

A Morphological Analysis on the Transformation of Ottoman Cities during the Tanzimat Era

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Abstract

Ottoman Empire witnessed radical changes and transformations in the economic, social, political and legal fields during the 19th century. Especially, with the proclamation of the Tanzimat Edict in 1839, several reforms were issued to strengthen the relations with the West. It was a period of reform and westernization where new orders were specifically structured for Istanbul and later implemented into the selected cities of the empire. Although these newly introduced legal reforms had an impact on the urban fabric, the main factor driving the spatial transformation in Ottoman cities was the need to solve problems related to fires, migration and population growth. Therefore, this study aims to examine the changes brought about by the reforms specifically developed for the city and urban space during the Tanzimat Era. Through an analysis on urban morphology, this study focuses on understanding the impact of Tanzimat reforms on spatial transformation of various Ottoman cities – except the capital city İstanbul – that exhibit similar urban characteristics and patterns of change.

Keywords: Tanzimat Era, Urban Reforms, Urban Morphology; Ottoman Modernization/Westernization; 19th Century Ottoman Empire.

1. Introduction

The 19th century in the Ottoman Empire was an important period of radical changes and social transformations in economic, social, political and legal fields. In 1839, the Tanzimat Era began with the *Gülhane Hatt-ı Hümayun* read in Gülhane Park. The Tanzimat Era represents an important stage in the transformation process of the Ottoman Empire. With Tanzimat, which is also defined as the Westernization movement, the Ottoman Empire made a number of legal arrangements that strengthened its relations with the West and improved its economic relations through foreign trade. This process of socioeconomic change affected many cities of the Ottoman Empire, especially the capital İstanbul, in spatial terms.

From the completion of its establishment and the peak of its power in the 15th century, until the mid-19th century when the signs of decline became apparent, the spatial structure of cities in the Ottoman Empire remained relatively static despite the significant differentiation within society. However, starting from the 19th century, the structure of urban form entered a phase of transformation. Thus, the 19th century marked the period when spatial differentiation emerged in Ottoman cities (Aktüre, 1981, p.1).

In this study, the dramatic change and transformation that Ottoman cities experienced in the second half of the 19th century and the first quarter of the 20th century will be discussed within the context of the urban reforms that started with the Tanzimat Edict (1839). These reforms, which were systematically developed in political, sociocultural, economic and urban issues had an impact on architecture and urban space and therefore defined the patterns of urban transformation starting from the Ottoman Empire to the proclamation of the Republic of Türkiye.

Aim: The reforms of the Tanzimat Era were mainly developed for re-organizing the administrative structure, social life, and cultural fabric of the Ottoman Empire. On the other hand, most of these reforms had a direct/indirect impact on architecture and urban form. This study aims to understand the transformation in urban form resulting from the reforms developed specifically for urban space (direct impact) during the Tanzimat Era, by categorizing reforms regarding their focus area and analyzing their impact through multiple cases.

Scope: For this study, temporal and spatial limitations have been defined. It has been observed that scholars have adopted different historical intervals while defining the Tanzimat Era¹. By considering all these approaches, this study defined the Tanzimat Era, starting from the declaration of the Tanzimat Edict to the proclamation of the Republic of Türkiye, encompassing a broader timeframe to account for the long-term impact of reforms on urban areas. In addition to the temporal limitation, this study also narrowed down its spatial focus by excluding İstanbul from its investigation. The administration in the Ottoman Empire was divided into two parts: the central organization (İstanbul) and the provincial organization (outside İstanbul). Therefore, İstanbul, the capital of the Empire, was in a different

¹ These historical intervals can be listed as follows: From the declaration of the Tanzimat Edict to the Ottoman Reform Edict (1839-1856), From the declaration of the Tanzimat Edict to the proclamation of the First Constitutional Era (1839-1876), From the declaration of the Tanzimat Edict to the proclamation of the Second Constitutional Era (1839-1908), From the declaration of the Tanzimat Edict to the proclamation of the Republic of Türkiye (1839-1923).

position by having a specialized administrative structure compared to the rest of the Empire. Since Tanzimat reforms were commonly prepared for and implemented to the capital city Istanbul, it is a unique case and should be studied separately. On the other hand, except Istanbul, most of the cities located in the Ottoman Empire had similar transformation processes during the Tanzimat Era and therefore selected as the main cases of this study. Consequently, this study focuses on understanding the impact of Tanzimat reforms on the spatial transformation of various Ottoman cities that exhibit similar characteristics and patterns of change through an analysis of urban morphology outside the capital city of Istanbul.

Methodology: Through a detailed literature review on the meaning and methods of urban morphology, this study developed its own method for understanding the characteristics of urban space and how it is transformed through time.

The word morphology was first introduced by the famous German writer and thinker Johann Wolfgang Von Goethe, who devoted part of his work to biology. Goethe defined morphology as “the science that deals with the essence of forms”. Although proposed as a branch of biology, the general and abstract nature of morphology allows it to be applied in many different fields (Oliveira, 2016, p.2). One of these fields is urban morphology. Urban morphology can be defined as an approach that enables the understanding of the form, formation, and transformation processes of human settlements, as well as the spatial structure and character (Aziz Amen, 2017; Aziz Amen & Nia, 2018; Song & Selim, 2022)

, by analyzing the historical development processes and component parts that constitute settlements. With this characteristic, urban morphology is utilized as a significant assessment tool or method in determining the change and transformation processes of urban textures, interpreting the historical roots of spatial and functional structures, and transferring them to the present (Kubat, A.S., Topçu, M., 2009, p. 336).

In morphological terms, cities are extremely complex objects. In other words, cities are objects composed of different objects or different parts. It is possible to identify a series of relationships between these objects '*from the part to the whole*' and to define a hierarchy in these relationships. Urban morphology uses this hierarchical view of the city, structured according to a set of fundamental physical elements, to deal with the complexity of cities (Oliveira, 2016, p.8).

The scientific study of urban forms could not have developed without the preparation and dissemination of reliable topographic maps and plans from the eighteenth century onwards (Gauthiez, 2004, p.72). Such plans sometimes show the location of city walls that no longer exist and point to the evolving forms of the city. From the late 19th century onwards, the use of city plans as a source of history and geography and as data for urban planning has led to important developments in the theoretical and analytical aspects of urban morphology (Gauthiez, 2004, p.71).

