



An Analysis of the Urbanization Process from the Republican Period to Present: The Case of Odunluk Neighborhood in Nilüfer District, Bursa Province¹

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Abstract

Urban areas constantly transforming and it is usually challenging to preserve heritage during transformation. As a historical city that went through a rapid growth period, Bursa sets an example to that. Bursa is an ancient city that hosted various civilizations throughout history. During the Republican Era, Bursa itself grew and expended. Especially starting from the second half of 20th century, Bursa's population increased through migration and the city entered a rapid industrialization era. Built principally on the east-west axis, the city continued to expand mainly towards West. Such growth transformed especially Nilüfer district, situated on the West of the center. Odunluk is a neighborhood in Nilüfer district which transformed during this process. This work focuses on architectural, urban and spatial transformation of Odunluk during the first century of Turkish Republic. The change was analyzed through photographs, satellite images, records and maps of the area. Building density and buildings' architectural properties were seen to have drastically changed. Therefore, Odunluk's transformation was compiled in four main dimensions: materials, building height, density and housing typology. These four criteria were determined as the most relevant and basic indicators of change in the area. Having transformed in all four dimensions, Odunluk no longer holds its ancient, rural heritage and it has become a new, central urban zone.

1. INTRODUCTION

Metropolitan zones are dynamic, everchanging areas that constantly go through transformation. In Turkey especially in the 1960s, urban areas went through a rapid change following shift of population from rural zones. Rapid urban growth with partial and insufficient urban plans were problems that the country faced during this period, which lead to urban sprawl in many major cities [1]. Urban sprawl is a multidimensional concept that can be defined through "urban form, land use, its effects on the city and density" [2]. and it is often linked to negative outcomes of urban growth [3]. The way in which a city grows is important for the residents as it transforms urban identity and urban experience [4]. Another issue is the urban heritage, since growth often tends to put cultural heritage at risk [5]. Bursa a city that has a rich historical and cultural heritage, but also went through transformation through growth.

Bursa is an ancient city which hosted several civilizations during centuries. Each of them enriched its multicultural heritage, having left their trace [6]. In historical city center, architectural heritage is mostly protected, especially around the Grand Bazaar and Grand Mosque. This central urban zone, included in UNESCO World Heritage List, remains lively and keeps its economic significance for the city after centuries of use. By time, Bursa expended through east-west axis and new central zones were formed throughout this process.

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Starting from the Republican Era, Bursa developed and expanded. Especially after the second half of 20th century, Bursa entered a rapid industrialization era and received domestic migration [7]. These enforced Bursa's expansion on the east-west axis. Following sprawl through west, urbanization and population density increased in Nilüfer district. Migration to Bursa combined with population shift within Bursa accelerated sprawl towards west and densification of Nilüfer. Nilüfer, denser and more crowded than before, transformed into a multi-central urban region itself.

Odunluk, is located in Nilüfer district of Bursa (Figure 1). By expansion and growth of Nilüfer, Odunluk transformed like many other areas inside it. At the beginning of the Republican Era, Odunluk was a rural settlement. As Bursa Metropolitan Municipality was founded Odunluk became a neighborhood in Nilüfer district. Odunluk also became an integral part of the city as it sprawled towards west. As Bursa expanded and Nilüfer grew, Odunluk went through a multi-dimensional transformation, changing several features of the area. By the first century of the Republic, Odunluk is a modernized, central urban zone.

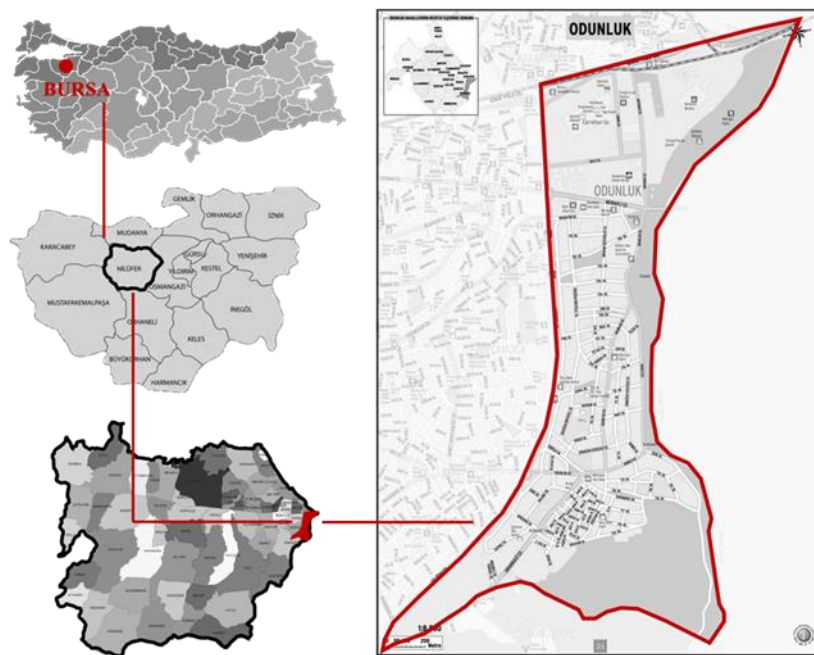


Figure 1. Location of Bursa, Nilüfer and Odunluk (Prepared by the author)

In order to study the transformation of Odunluk, four main aspects were taken into consideration. In the past hundred years, Odunluk changed due to urbanization and it transformed from a rural village to an urban center. As land use is a key indicator of urbanization [8], the change in density in the area is studied. Following the increase in building and population density, high-rise buildings became more common in this area by time. Especially after 2010s, Odunluk became a neighborhood where high-rise buildings are densely clustered. Therefore, changes in building heights in the area by time are inspected. Along with that, building materials were studied as new ones came into use for taller and larger buildings rather than traditional ones. Finally, as Odunluk transformed into a denser, more populated urban area; gradually evolving housing typology was studied as particular family houses were replaced by gated communities and high-rise building with urban dwellings.

