stages of adaptation- first by inviting Western experts, then by educating local architects in European methods, and eventually by localizing and transforming these approaches. This concluded in the establishment of TOKI, which prioritized large-scale, cost-effective solutions.

However, this shift towards mass housing also aligned Turkey with the global trend – seen in both Western and Turkish contexts – of emphasizing quantity over quality. While high-density developments met the persistent housing demands, it often did at the cost of community cohesion, adequate infrastructure and livability. The hypothesis that such models often contributed to discontentment, and in some case exacerbated rates of poverty and crime, is supported by the analysis of these developments. Nevertheless, the impact of density remains context-dependent, influenced by cultural norms, spatial design and urban policy framework.

Ultimately, this study reinforces the importance of understanding housing policies as a dynamic process shaped by socio-economic context. Turkey's experience reveals how foreign models must be thoughtfully adapted rather than directly applied. This research offers a foundation for further investigation into individual housing projects, both in Turkey and abroad, to deepen our understanding of how global models can be successfully localized to meet diverse urban challenges.

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## Resume

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