When the theory of urban morphology is analyzed, it can be seen that there have been different approaches starting from the 19th century until the end of the last century. Oliveira (2016, p. 102-105) examined different morphological approaches used to understand the relationship of urban form in four groups: historico-geographical approach, process typological approach, space syntax and spatial analysis.²

The historico-geographical approach began in 1894 with a comparison of more than 300 German cities by the historian Johannes Fritz. The most important innovation of this study is the use of city plan and cartography as the primary source of information for urban history. One of the findings of the study was the proposal to classify cities according to plan types. A few years later, Otto Schlüter, influenced by Fritz's text, carried out a study that developed the line of research on the city plan initiated by Fritz, including the identification of the different sections that make up the city center (Oliveira, 2016, p.103). The work of German geographers in the early twentieth century was crucial in establishing urban morphology as a science that studies the physical form of cities, and the actors and processes that shape it (Oliveira, 2016, p. 106). Later in 1949, Conzen analyzed the city by dividing it into street system, plot layout and building pattern elements to understand urban morphology (Oliveira, 2016, p. 107). Additionally, he introduced one of the most important approaches in urban morphology which is the definition of morphological periods. This approach allows to observe the evolution of important cultural periods and diversify regions as a result of the change of cultural periods.

Another important method developed by the scholars dealing with urban morphology was *process typological approach*. Starting from a historical framework, the process typological approach addresses the principles of urban growth and transformation that emerge from the long-term analysis of different geographical situations. Through the analysis of specific case studies, the idea of the permanence of the planimetric pattern and the city plan as a palimpsest is formulated, in which the dense stratification of different layers reveals the progressive, partial accumulation and erosion of the initial settlement (Oliveira, 2016, p. 112). Canniggia, who is one of the important researchers of the process typological approach, studied and developed Muratori's concepts of type, typology, structure, texture, series

² Selection of scholars focusing on urban morphology are listed below:

- Historico-Geographical Approach: Johannes Fritz (1894), Otto Schlüter (1899) and Conzen (1949)
- Process Typological Approach: Saverio Muratori (1952), Gianfranco Caniggia (1975)
- Space Syntax (1970-1980): Bill Hillier and Julienne Hanson
- Spatial Analysis: Jeremy Whitehand (1970)

and seriality, created the method of process typology and developed a new method for interpreting the history of a city according to its phases in relation to basic typological processes (Oliveira, 2016, p. 116).

In parallel to these, scholars developed a more quantitative approach called *space syntax* for understanding urban morphology by the analysis of urban form. This approach first emerged in many public housing estates built in the United Kingdom to understand the impact of architectural design on existing social problems (Oliveira, 2016, p.118). Considering the environment as a space limited to buildings, the space syntax approach objectively reads the city and explores the potential for people to come together in order to understand spatial and social relations. The most important element that distinguishes space syntax method is that, it can be applied at both urban and building scales and can reveal the relationship between them. As a representation of the spatial network and a mathematical description of space, this method defines the basic elements of urban form (Koç & Kubat, 2018, p. 244).

The last approach for understanding the urban morphology was called *the spatial analysis approach*, which uses a range of methods and models to understand the spatial structure and dynamics of cities as complex, emergent phenomena in which the global structure evolves from local processes. The city is seen as a problem of organized complexity and the concepts of emergence and evolution are applied to progress towards solving this problem (Oliveira, 2016, p.125).

Many of the advances made in the analysis of urban form appear to be the result of the incorporation of concepts from the field of urban planning into historical and geographical research (Gauthiez, 2004, p.79). Moreover, it can be said that the morphological analysis of cities arises from questions concerning architectural types on the one hand and the analysis of plans on the other. These two types of analysis initially proceeded in parallel and from the mid-twentieth century onwards came together in a theoretical framework linked to actual planning practice (Gauthiez, 2004, p.80).

By focusing on open spaces and street/road networks to understand the urban form and its transformation through time, this study developed its own methodology by combining methods of different approaches that are discussed above. Several parameters that directly affected the Ottoman cities during the Tanzimat Era are defined and their impact on transformation of urban spaces are analyzed in selected cities. To analyze and understand the impact of Tanzimat reforms on urban space, primary sources in the literature were scanned, encyclopedias, books, articles and theses were examined, city maps are gathered through online and municipality archives. In order to present the outcomes accurately, historic city maps were visually modified by using markings and additionally similar cases are presented together to provide a better understanding of the topic.

2. Reforms of the Tanzimat Era

The Tanzimat Era, which began with the proclamation of the Tanzimat Edict also known as *Gülhane Hatt-ı Hümayun* by Mustafa Reşit Pasha in the Gülhane Park on November 3, 1839, is a period marked by a series of reforms ranging from social, cultural, and economic reforms to military and political innovations, as well as changes in the administrative mechanism, across the territories under Ottoman rule. This period can be defined as a "reformist era" or a "Western-oriented renewal process" aimed at Westernizing the Ottoman Empire (Özcan, 2006, p. 149).

The word *Tanzimat* is the plural of the word *tanzim*, which means ordering, arrangement, and is a term used for the reforms made in the 19th century, and also refers to the period in which these reforms were made (Berkes, 2024, p.213). The 19th century was the most active, painful, exhausting and long period for the Ottoman Empire. It also refers to the reorganization of the Ottoman Empire, where basic institutions had deteriorated, in the face of the overwhelming superiority of Europe.

The most important aspect of the new reforms introduced by the Tanzimat Edict is that the public order was to be regulated by laws to be enacted instead of being at the initiative of the sultan. In the provisions of the edict, it was stated that all Ottoman citizens, both Muslim and non-Muslim, would be equal under the law, that no one would be sentenced to death unless there was a legal judgment and the sultan's decree, that cruelty would be eliminated, that taxes would be collected fairly, that the people would be protected, that the governors would explain the Tanzimat well to the people and that the people would abide by it. With the Tanzimat Edict, it was deemed necessary to introduce some new laws for the administration of the state and the country. The main principles of these laws were reforms on the protection of honor and security of life, taxation and military service (Eren, 2007, p.41).

During this period, the Ottoman Empire exerted significant social and economic efforts to modernize its traditional structure. Throughout this timeframe, innovative movements were made across the empire, particularly in Istanbul serving as a model, encompassing every field ranging from military, urban planning, architecture, law, finance, education and language. Some of the areas that were reformed during this period, other than those mentioned above, are as follows: security, legal system, administration, press, health, foreign relations, economy, literature, transportation, and communication.