Odunluk is an example of many settlements that urbanized since 1923. Aim of this work is to analyze urbanization process in Turkey through Odunluk in the past hundred years. The main purpose is to question the ways in which the common architectural practices and applications have evolved throughout the century. The study area was determined as Odunluk neighborhood area, according to 2023 map of Municipality of Nilüfer. Old maps, records, photographs and satellite images are used as materials to study the change of the area. The transformation was evaluated through observing the change regarding four main aspects being building materials, building height, density and housing typology. Studying

Odunluk region at the very beginning of the Republican Era and in the centenary year of the Republic, a clear difference was observed. The region has undergone a multifaceted change.

2. THEORETICAL FRAMEWORK

This section of the work is composed of two parts. First, industrialization and growth of Bursa throughout the past century is briefly explained. Then Odunluk's history and development are studied. Transformation of the area is analyzed and discussed.

2.1. Expansion and Modernization of Bursa

Bursa, located between is Uludağ Mountain and Marmara See, settled on a main east-west axis [9]. By time, it expanded and changed. The modernization process of the city started in the 19th century. After the earthquake and fire of 1854, modernist approaches were applied during the rebuilding of the city. Industrialization of Bursa also dates back to this period, starting with use of machines in silk production which is an important economic activity of the city. In addition to that education, health and hospitality sectors have also developed in this era. By the end of 19th century, city sprawl expanded up to today's Acemler, located on the west of the city center, forming a new luxury residential area [10]. This zone was accessible only by carriages at that time [11]. It is possible to state that, Bursa's sprawl through west initiated in this era. Some photographs of Bursa at the time are seen on Figure 2.



Figure 2. Bursa, around 1890 [12].

After World War I, urbanization process of Bursa decelerated. Bursa entered the Republican Era having developed as a result of modernization but still effected by the war. During the early Republican Era, several urban plans for Bursa's development were prepared. The earliest one dates back to 1924 and is attributed to Karl Lörcher. Another plan was prepared by Henri Proust in the 1940s [13]. Finally in the 1960s, Luigi Picciano's plan paved the way for city's sprawl towards west [14].

An important milestone on Bursa's development is the process of industrialization and globalization in the 1960s. Bursa Organized Industrial Zone was founded in 1961, which was a first at that time. This accelerated the industrialization process and attracted a new wave of migration towards Bursa. Another issue that effected Bursa was the population shift from rural zones to large cities, which was a common trend at the time on a national level. As city center became more congested, upper middle class started to leave to settle in Nilüfer on the west. As a result, the westward growth trend of the city which was already expanding on the east-west axis, has accelerated. In the 1990s, globalization starting having its influence on the city. Accordingly, development of Nilüfer district has led to its current state by time [15]. By the 2000s, Nilüfer has become an urban area with many different functions such as commercial areas, service units, recreational areas as well as residential settlements.

Transformation of Bursa can be viewed through residential settlements. By 1980s, globalization and economic development enhanced social segregation. That was one of the reasons that facilitated shift of upper and middle class towards western parts of the city. Nilüfer, located on the west of the city center was the primary zone where this group settled, along with some neighborhoods on north, towards Mudanya. This was also the time when gated communities first appeared in Bursa, as an indicator of

changing social habits [16]. Therefore, it is possible to state that this new type of residential settlements is one of the visible features of Bursa's social and physical transformation at the time.

2.2. Odunluk Region

Odunluk has a rather central location in Bursa. It is located at the outermost part of Nilüfer, right at its border with Osmangazi. Between two historically diverse districts, this zone is also in the middle of Bursa's historical city center and its main industrial zone. Another important aspect of Odunluk's location is the Izmir-Ankara route right on north of it, which is the main axis that Bursa is settled on. On the south, Uludağ sets a natural border. Figure 3 illustrates location of Odunluk.

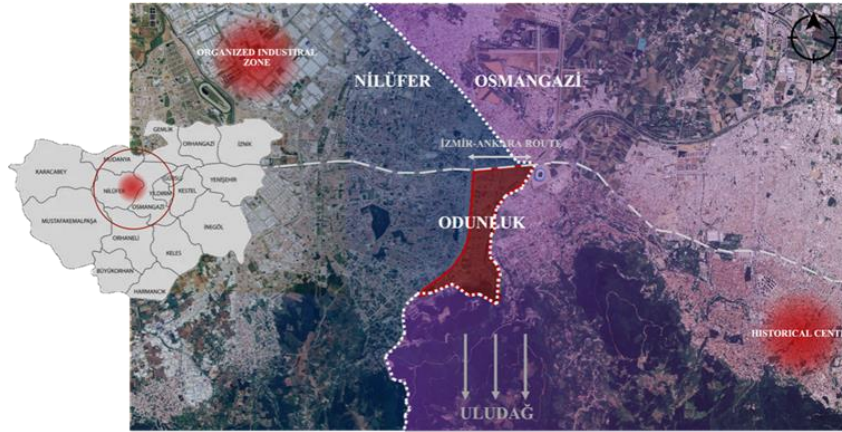


Figure 3. Location of Odunluk in Bursa (Prepared by the author)

History of Odunluk as a village dates back to 1890s [17]. The village had received mass migration especially from the Balkans and Caucasia at the beginning of 1900s. Following Ottoman Empire's war losses at the second half of the 1800s, Turkish and muslim populations in the area were encouraged to migrate to Anatolia. Odunluk was one of the designated destinations for them and some of them settled here [18]. Therefore, it is possible to say that in terms of ethnicity, Odunluk has a diverse heritage.

The name Odunluk originates from its ancient use, as it was once the area where woods retrieved from Uludağ were kept before being sent off to central Bursa [19]. Previously, this area was used only for the transfer of firewood to the city to meet Bursa's fuel needs. Residential settlement in this area started mainly after migration following the wars. Especially the Russo-Turkish War facilitated formation of Odunluk village [18]. As people settled, agricultural and livestock farming activities debuted in the area.