3. The Impact of Reforms on Urban Space in the Tanzimat Era

The spatial products of the renewal process that the Ottoman Empire underwent, the planning movements that began to be carried out in this period, were realized almost simultaneously with the planning movements of the West. Even though, it can be said that the planning movements in the Ottoman Empire during the Tanzimat Era were influenced

by Western-oriented legal and spatial reforms, the pattern of emergence varies (Özcan, 2006, p.149). Planning movements in the West during the 19th century emerged as problem-solving actions in response to changes in daily life patterns following the Industrial Revolution. In the Ottoman Empire, on the other hand, this movement emerged as a result of different reasons. From the beginning of the 19th century onwards, the issue of urban planning was brought to the forefront due to the destructive fires that frequently occurred in the Empire, the migrations to Anatolia, which increased with the loss of lands, and the necessity to cope with the increasing population. The *westernization-modernization* of the city and its inhabitants, such as the opening of wide boulevards, the arrangement of squares and parks, and the introduction of new socio-cultural functions into urban life, emerged as a result of this legal obligation (Tekeli, 1985, p.884).

Some of the factors that played a significant role in the transformation of cities during the Tanzimat Era can be listed as; Fires, Migrations, Earthquakes and Epidemics. The authorities who aimed to organize the city knew how to take advantage of these natural disasters as well. Especially in cities where almost exclusively wooden materials were used in residential architecture, fires, which were very common, led to the complete destruction of certain areas of the city. Following these disasters, the empty areas started to be organized according to new measures. Disasters were not something new for Ottoman cities; what was new was the desire to organize the aftermath of the disaster according to new standards (Dumont & Georgeon, 2023, p. 9).

In addition to all these, different regions of the Ottoman Empire were affected by these reforms to different degrees. For instance, during this period, **port cities** became the focal points of international trade development in the 19th century, experiencing the highest levels of inter-country interaction and being more influenced and developed compared to other provincial cities. In line with this commercial mobility, new functions were incorporated into urban life such as trade centers, banks, and customs buildings (Tekeli, 1985, p. 878).

Balkan cities represent another segment affected by the change and transformation in this period. National awakening and modernization movements developed in the Balkans as a result of developments both abroad (the French Revolution) and at home (the declaration of Tanzimat) (Aktüre, 1981, p.41). Due to their proximity to the West, it can be said that Balkan cities were more influenced by developments in Europe.

Provincial cities also underwent spatial changes due to the developments of the period, trade relations, and especially the introduction of new transportation methods (such as railways).

Tanzimat Era reforms can be categorized regarding the way they were developed for and their impact on urban space (direct or indirect). There are reforms mainly developed for re-organizing the urban space and therefore had a direct impact on urban morphology. Besides, there are others that are mainly developed for socio-cultural, economic, political-administrative, and technological fields but also have an impact on the transformation of urban space and are therefore defined as reforms with indirect impact.

3.1. Reforms Having an Indirect Impact on the Transformation of Urban Space

As a result of the change in the administrative structure in the Tanzimat Era, public buildings such as the government mansion, municipality building, postal telegraph building and public green spaces started to be implemented to the urban space as new functions. These buildings were planned in the central part of the city and not too far from each other (Aktüre, 1985, p.896). At the same time, structures such as luxury shops, theaters, entertainment venues, cafes, etc., that are reflecting the consumption patterns and lifestyle brought about by the shift towards Western culture within the new economic relations also began to emerge in the city center. The new Ottoman city started to re-establish its relations with its region and the world through steamships and railroads. Communication functioning through the postal system was opened to the whole society. These new channels of communication activated the emergence of new station buildings, new quays and new post office buildings in the city centers. This change in the way of relating to the environment is not only the creation of some new buildings for these functions, but also the emergence of many other new types of buildings. Moreover, introduction of new transportation systems also accelerated the construction of warehouses for the transportation of goods and the construction of hotels for the accommodation of travelers. In this period, the caravanserai or inn of the 16th century transformed into a station, warehouse and hotel. These functions were taking place in the city for the first time (Tekeli, 1985, p.881). Again, in line with the needs of the period, buildings such as hospitals, station buildings, factories and customs buildings were also seen in city centers.

The changing structure and new necessities in some Ottoman cities immediately required the establishment of modern municipal organizations. Providing public services in big cities and solving transportation, water, housing and health problems were among the main demands of the Tanzimat reformers. This was the reason for the first attempt to establish a new municipal organization in Istanbul. As the first place where every innovation in urban administration was implemented, the city of Istanbul has always been a model for other Anatolian cities. Upon the applications made by the authorized representatives of foreign states due to the irregularities in municipal services, health conditions and transportation in the city of Istanbul, the Istanbul Municipality (*İstanbul Şehremaneti*) was established in 1854 with an official communiqué. The duties of this department include the construction and repair of roads and sidewalks,

the execution of cleaning works of the city, the supervision of bazaars, markets and tradesmen, etc. (Aktüre, 1981, p.94). The implementation of the İstanbul Municipality department the Commission of Order (*İntizam-ı Şehir Komisyonu*) established in 1855 and the Sixth District Administration Regulation (*Altıncı Daire-i Belediye Nizamatı*) that came into force in 1858 failed to solve the municipal problems of the city of İstanbul and could not find widespread application in other Anatolian cities due to financial and administrative difficulties (Aktüre, 1981, p.95). However, it can be argued that the legal procedure of the zoning system took on a different dimension with the establishment of the first municipal organization, the Sixth District Administration (*Altıncı Daire-i Belediye*), covering the Beyoğlu and Galata regions, and the establishment of the municipal commission in 1855. After 1855, the institution of municipality began to be organized especially in port cities where economic activities were focused and the urban population was exposed to agglomeration tendencies, while the institutional framework introduced by the Provincial Municipality Law (*Vilayât-ı Belediye Kanunu*) of 1877 stipulated the establishment of municipal organizations in settlements exceeding a population threshold of forty thousand in the Ottoman geography (Özcan, 2006, p.160).

3.2. Reforms having a Direct Impact on the Transformation of Urban Space

Following the proclamation of the Tanzimat Edict, reforms directly related to urban space began to be announced shortly thereafter. After the Tanzimat edict, with the official records (*ilmühabers*) and regulations (*nizamnames*) containing reforms on cities, radical reforms such as prohibition of narrow and dead-end streets in the city, banning wooden buildings and building masonry structures to prevent fires, and paying attention to road widths and geometries began to be made. The content of urban laws arising from necessities such as fires and migrations also included provisions aimed at beautifying the city. At the same time, the fact that the arrangements made in the cities in the Ottoman Empire took place almost simultaneously with the urban planning process in the West shows that examples were also taken from the planning process of the West (Özcan, 2006, p.156).

3.2.1. Urban Reforms of the Tanzimat

During this period, a series of legal reforms emerged under the names of *the official records or regulations*, shaping the urban development process: extending from building materials, building heights and proportions to property regulations such as land partitioning or expropriation rights, as well as road improvement regulations aimed at preventing frequently occurring fires and the use of new transportation modes such as tramways (Özcan, 2006, p. 149).