During the first years of the Republic, Odunluk remains as it was inherited from the Ottoman Empire. The village is a rural settlement located on the Orhaneli route of this period (Figure 4), completely unattached to the city. Agriculture is the main economic activity of the time in this region. For a brief period, Odunluk becomes a settlement that is administratively attached to Dobruca, a neighborhood nearby, and regains its status as village [12]. After the foundation of Bursa Metropolitan Municipality, Odunluk obtained a status of neighborhood of Nilüfer district and hereupon it remained as it is.



Figure 4. Odunluk village and ancient Orhaneli route in 1960s [17].

For the majority of the 20th century, Odunluk has not had a significant growth or transformation. Primary economic activities at the time were pomiculture, grain cultivation and viniculture. The village was parceled perpendicular to the Nilüfer Stream next to it, in order to maximize the efficiency and enable each farmer to water their land [17].

As Bursa expanded towards west by time, Odunluk was affected by the sprawl as well as other areas in Nilüfer. As city sprawled, density of Nilüfer increased in terms of people and buildings. Like many similar regions, Odunluk was no longer an unattached settlement. By time, it became an integral part of the expanding city and its population rose accordingly. Figure 5 illustrates the change in Odunluk's population between 1940 and 2023. Change in population is one aspect of the multi-dimensional transformation of Odunluk.

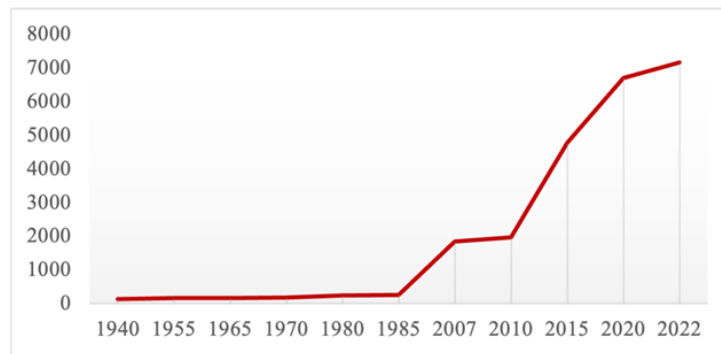


Figure 5. Population change in Odunluk in years (Data from [17],[20]).

At the beginning of 21st century, commercial buildings started to settle in Odunluk. Carrefour Mall which was built in 2001, was one of the first ones among them. Commercial settlements accumulated mostly on the northern part of the region, near Izmir-Ankara route. By 2010s, high-rise construction started in this area as well. Meanwhile, gated communities were built and ancient farming lands by the stream which are located in the southern part of Odunluk, transformed into a residential area. Figure 6 summarizes transformation and development of Odunluk on a timeline.

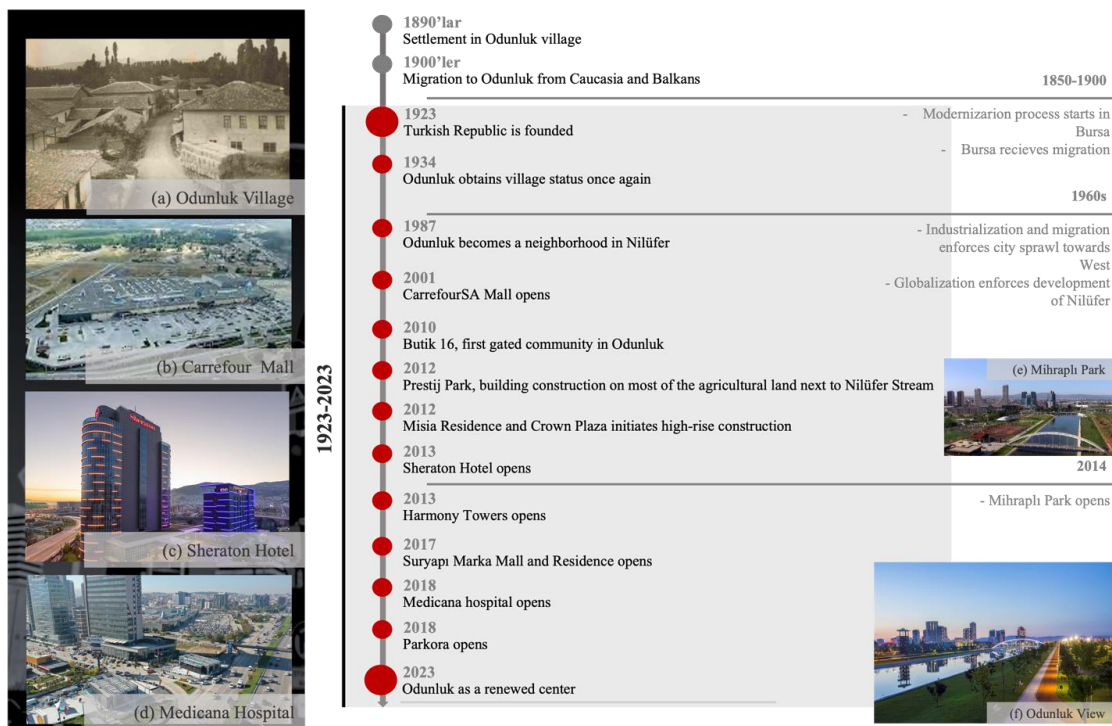


Figure 6. Timeline of Odunluk's transformation (Prepared by the author, Photos from a: [17], b: [21], c: [22], d: [23], e: [24], f: [25])

By 2023, Odunluk is a diverse and multi-dimensional urban zone. Figure 7 illustrates various areas with different properties within Odunluk. On the northern part, right by Izmir-Ankara route, mostly commercial buildings are present. Many of them are high-rise buildings, so this part of the neighborhood has a very dense urban structure. Further to south, location of ancient village of Odunluk is situated. This is also the part which is relatively closer to Mihraplı Park. On the extreme south of Odunluk neighborhood, mostly residential areas are found.