To understand their meaning and impact on urban space, this study analyzed urban reforms realized in the Tanzimat Era – in which the first official document was prepared on 17th of May, 1839 – in chronological order. This document contains the opening of wide avenues and docks, the removal of narrow streets and dead ends, and a radical change in the urban space of the capital (Yerasimos, 2020, p. 507). In 1841, the Guild of Architects (*Hassa Mimarlar Ocağı*), which had played an active role in the organization of urban spaces since the 16th century, was abolished and the Department for Buildings (*Ebniye-i Hassa Müdürlüğü*) was established. In this process, a remarkable development occurred in terms of the Turkish town planning system with the establishment of assemblies called “zoning councils” in 1845. These councils undertook responsibilities such as the realization of infrastructure activities needed in provincial cities and the preparation of maps of cities. However, before the institutionalization of this organization, a change was made in 1848 to centralize the supervision and management of zoning activities and the powers and responsibilities of the previous institutions were transferred to the newly established institution called Ministry of Public Works (*Nafia Nezareti*). Following the establishment of the ministry, a series of legal reforms called Atik Building Regulations (*Atik Ebniye Nizamnameleri*) were enacted between 1848 and 1849 for urban construction activities (Özcan, 2006, pp.158-159). In 1848, the First Building Regulation (*1. Ebniye Nizamnamesi*), the first zoning legislation of the Ottomans introducing some of the basic principles of Western urbanism such as widening streets by pulling new buildings back and parcelization of urban lands, was published (Yerasimos, 2020, p.508). This regulation was followed by the Second Building Regulation in 1849. It can be said that these legal reforms contain common or similar decisions on organizing urban space. In the First Building Regulation, rules on expropriation, ways of granting building licenses, inspection of constructions, definition of widths of roads and streets, and heights of the buildings to be built around them were introduced. Therefore, regarding the technical aspect of these reforms, it can be said that the main concern of both the First and the Second Building Regulation was to find a solution to the fire problem rather than to create significant changes in the physical form of the city. On the other hand, the rules also had an impact on social norms; from now on, the height of buildings to be constructed in the city would be determined not by the “nationality” to which the owner belonged, but by the width of the road on which the building was located. Tanzimat's principle of equality between nations or “Ottomanism” was clearly reflected in these reforms (Tekeli, 1985, p.885).

In the second half of the 19th century, the municipal commission was established in 1855, and immediately afterward, the Expropriation Regulation (*İstimplak Nizamnamesi*) was published in 1856. In the same year, parcelization was initiated that would gradually change several cities of the empire according to the image of the Western urban model and within the framework of accepted procedures (Yerasimos, 2020, p.508). In 1858, the Land Code (*Arazi Kanunnamesi*) was enacted, and in 1864 the Provincial Regulation (*Vilayet Nizamnamesi*), which played an important role in the centralization of the Ottoman provincial organization, was issued. In 1864, a new regulation on the zoning

system was enacted and the Street and Building Regulation (*Turuk ve Ebniye Nizamnamesi*) was issued. By enabling the widening of urban roads to allow the passage of new means of transportation such as cars and trams, and imposing the condition of preparing road direction maps, this regulation became one of the most important ones in terms of its impact on urban form. It can be said that with this regulation, studies focusing on the preparation of triangulation maps or cadastral maps intensified (Özcan, 2006, p.164). In 1866, Street Improvement Commission (*Islahat-ı Turuk Komisyonu*) was established for the first time after the Hocapaşa fire, which started in Istanbul on September 19, 1865, and caused great damage by spreading over a large area. As a result of the activities of the commission, which envisioned the organization of the city, the streets were widened (Yerasimos, 2020, p.512). After this fire, the 1848 Building Regulation was abolished and replaced by the 1864 Street and Building Regulation. This regulation was more comprehensive and developed compared to the one issued in 1848. In this regulation, the concerns of regulating the physical appearance of the city predominate. Moreover, it is developed not only for Istanbul like the 1848 regulation, but also for the rest of the empire and therefore had a significant impact on cities other than Istanbul. It introduced provisions on map making, expropriation, parceling, road widths and building heights (Tekeli, 1985, p.886).

On the other hand, the realization of a series of legal reforms for the protection of buildings and artifacts of historical and cultural heritage value under the name of Ancient Monument Regulations (*Asâr-ı Atîka Nizamnameleri*) in the 1869-1874 period is important in terms of bringing the concepts of urban conservation and renewal to the forefront (Özcan, 2006, p.169).

In the last quarter of the 19th century, the first Ottoman zoning law, the Building Law (*Ebniye Kanunu*), was enacted in 1882. This law abolishes the 1864 Street and Building Regulation and introduces new and more comprehensive provisions than the previous regulation. This law stipulates that municipalities must have maps of the streets, roads and neighborhoods they will open and announce them to the public. In addition, municipalities are charged with the duty of making maps of fire places. If the face of a building has to be cut off in the widened roads, the municipality is obliged to rebuild the facade of the remaining building as before. As can be seen from these provisions, the law gives particular importance to the widening of urban roads (Tekeli, 1985, p.886). In 1882, the enactment of the Building Law, which would have repercussions until the Republican period, was the turning point of the Turkish zoning system and continued to shape the system until the first zoning law of the Republican period, the Zoning Law of 1956, came into force (Özcan, 2006, p.171).

It can be concluded that the first applications of planning experiments within the scope of urban reforms of the Tanzimat Era were accompanied by legal and institutional arrangements that formed the infrastructure of the Turkish zoning system, such as; official records, reforms and the establishment of the municipal organization. These implementations focused first and sometimes exclusively on the capital city of Istanbul, which was both the political-administrative and cultural-economic center of the Ottoman Empire (Özcan, 2006, p.156). The spread of these practices throughout the empire can be seen after the second half of the 19th century.

Transformation of urban space in the Ottoman Empire entered a new phase with the Tanzimat Era that is mainly accelerated by the implementation of reforms defined above. Reforms that are directly developed for re-organizing the urban space and urban areas that emerged as an outcome of these reforms are defined as; fire location arrangements, immigrant quarters, bourgeois quarters, road regulations, nation gardens (*millet bahçeleri*), and regulations made for port cities.