Figure 7. Odunluk in present day (Prepared by the author, Photos from a: [25], b: [26], c: [27], d: [26])

Northern part of Odunluk is the densest and functionally richest part of the entire neighborhood. Here, many mixed used buildings are present. Malls, hotels, business centers, stores, a hospital, governmental buildings and high-rise gated residences are located here (Figure 8). The area is highly commercialized and due to various functions it has, this part is saturated with high population.

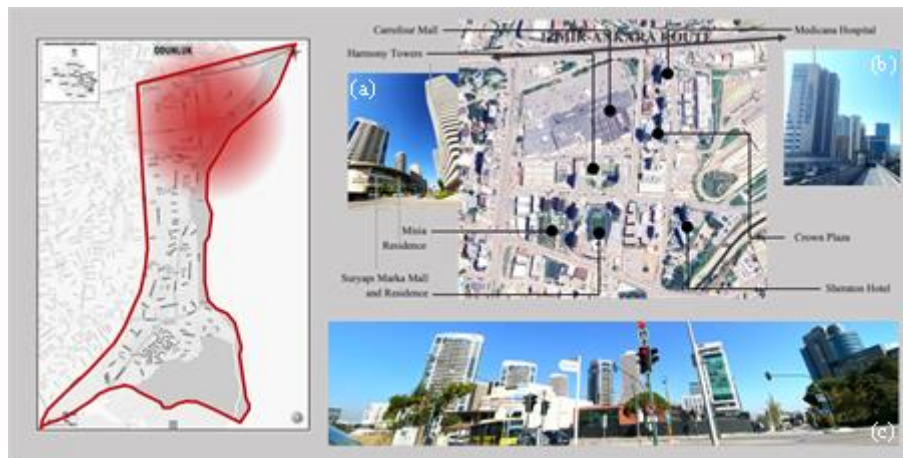


Figure 8. Commercial building in northern Odunluk (Prepared by the author. Photos from a: [28], b: [28], c:[26])

3. ANALYSIS OF ODUNLUK'S TRANSFORMATION

In this section, old and new maps, satellite images and photos are used in order to analyze the architectural and urban transformation of Odunluk. Ancient Odunluk village and current Odunluk neighborhood are compared through these materials. Differences in materials, building height, density and housing typology are questioned.

Odunluk's transformation which is connected to Bursa's development is rather recent. As Bursa rapidly expanded after industrialization and especially in the 1980s, Nilüfer region and Odunluk started changing. It is possible to state that Odunluk has not significantly changed until 2000s. However, after 2000s, a

rapid transformation is observed in the area. Especially after 2010s, urbanization of the ancient village area and farming lands is accelerated and Odunluk reaches its current form.

Satellite images are one of the most effective ways to observe process of urbanization by time. On Figure 9, satellite images of Odunluk are seen. The most ancient one available is from 1985. It is seen on that image that there has not been a tendency of urbanization during this time and Odunluk is still a rural settlement. The next most ancient image is from 2003, leaving a large time gap between the two. By the 2000s, Odunluk becomes integrated to the expanding city. The neighborhood is surrounded by urbanized zones on the east, west and north; as seen on satellite image. As for the first decade of the century, no significant transformation is observed within the neighborhood. However, new settlements in Odunluk are highly visible starting from 2010. On the image of 2015, most of the ancient village's land is seen to be transformed and Mihraplı Park is built. By 2023, a highly urbanized, dense area is visible.

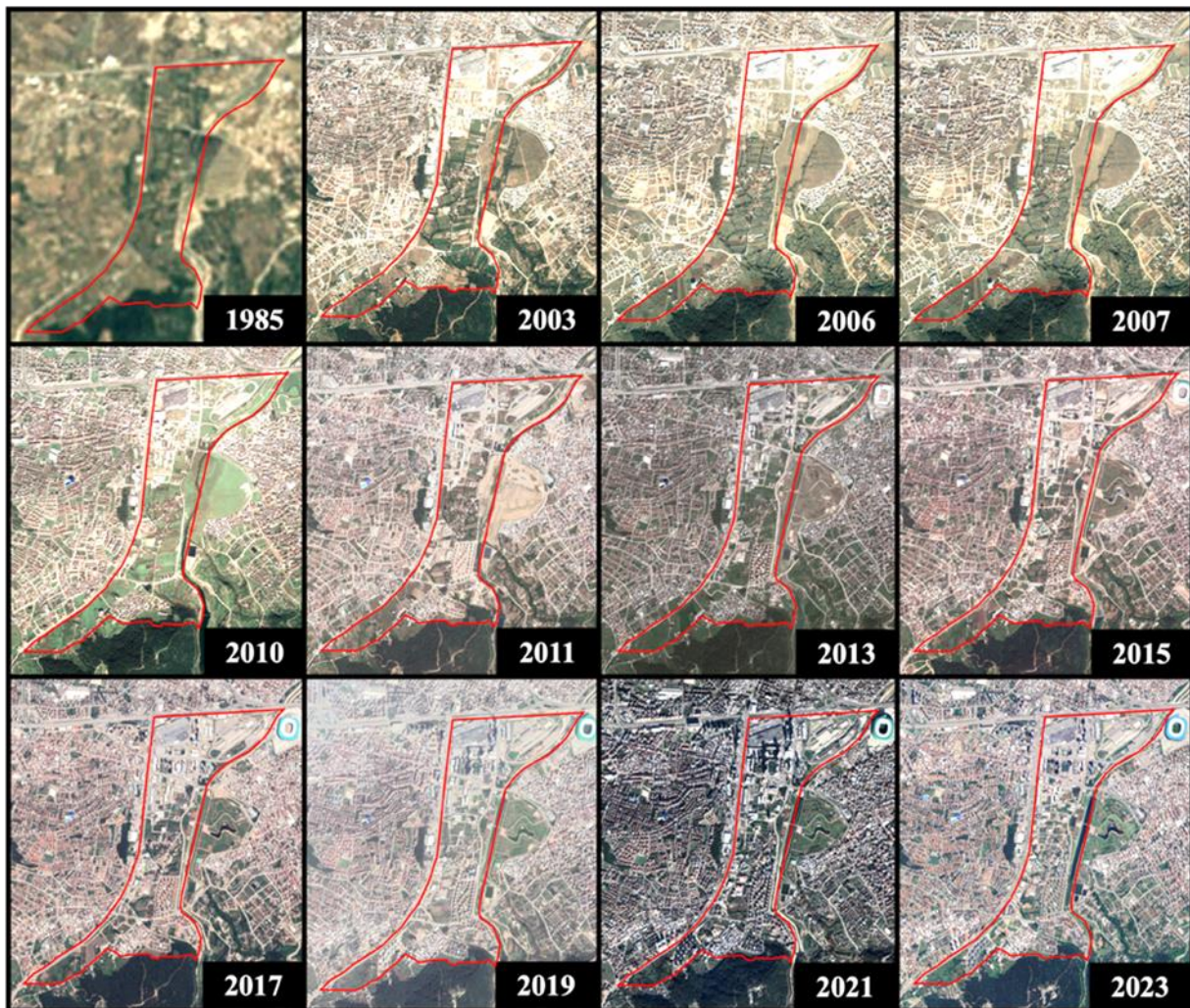


Figure 9. Satellite images of Odunluk throughout the years (Prepared by the author using Google Earth)

Maps of Odunluk were also used in order to comprehend the urban development through time. The most ancient map available of Odunluk dates back to 1966. Maps of Odunluk from 1966 and 2023 are shown on Figure 10. In 1966, Odunluk is still a village, lightly populated and separate from the city. The map visualizes only the ancient Odunluk village area. The base map of Odunluk of 2023 on Figure 10 is obtained from Bursa Metropolitan Municipality. On the map of neighborhood of Odunluk, its district lines and present buildings within the area are seen. A scaled version of the map of 1966 is also placed on map of 2023. Difference in sizes of the two maps is highly visible. Odunluk neighborhood of 2023 spreads to a much wider area than Odunluk village of 1960s. Difference of density between the two maps

is also an issue to be addressed. In addition to covering a wider space, Odunluk neighborhood also has a much denser urban character.

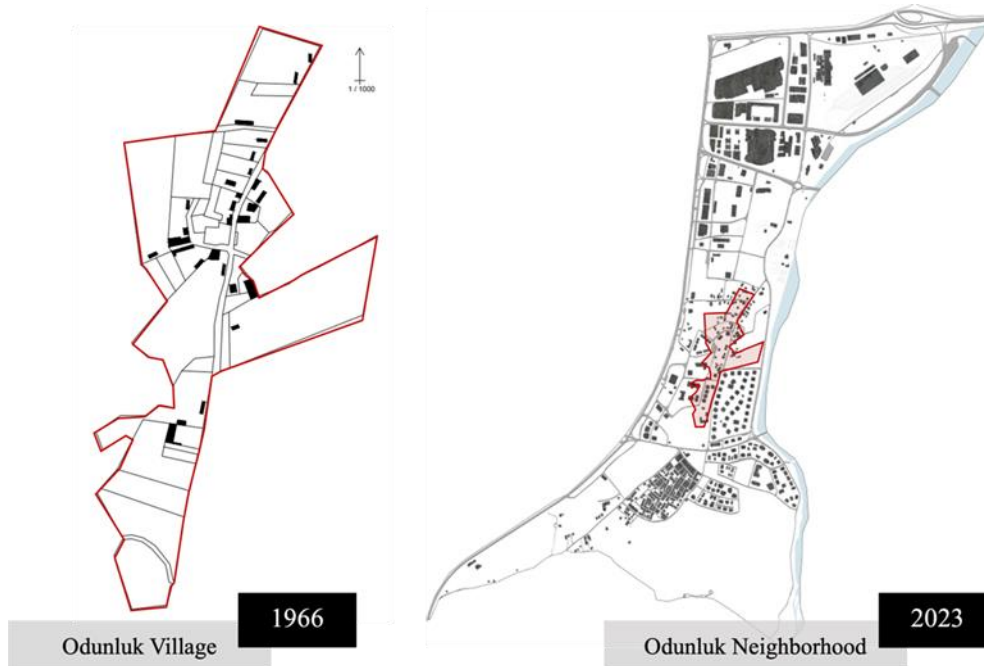


Figure 10. Maps of Odunluk from 1966 [17] and 2023

Regarding the ancient Odunluk village area, a multi-dimensional transformation is visible. On Figure 11, two satellite images from 2010 and 2023 are compared. Ancient Orhaneli Route, which used to be the main axis of the village is highlighted in red. The axis is still visible by 2023. However, parceling and density around the axis are among the main changes in the area. In 2010, tracks of the ancient village are still clearly apparent. Farming lands that were parceled perpendicularly to the stream can be seen on the image of 2010. Satellite image of 2010 is the latest one where they are still visible. However, most of those are no longer existent in 2023. Ancient farming lands are mostly replaced by larger parcels of gated communities.



Figure 11. Ancient Odunluk village area in 2010 and 2023 (Prepared by the author using Google Earth images and photos from a [29], b [30], c [26])

An important aspect of the transformation of Odunluk is the main housing typology of the area. As the region transformed in an architectural and urban dimension, common lifestyles and economic activities did as well. This transformation can be observed through main housing typologies. Ancient Odunluk village has a rather simple housing typology. Houses of Odunluk are mainly two-story buildings within their own yards (Figure 12). Building materials used in houses of Odunluk are mainly of stone, wood, bricks and adobe. Each house has its own barn, storage unit, and garden [17].