Fire Place Arrangements: When these parameters are examined in sequence, it can be seen that fires were particularly the accelerating factor in the transformation of urban fabric in the 19th century. Cities consisting of wooden buildings experienced major fires, which accelerates the transition to a new texture. Legal reforms stipulate that these new buildings must be masonry (*kagir*). Thus, a more permanent urban fabric emerges (Tekeli, 1985, p.882). During this process, fire place plans were prepared by local and foreign survey engineers to regulate the fire areas. In addition, it can be said that the first planning experiences during the establishment of the Ottoman zoning system started with a series of planning studies carried out by Italian engineer Luigi Storari for the organization of fire places in İzmir and İstanbul between 1848-1862 (Özcan, 2006, p.161).

It can be observed from the city plans prepared during this period that, after the fire place reforms, several sites with an organic urban pattern were re-arranged by implementation of streets with an orthogonal orientation. For instance, the fire place reforms in İzmir are among the early planning experiments in the Ottoman Empire. When the 1836 Graves map and the 1856 Storari map are compared, the fire place reforms in İzmir made by the Building Regulation can be read (Figure 1.a.) The change in urban morphology in Edirne and Thessaloniki can also be observed from the maps (Figure 1.b. & 1.c.).

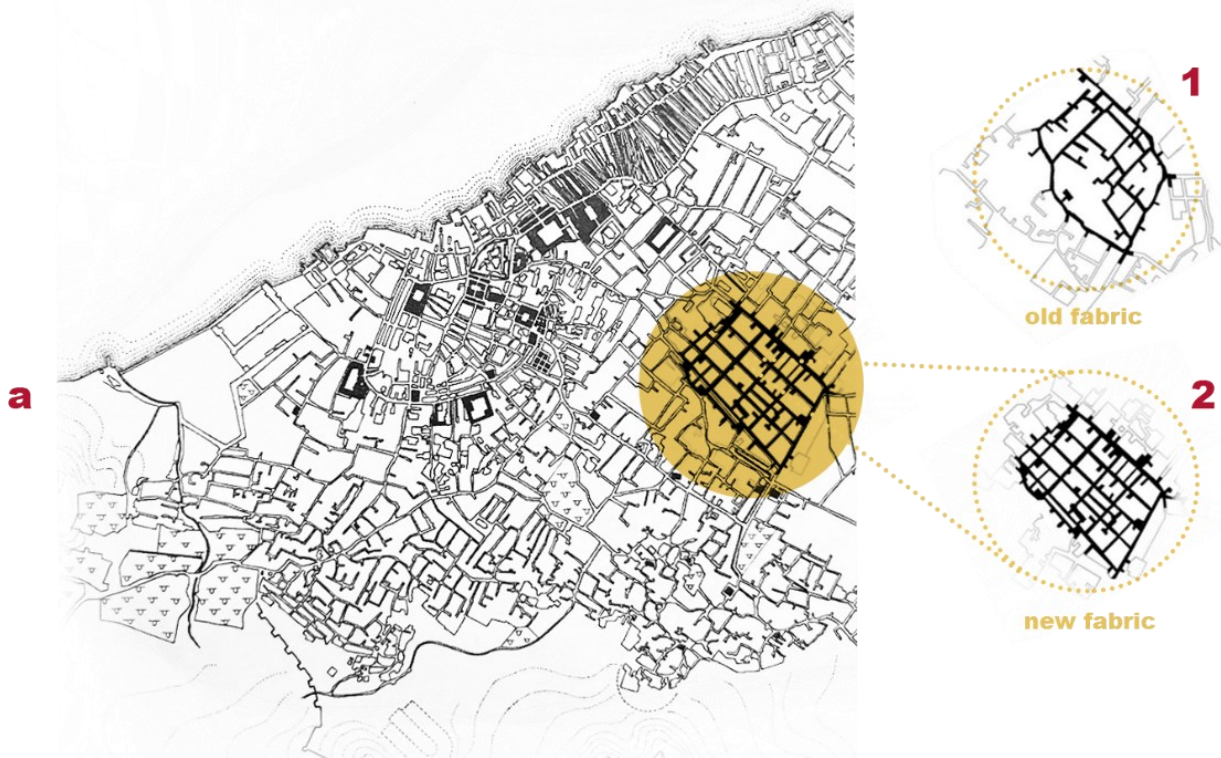




Figure 1. a. İzmir fire place arrangements in the first half of the 19th century (Yellow Dotted Area: old and new fabric on a close scale; Yellow Marked Area: Transformation on the city map, marked by the author) [1: 1836 Thomas Graves (Özcan, 2006, p.177) map 2: 1856 Storari map (Cerasi, 1999, p. 87)].

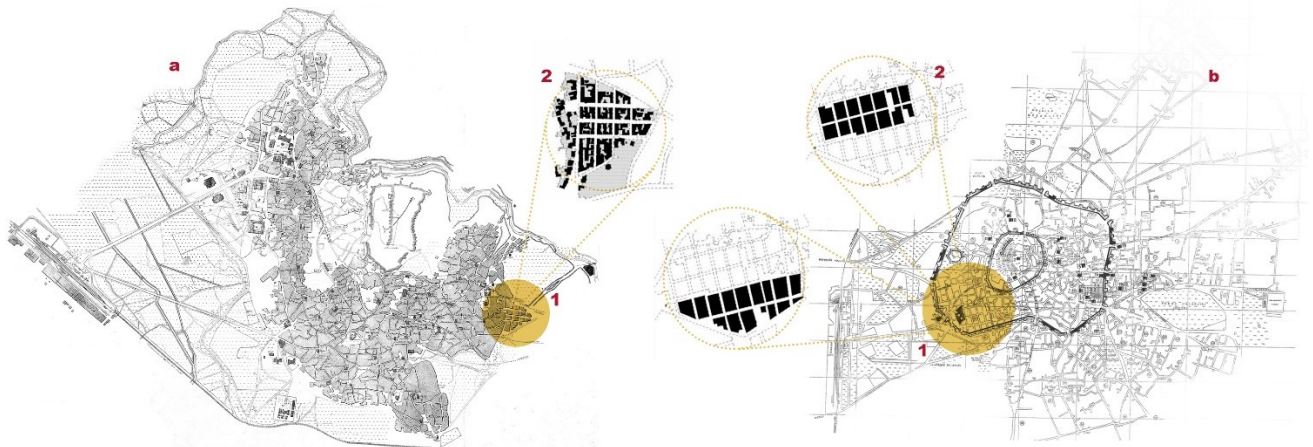
b. Edirne fire place arrangements in the 19th century (Yellow Dotted Area: old and new fabric on a close scale; Yellow Marked Area: Transformation on the city map, marked by the author) [1: 1854 Osmont Plan (Özcan, 2006, p.173), 2: 1918 plan (Edirne Municipality Archive, 2020)].

c. Thessaloniki fire place arrangements in the 19th century (Yellow Dotted Area: old fabric on a close scale; Yellow Marked Area: new fabric on the city map, marked by the author) [1: 1882 (Yerolimpos, 2023, p. 73) 2: 1917 map (Cerasi, 1999, 89)].

Immigrant Quarters: In the 19th century, one of the new types of urban space that emerged as a result of external factors was 'immigrant quarters' (Aktüre, 1981, p. 98). These quarters, which emerged as a result of migrations to Anatolia from the territories lost by the Empire after the wars and after the independence uprisings in the Balkans, differ from the traditional Ottoman neighborhood fabric. These quarters were mainly located on the outskirts of the city centers, consisting of streets with a grid-iron plan.

On the other hand, it can be said that the first spatial products of the Street and Building Regulation in Anatolian cities were the immigrant neighborhoods that began to be articulated to the cities by the Migrant Resettlement Commission (*İskân-ı Muhacirûn Komisyonu*) for the settlement of immigrants coming to Anatolia in masses from Crimea or the Balkans. In fact, in the cities where immigrant quarters were articulated, the grid-iron plan and orthogonal road schemes of the cities, which can be easily distinguished from other neighborhoods, bear the traces of the provisions of the Street and Building Regulation (Özcan, 2006, p.165).

The examples of grid-planned immigrant neighborhoods having a differentiated texture compared to the traditional one are defined as; Ankara Bosnian Quarter (Figure 2.a.), Konya Cedidiye and Mamuriye Quarter (Figure 2.b.) and Bursa Rusçuk Quarter (Figure 2.c.). They were all located at the periphery of the city and developed for the immigrants coming from Balkans.



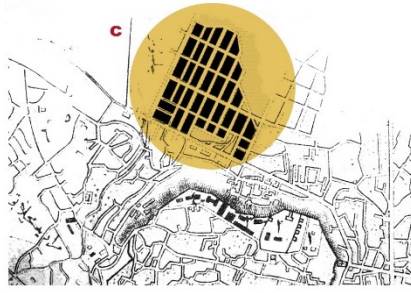


Figure 2. a. Ankara in 1924 (Yellow Dotted Area: Boşnak Quarter on a close scale; Yellow Marked Area: Boşnak Quarter on the city map, marked by the author) [1: 1924 Ankara Layout Plan (VEKAM: H004), 2: Boşnak Quarter (Aktüre, 1981, p.134)].

b. Konya in 1922 (Yellow Dotted Area: Ceditiye and Mamuriye Quarter on a close scale; Yellow Marked Area: Ceditiye and Mamuriye on the city map, marked by the author) [1: 1922 map (Konya Municipality Archive, 2023), 2: Ceditiye and Mamuriye Quarter (Özcan, 2006, p.166)].

c. Bursa in 1907 (Yellow Marked Area: Rusçuk Quarter on the city map, marked by the author) [Saint Laurent, 1994, p. 210].

Bourgeois Quarters: Another transformation seen in the urban fabric of the Ottoman Empire in the 19th century is the emergence of bourgeois/wealthy quarters. The 19th century city's differentiation in residential areas cannot be understood only in terms of cosmopolitan structure, as in the 16th century city. During this period, alongside international differentiation within the Ottoman Empire, class distinctions also began to emerge. In residential areas, there is again international differentiation, but now not all classes of each nation reside in the same neighborhood. Those who become wealthier preferred to live on the outskirts of the city and as a result, suburbs were formed in parallel with transportation facilities. There is also a differentiation between nationalities in these suburbs, but not as rigid as in the city. There is clearly a differentiation between the inner city and the suburbs (Tekeli, 1985, p.882). These families, not integrating with other social segments in the cities, are forming their own groups, and in neighborhoods evolving with their demands and support, the implementation of common planning principles and spatial standards from Europe is leading to the emergence of a very different fabric from the traditional one (Aktüre, 1981, p. 212). The Punta Quarter of Izmir³ (Figure 3.a.) and the Tac Ahmed Quarter of Afyon (Figure 3.b.) can be given as examples of bourgeois neighborhoods. It can be seen in the map that these neighborhoods were formed with an orthogonal parcel layout, away from the city center, differentiating from the traditional Ottoman residential texture of the city.

³ Sevgi Aktüre defined the term "bourgeois quarter" in her book titled "Late 19th Century Anatolian City Spatial Structure Analysis". Yılmaz and Yetkin's book "Urban History of İzmir", The Alsancak region, including Punta, is described as a "rich - western districts". In parallel to Aktüre's definition, this study also considered bourgeois quarters as a new type of urban typology introduced by the Tanzimat Era and therefore analyzed different cases in detail. For more information see, Aktüre, 1981, p. 212; Yılmaz & Yetkin, 2002, p.57-58.