Figure 12. Photos of houses in ancient Odunluk village [17].

On Figure 13, plans of a common two-story house in Odunluk is seen. Ground floor is composed of three main sections: part 1 being kitchen, part 3 a room and part 2 being the main area of circulation with entry and staircase. The top floor follows a similar scheme with two rooms numbered 3 and a main living and circulation area numbered 2.

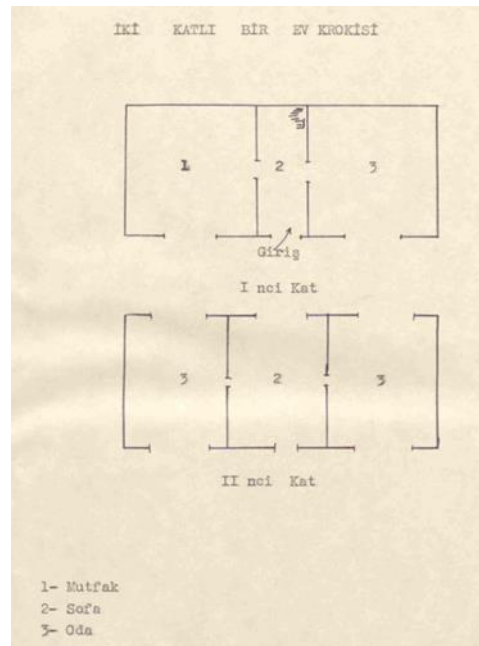


Figure 13. Plan of a house in ancient Odunluk village [17].

By 2023, most of these are seen to have disappeared. As seen on satellite images, most of this land is replaced by new buildings and gated communities. On Figure 14, some of the houses that remain by 2023 are seen. While some are still in use as before, one is almost wrecked. Yet, housing typology of Odunluk village can still be seen through them. Settlement of traditional two-story houses inside their gardens and their building materials remain slightly visible in Odunluk neighborhood.



Figure 14. Some remaining houses of ancient Odunluk village [26].

Despite demolition of many, some buildings of the ancient village remain as they were. On Figure 15, photographs of the same house from different years are seen. This building is a one-story house. First photograph was taken in 1960s and the other one shows the present state of the same building. It sets example as one of the few buildings that remain from the village.



Figure 15. A house from Odunluk in 1960s [17] and in 2024 [26].

Apart from few remains, Odunluk neighborhood has a rather different housing typology than Odunluk village. Urbanization and housing typology of Odunluk neighborhood can be studied in two sections. On the north where mostly commercial building are located, housing density is high and mostly located in high-rise buildings. On Figure 16, main residential buildings of the area are seen: Misia Residence, Harmony Towers and Suryapı Marka Residence. On the south, relatively smaller multi-story apartment blocks and gated communities have replaced houses in the ancient village.



Figure 16. Housing in Odunluk neighborhood [26].

Overall, housing in present day Odunluk is composed mainly of multi-story apartment buildings. On the northern part, much taller and larger buildings are located. Traditional materials are replaced by use of reinforced concrete. Mixed-use buildings are quite common. On the north, most of the residential blocks are integrated with commercial units. Suryapı Marka Residence is linked to a mall and Harmony Towers have a wide commercial ground floor directly accessible from the street level. At the ancient Odunluk village area, current housing blocks are in forms of either gated communities or single residential units, as seen on Figure 16. Whereas gated communities are strictly separated from outside, most of the single apartment buildings have commercial units on the ground floor.

4. FINDINGS

As urban development of Odunluk is studied, it is possible to state that Odunluk went through a multi-dimensional transformation through time. The earliest satellite image available of Odunluk dates back to 1985. On the image of 1985, it was observed that almost all of Odunluk consisted of green areas, fields and orchards, and that construction was limited to housing and public buildings belonging to the village. But by 2023 a built-up, dense, crowded and sparsely populated neighborhood is seen. The transformation throughout the century is summarized on Table 1.

Table 1. Odunluk in 1923 and 2023 (Prepared by the author)

Odunluk in the past century	
1923	2023
- A village	- A neighborhood
- A rural zone	- A new urban zone
- Separate from the city center	- A new central area
- Economic activities in agriculture	- Economic activities in commerce, trade and services
- Lightly constructed	- Densely construction
- Two-story houses in private lands and gardens	- High-rise buildings, gated communities
- Sparsely populated	- High and dense population

Since densification in the Odunluk area had not fully started in the 1980s, the differences between Odunluk of this period and Odunluk of the beginning of the century are limited. From 1923 until the end

of the twentieth century, there was no significant development and new settlement in Odunluk area. The next earliest satellite image is from 2003. In the intervening eighteen years, it is observed that construction started primarily in the areas facing Izmir-Ankara Route in the north of Odunluk. The intensification of construction occurred primarily in the north of the area. Between 2003 and 2010, it is observed that the construction that started in the north of the area moved towards the south. New construction is observed in the ancient village area, around Ancient Orhaneli Route (Figure 17).



Figure 17. Ancient Orhaneli Route, main axis of Odunluk village, in 2023 [26].

After 2010, it is seen that the construction in the Odunluk region has increased rapidly. Especially in the ancient village area, most of the construction has appeared in the 2010s. In the light of the information gathered on Odunluk, it is concluded that the construction of Odunluk did not make a significant progress between 1923-1985. Between 1985-2003, construction started in the north and south of the area. The construction in the northern region increased between 2003 and 2010, while there was no significant change in the ancient village area until 2010. From 2011 onwards, the ancient village area of Odunluk started to be built up, and by 2023, many empty spaces in the entire neighborhood have been filled.

Figure 18 shows the built-up areas in the Odunluk region by years. The blurry area marked in red in the center of the figure shows the ancient Odunluk village area. Although some of the buildings belonging to the village have been demolished and the lands belonging to them have been built up, it is seen that some of the old village houses still exist as of 2023. In the colored sections, areas outside the old village area are indicated. These areas show the expansion in the Odunluk region until 2023. In this context, there was no major construction in the Odunluk region until 2003. The biggest development in this period was the construction of the Carrefour Mall, the first large commercial building in the region.

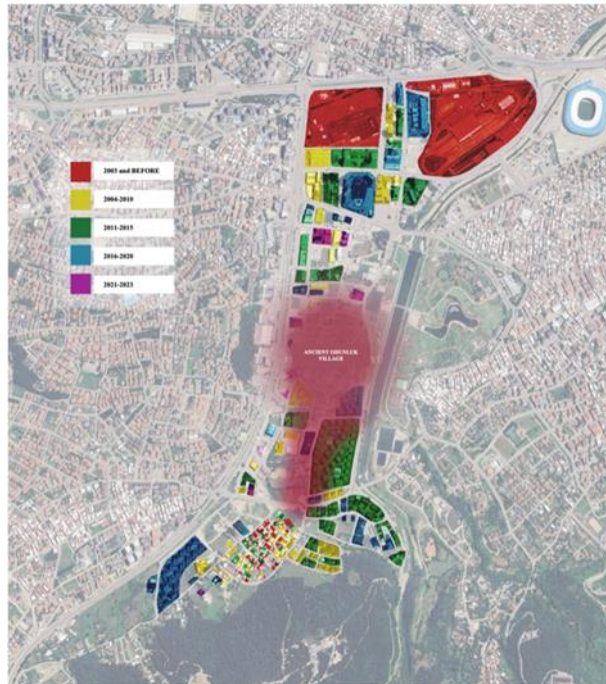






Figure 18. Urban development in Odunluk region by years (Prepared by the author)

Throughout the first century of the Republic, Odunluk region is one of the many that evolved. By studying its spatial transformation, it is possible to have a wider opinion of the evolution of architecture in the area. On Table 2, architectural and urban transformation of Odunluk is studied in four main dimensions. Traditional materials such as adobe, wood and stone used in the construction of village houses have been replaced by reinforced concrete. Many high-rise buildings have been constructed in the area. Especially in the northern part where the density is higher, most of the buildings are above 10 floors, with the highest reaching up to 28 floors. At the southern part, it is seen that six to seven story apartment buildings are the majority. There has been a clear densification in the area. Large open lands have been filled by housing developments. Detached village houses have mostly been replaced by apartments. Most of the housing buildings consists of residences or apartments within a complex. Apart from these, there are also single apartment buildings whose ground floor is used as a commercial unit. Along with this, change in lifestyle and economic activities are also visible.

Table 2. Transformation of architecture and urbanization in Odunluk throughout the years (Prepared by the author. Photos a1, a2, a3, a5, b2, b4, b5, b6, b7, d2, d3, d4, d5, d6 [26], a4 [28], b1, c1, d1 [17], b3 [21], c2, c3, c4 obtained using Google Earth).

Architecture and urbanization in Odunluk				
	Materials	Building height	Density	Housing typology
1923	Stone, wood, bricks and adobe 	Mostly two-story buildings 	Broad farming lands and sparsely located construction 	Detached houses with gardens and similar plan schemes 
1960s		Remaining two-story houses 	Remaining broad areas in ancient village zone 	Remaining houses of ancient village 
2000s	Reinforced concrete in structural systems 	Carrefour mall, first major commercial building 		Apartment buildings in gated communities 
2010s	Augmented use of glass walls 	Mostly residential six-story buildings 	Increasing densification in ancient village area 	Apartment buildings in gated communities 
2020s		Multi-story and high-rise buildings up to 28 floors 	Dense construction and use of land in entire Odunluk area 	Apartments in high-rise residences, gated communities and single buildings 

5. CONCLUSION

Between 1923 and 2023, factors such as urbanization, industrialization and rural-urban migration led to changes in many cities in Turkey. Cities have expanded, become more crowded and densified. This transformation can be observed through Odunluk in Bursa, which itself went through city sprawl and urban transformation. Throughout this work, spatial transformation of Odunluk through urban development and sprawl is studied. The growing city tended to expand towards the west, paving the way for rapid urbanization in Nilüfer. Like many areas in today's Nilüfer district, Odunluk used to be a rural settlement. But over time, it became a zone within the expanding city. However, the region's own rural texture has deteriorated. Traditional building materials were replaced by reinforced concrete, and old village houses and empty spaces were transformed into high-rise apartments and commercial units. Therefore, it is possible to state that the case of Odunluk is an example of loss of heritage through city sprawl. Within a hundred years, Odunluk area has also experienced a tendency towards verticalization, construction and densification. Gaps have been filled with buildings. Odunluk has transformed from a rural area into a new urban center with the change in a hundred years. While the historical city center of Bursa keeps its vitality, Nilüfer and Odunluk region have developed in parallel to this and became a new center. The expansion of the city towards the west continues. Despite this, it is predicted that this new central area, which responds to changing needs, will maintain its functionality in the future, just like the historical center. However, like many areas that have been built up, the original physical and social fabric of the area has been lost and the region has been transformed in every sense.