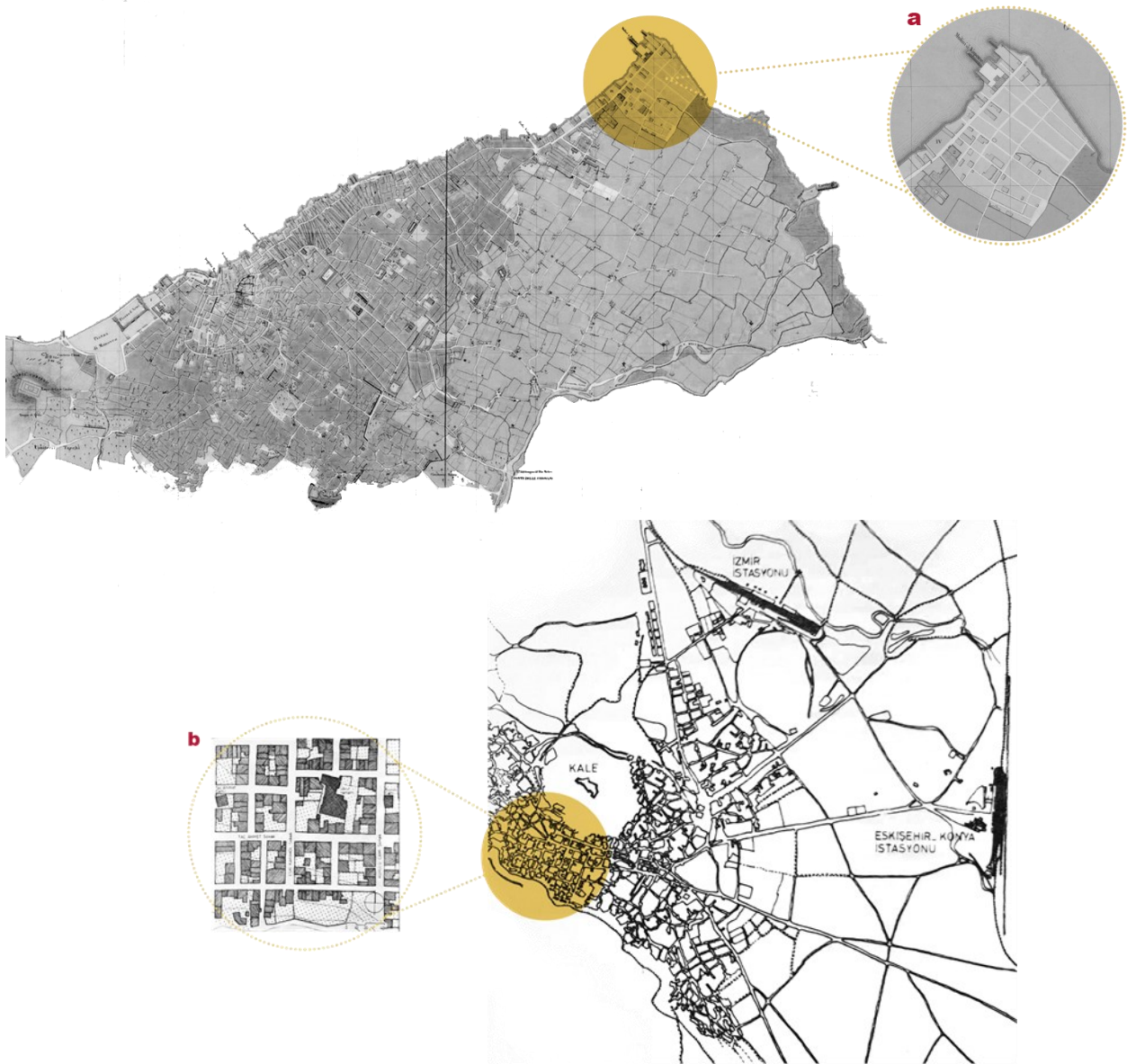


Figure 3. a. İzmir, 1856 Storari map (Yellow Marked Area: Punta (The Point) Quarter on the city map, Yellow Dotted Area: Punta Quarter on a close scale, marked by the author) [Zandi Sayek, 2012, p. XIV-XV].

b. Afyon in the late 19th century (Yellow Marked Area: Tac Ahmed Quarter on the city map; Yellow Dotted Area: Tac Ahmed Quarter on a close scale, marked by the author) [Aktüre, 1981, p. 202-213].

Road Regulations: Another arrangement among the urban reforms of the Tanzimat Era is related to roads. These reforms involve the establishment of new road networks within and between cities, as well as the creation of new road lines in historical areas within city centers. The 1864 Street and Building Regulation stipulated that urban roads should be expanded to allow the passage of new transportation vehicles such as cars and trams, and that road direction maps should be prepared to provide these conditions (Özcan, 2006, p.161). According to the Building Law, the urban transportation system was defined in five levels of 20, 15, 12, 10 and 8 *zirâ*⁴, while the construction of overhangs or protrusions on the street was prohibited, and restrictions were imposed on the reorganization of the relationship between road widths and building heights (Özcan, 2006, p.171). In this regulation, road widths, building heights and the prohibition of building cantilevers on the streets are specified. With these reforms developed for reorganizing the fabric of the city, the old dead-end, curved and narrow streets are replaced by wider roads.

An example of road arrangements can be seen in Figure 4.a., Ankara İstasyon Street opened at the end of the 19th century to connect the city center to the train station. Also Vardar Street in Thessaloniki in Figure 4.b., which is parallel to the coast, and other streets cutting each other at right angles can be read on the map. Another example is the city of Bursa, where the road arrangements can be read on the 1912 map (Figure 4.c.)⁵.

⁴ A measure of length used in the Ottoman Empire before the transition to the metric system.

⁵ The period of 1879-1882 was important in terms of reflecting the impacts of Western planning experiences on the spatial organization of Ottoman cities. This period covers the reconstruction works carried out by Ahmet Vefik Pasha, who had observed Haussmann's practices during his

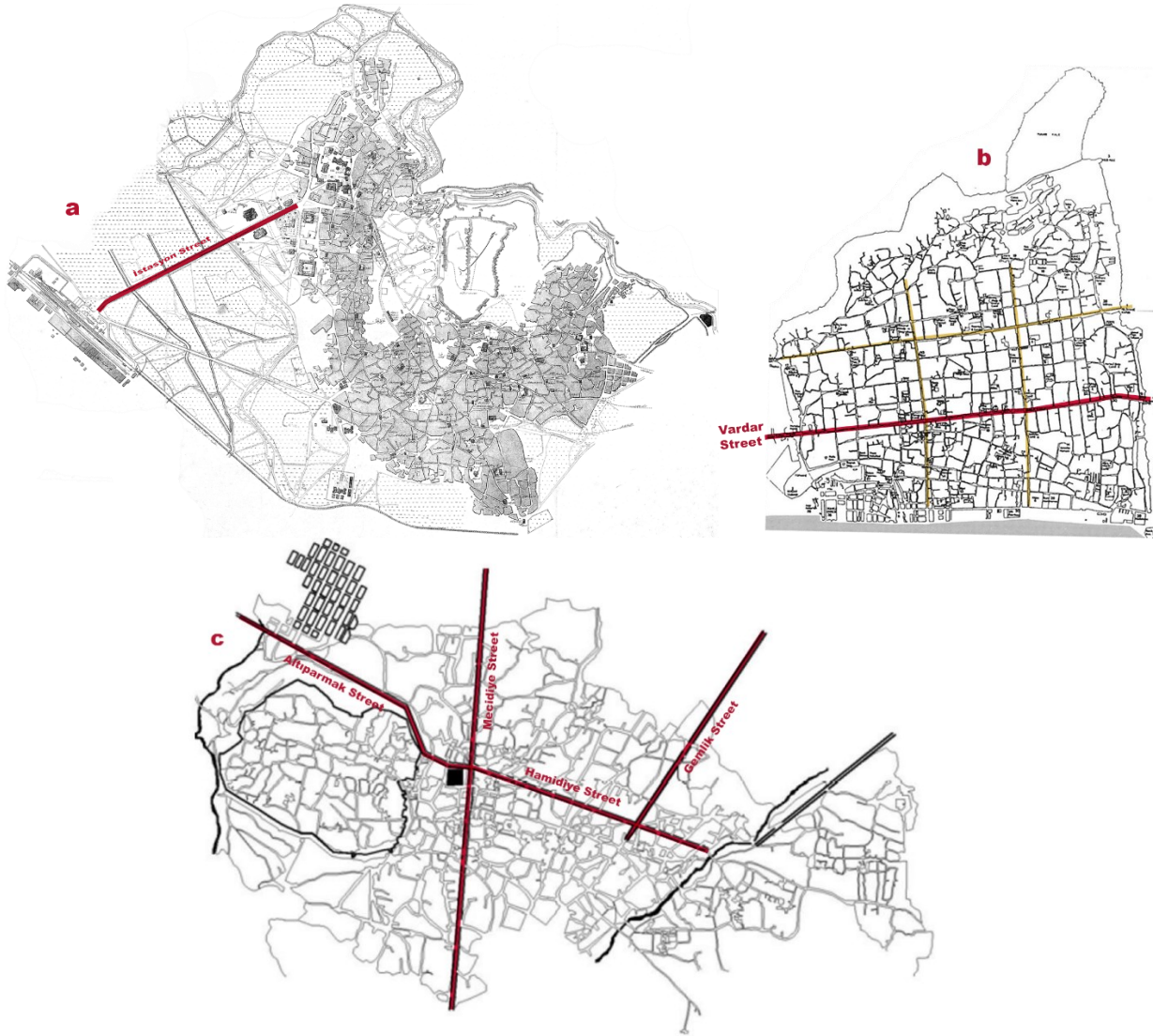


Figure 4. a. Ankara in 1924 (Red Line: Station Street, marked by the author) [1924 Ankara Layout Plan (VEKAM: H004)].
 b. Thessaloniki in 1882 (Red Line: Vardar Street, marked by the author) [Yerolimpos, 2023, p. 73].
 c. Bursa in 1912 (Red Lines: Hamidiye, Altıparmak, Mecidiye and Gemlik street, marked by the author) [Özcan, 2006, p. 170].

Nation Gardens (*Millet Bahçeleri*): In the 19th century, gardens were also included in the new formations brought by the Tanzimat Era. As of the second half of the 19th century, public gardens open to the public were built and these gardens were called the Nation Gardens (*Millet Bahçeleri*). After the declaration of the Second Constitutional Era in 1908, some palace and mansion gardens were transformed into public parks (Ercan, 2018, p.32).

The Nation Garden, also known as state or municipal gardens, had their earliest examples constructed in Istanbul in the 1860s. Inspired by public gardens in France, Nation Garden aimed to control and socialize society according to Ottoman values (Dedekarginoğlu, 2019, p.358). These gardens emerged in line with the political, social, and economic conditions and needs of the period, serving as significant public spaces with a collective function. Indeed, what distinguishes Nation Garden from other public spaces is its ability to serve multiple purposes on its own (Ercan, 2018, p.64). Over time, Nation Garden became widespread throughout the Empire. According to documents from the Ottoman Prime Ministry Archives, the existence of Nation Garden can be noted in many Ottoman cities (Ercan, 2018, p. 87). Some of these cities include Ankara (Figure 5.a.), Konya (Figure 5.b.), Edirne, Giresun, İzmir, Trabzon, Manisa, Erzurum, Sivas, Adana, Yanya, Varna, Thessaloniki, Macedonia, Kudüs.

term as ambassador to Paris and assumed the governorship of Bursa. During Ahmet Vefik Pasha's reign – similar to the reconstruction activities carried out by Haussmann in Paris – Bursa's urban transportation system was reorganized in a way to provide connections between monumental-public service structures (especially focused on Ulucami) and to create large squares. At the same time, the areas destroyed by earthquakes or fires and the immigrant neighbourhoods annexed to the city were reconstructed in accordance with the grid-iron plan and orthogonal road scheme (Özcan, 2006, p. 169).



Figure 5. a. Ankara in 1924 (Yellow Marked Area: Ankara Nation Garden, marked by the author) [1924 Ankara Layout Plan (VEKAM: H004)]

b. Konya in 1922 (Yellow Marked Area: Konya Nation Garden, marked by the author) [Konya Municipality Archive, 2023 & Çelik, 2018, p. 344].

Regulations on Port Cities: The last reform having a direct impact on Ottoman urban space is developed for Port Cities. As mentioned before, port cities in this period were the main interaction points of the empire with the West and therefore was the most intense due to international trade. For this reason, innovations such as the organization of the coastal line, the renewal of the waterfront, the construction of new customs buildings and social areas along the coast are observed in these cities. There are significant examples reflecting the role of regulations on the transformation of coastal line in cities, such as the quays of Izmir and Thessaloniki. Figure 6.a. shows the first proposal for the coastal line of Izmir and the quay plan of 1867 and Figure 6.b. shows the quay plan of Thessaloniki in 1869.



Figure 6. a. İzmir, Quay plan (*Plan du Quai pour la ville de Smyrne*) in 1867 (Yellow Line: old coastline; Red Line: new coastline, marked by the author) [Atay, 1998, p.115].

b. Thessaloniki, Quay Plan, 1869 (Yellow Line: old coastline; Red Line: new coastline, marked by the author) [Gençer, 2016, p.154].

4. Conclusion and Discussions

To conclude, it can be stated that emergence and transformation of urban space in line with the reforms developed and decisions taken during the Tanzimat Era created its own layer in Ottoman cities.

While Ottoman cities were affected and began to transform due to various internal and external factors throughout the 19th century, the reforms of the period also had a critical impact on the transformation of Ottoman cities either directly or indirectly. Reforms of the era that were designed for ensuring the modernization in various fields (military, urban planning, architecture, law, finance, education and language , etc.) played a role in the re-shaping of urban space. Whereas, reforms developed specifically for improving the physical aspects of cities and thus had a direct

impact on emergence and transformation of urban space, played a critical role in the formation of Tanzimat Era layer of these cities. The impact of these reforms can be revealed by analyzing the transformation of existing urban fabric and documenting newly emerging spaces and their integration with the rest of the city, which ultimately composes the new urban layer of the city. Since the impact of these reforms can be commonly observed in several cities of the Ottoman Empire, in this study the "Tanzimat Era layer" on the maps of different Ottoman cities outside the capital Istanbul, were analyzed in detail.

By analyzing the similarities between various cities of the Ottoman Empire, it can be concluded that the Tanzimat Era Reforms had a critical role in the definition and use of architectural and urban space throughout the 19th century. The meaning and use of urban space and the relationship between the components has changed by the reforms of the Tanzimat Era. This is the reason why, spatial products of this period are defined as the new layer of the city contributing to the multi-layered character of Ottoman cities. A study based on the impact of the Tanzimat Era reforms on the definition of urban space and its transformation over time is considered important to understand the morphology of multi-layered Ottoman cities and can provide a basis for further studies.

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