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REFERENCES

- [1] Balta, M. Ö. (2016). Urban development policy and urban sprawl in Turkey. *Energy, Transportation and Global Warming*, 5-11. Springer.
- [2] Dadashpoor, H., & Shahhossein, G. (2024). Defining urban sprawl: A systematic review of 130 definitions. *Habitat International*, 146, 103039.
- [3] Miceli, T. J., & Sirmans, C. F. (2007). The holdout problem, urban sprawl, and eminent domain. *Journal of Housing Economics*, 16(3-4), 309-319.
- [4] Mansour, H. M., Alves, F. B., & da Costa, A. R. (2023). A Comprehensive Methodological Approach for the Assessment of Urban Identity. *Sustainability*, 15(18), 13350.
- [5] Fu, L., Zhang, Q., Tang, Y., Pan, J., & Li, Q. (2023). Assessment of urbanization impact on cultural heritage based on a risk-based cumulative impact assessment method. *Heritage Science*, 11(1), 177.
- [6] Çahantimur, A. I. (2012). The Impact of Different Urban Housing Patterns on the Sustainable Urban Development of a Historic City, Bursa/Turkey. *Urban Development*, Editör: Polyzos S., InTech, Croatia, s: 181-200.
- [7] Aslanoğlu, R. A. (2000). *Kent, Kimlik ve Küreselleşme*. Ezgi Kitapevi, Bursa.
- [8] Wen, F., & Ren, L. (2017). The Measurement of Urbanization Level Based on Entity Space: A Case Study of JingJinJi Region, China. In *MATEC web of Conferences* (Vol. 100, p. 05046). EDP Sciences.
- [9] Öcalan, H, B. (Ed.). (2012). *Seyahatname'ye Göre Ruhaniyetli Şehir Bursa*. Bursa İl Özel İdaresi.
- [10] Tekeli, İ. (1999). *Bursa'nın Tarihinde Üç Ayrı Dönüşüm Dönemi. Osmanlı Devleti'nin Kuruluşunun 700. Yıldönümünde Bursa ve Yöresi*, 11. Yapı Yaşam Kongresi, TMMOB Mimarlar Odası Bursa Şubesi Yayınları, Bursa, s. 7-30.
- [11] İlhan, C., Ediz, Ö. (2019). Kent Dokusu morfolojik değişiminin fraktal geometri aracılığıyla hesaplanması: Bursa örneği. *Mimarlık ve Yaşam*, 4(1), 117-140.
- [12] Ulutaş, O. (2014). *Nilüfer'in Hikayesi*. Nilüfer Belediyesi, Bursa.
- [13] Bilir, T. H. (2020). *Çok Katlı Konut Bloklarında Sosyal Yaşam ve Mekan İlişkisinin İncelenmesi: Bursa, Odunluk Bölgesi Örneği*. Yüksek Lisans Tezi. Bursa Uludağ Üniversitesi, Fen Bilimleri Enstitüsü, Mimarlık Fakültesi, Bursa.
- [14] Erken, E. (2022). İstanbul'da Cumhuriyet Döneminde Planlama Çalışmaları: Henri Prost ve Luigi Piccinato'nun Planlarının Sonraki Dönemlere Etkileri Açısından Mukayeseli Analizi. *İstanbul Ticaret Üniversitesi Sosyal Bilimler Dergisi*, 21(45), 1626-1648. doi: 10.46928/iticusbe.1224428.
- [15] Ertürk, H. ve Karakurt Tosun, E. (2009). Küreselleşme Sürecinde Kentlerde Mekansal Sosyal ve Kültürel Değişim: Bursa Örneği. *U. Ü. Fen-Edebiyat Fakültesi Sosyal Bilimler Dergisi*, 10(16), s: 37-53.
- [16] Tümer, H. Ö., & Dostoğlu, N. (2008). Bursa'da dışa kapalı konut yerleşmelerinin oluşum süreci ve sınıflandırılması. *Uludağ Üniversitesi Mühendislik Fakültesi Dergisi*, 13(2).

- [17] Akyay, S. (1966). *Odunluk Köyü Monografisi*. İstanbul Üniversitesi Edebiyat Fakültesi Coğrafya Enstitüsü, İstanbul.
- [18] Karaaslan, Y, Z. (2015). *93 Harbi Sonrası Kafkasya 'dan Bursa'ya Kitlemel Göç Hareketleri: Odunluk Örneđi. Odryses'ten Nilüfer'e Uluslararası Nilüfer Sempozyumu. Nilüfer Belediyesi, Bursa.*
- [19] Akkılıç, Y. (2002). *Kurtuluş Savaşı'nda Bursa*. Akkılıç Kütüphanesi Yayınları. Nilüfer, Bursa.
- [20] Bursa, Odunluk Mahallesi Nüfusu. Access Adress: <https://www.nufusune.com/11113-bursa-nilufer-odunluk-mahallesi-nufusu>. (Date of Access: 14.09.2023).
- [21] 2000'li yıllarda Odunluk. Access Adress: <https://www.sayfa16.com/bursa/herkes-bu-fotografikonusu-yor-h65170.html> (Date of Access: 14.09.2023).
- [22] Sheraton Bursa Hotel. Access Adress: <https://www.marriott.com/en-us/hotels/yeisi-sheraton-bursa-hotel/overview/>. (Date of Access: 03.07.2024).
- [23] Bursaray Odunluk. Access Adress: <https://www.bursa.bel.tr/haber/bursaray-odunluk-istasyonu-hizmete-acildi-30747>. (Date of Access: 03.07.2024).
- [24] Hüdavendigar Kent Parkı. Access Adress: <https://www.bursa.com.tr/tr/mekan/hudavendigar-kent-parki-291/>. (Date of Access: 03.07.2024).
- [25] Sur Yapı Marka- Project Video. Access Adress: <https://www.youtube.com/watch?app=desktop&v=WKrwgVvVars>. (Date of Access: 14.09.2023).
- [26] Küçük, A. İ. Personal Archive.
- [27] Haberler: Dünyaya heyecan veren stat açılıyor. Access Adress: <https://www.bursa.bel.tr/haber/dunyaya-heyecan-veren-stat-aciliyor-20957>. (Date of Access: 14.09.2023).
- [28] Bal. Y. Personal Archive.
- [29] Butik 16 Konut Projesi. Access Adress: <https://www.gintas.com.tr/proje/tr/insaat/konut/butik-16-konut-projesi/>. (Date of Access: 14.09.2023).
- [30] Bonneville Mihraplı. Access Adress: <https://piktasyapi.com.tr/proje/bonneville-mihrapli/>. (Date of Access: 14.09.2023).