MORPHOLOGICAL EVALUATION OF SUBURBAN SETTLEMENT PATTERNS OF 19TH CENTURY IN CASE OF BUCA, BORNOVA AND KAMPOS

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ABSTRACT

MORPHOLOGICAL EVALUATION OF SUBURBAN SETTLEMENT PATTERNS OF 19TH CENTURY IN CASE OF BUCA, BORNOVA AND KAMPOS

The 19th century was a period of innovation for all countries, especially after the Industrial Revolution. The Industrial Revolution and its consequences naturally had great effects on the cities.

As the structure of the cities gradually turned into a production-oriented state, the population especially in the main European cities started to increase rapidly. With the effect of all these, a new spatial organizations emerged for the upper income group.

The effects of this period were observed in the Ottoman Empire, too. The empire was open to the innovations with the declaration of the Tanzimat Edict. Naturally, cities have been directly affected by the new reforms and policies. Therefore, a transformation process has started in the Ottoman city structure. Izmir and Chios were important port cities for Western Anatolia. Especially Izmir became the most important port city after Istanbul with the construction of the railway. Although Chios has lost its importance after the rise of Izmir, it has remained an important stopping point. The general purpose of this thesis is to examine the suburban characteristics of the selected areas Buca, Bornova and Kampos while looking at the urban pattern of Izmir and Chios in 19th century.

ÖZET

19.YÜZYIL BANLİYÖ DOKUSUNUN BUCA, BORNOVA VE KAMPOS ÖRNEKLERİ ÜZERİNDEN MORFOLOJİK DEĞERLENDİRMESİ

19. yüzyıldaki gelişmelerden sonra şehir yapısı dünya genelinde bir değişime uğradı. Bu dönemde yaşanan sanayi devrimi kentleri büyük ölçüde etkiledi. Şehirlerdeki kurgunun giderek üretim odaklı bir hale dönüşmesiyle başlıca Avrupa şehirlerinde nüfus hızla artmaya başladı. Zaman geçtikçe altyapı problemleri, salgın hastalıklar, güvenlik sorunları gibi sorunlar ortaya çıkmaya başladı ve giderek büyüyen şehirler her kesimin ihtiyacını karşılayamaz konuma geldi. Tüm bunların da etkisiyle, öncelikle İngiltere'de olmak üzere üst gelir grubunun yaşamayı arzuladığı bir şehir dışı mekan organizasyonu ortaya çıktı. Şehir merkezinin dışında ve ideal yaşam koşullarının sağlandığı bu yerleşimler banliyö olarak adlandırıldı. Banliyö kavramı, antik çağlardan beri var olsa da modern anlamını bu dönemde kazandı.

Bu tezin genel amacı, İzmir ve Sakız Adası'nın 19. yüzyıldaki şehir dokusuna bakarken buraların banliyöleri olarak kabul edilen yerleşimlerin karakterlerini sorgulamak ve incelemektir. Çalışma sahası olarak İzmir'den Buca ve Bornova, Sakız Adası'ndan ise Kampos seçilmiştir. İzmir'den iki yerleşim seçilmesinin nedeni, o dönemde özellikle demiryolu bağlantıları sayesinde öne çıkan Buca ve Bornova arasında genel anlamda çok belirgin farklar olmamasıdır. Konut tipolojisi konusunda bazı konularda ayrışsalar da kentsel dokuları genel olarak benzerdir. Sakız Adası'ndan seçilen tek yerleşimin Kampos olmasının nedeni ise buranın kendine has bir kentsel ve mimari dokuyla adanın genelinden ayrışmasıdır. Ayrıca, literatürde Cenevizliler döneminden beri adanın banliyösü olarak yer alan tek yerleşim burasıdır.

Bu çalışmada, yerleşimler kendi özelinde ele alınarak 1834-1860 yılları arasındaki ait kentsel doku izleri ile 1860-1910 arasındaki dokuları karşılaştırılmış ve gelişimleri saptanmıştır.

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CHAPTER 1

INTRODUCTION

1.1. Aim

The aim of this thesis is to examine the suburban pattern of the 19th century within the framework of the selected regions from Izmir and Chios.

The 19th century was a period when new policies were adopted for the Ottoman Empire and significant changes occurred. Cities were also directly affected by the policies of the state and existing city structures started to change. Port cities were the main factors of this change process. When examining the factors leading to the development of suburban settlements, the transformation of the port cities in the Ottoman Empire was generally taken into consideration. The urban space, which was previously divided according to ethnic origins, started to take shape according to the income groups with changing socio-economic conditions.

İzmir and Chios, which constitute the main subject of the study, were important port cities for Western Anatolia. Although Chios has lost its importance after the rise of İzmir, it continued to be an important stopping point. The general purpose of this thesis is to examine and evaluate the characteristics of suburban settlements in Izmir and Chios. The working areas of thesis has been defined as Buca and Bornova from İzmir and Kampos from Chios. The reason why the two settlements were chosen from Izmir was that there was no significant difference between Buca and Bornova in general. Although they were different in some aspects of housing typology, their urban pattern was generally similar and they should be evaluated together.

Kampos is different from the whole of the island with its unique urban and architectural pattern. Therefore, it was the only settlement chosen from the Chios to examine the suburban pattern. It is also the only settlement in the literature that has been named suburb of the Chios Island since the Genoese period.

During the study, morphological examinations will be made based on maps belonging to different periods. And the suburban pattern of each settlement will be examined in terms of general criteria.

1.2. Scope of the Study

The chapters of this thesis are divided into two parts and these chapters are formed with an approach that goes from general to special.

The second and the third chapter examine the concept of suburb and its reflections in the European and the Ottoman port cities.

In the third chapter, the evolution of the urban pattern of İzmir and Chios is examined and the existence of the suburban pattern is discussed. Morphological investigations were made about the urban and architectural typologies of Buca, Bornova and Kampos.

After these morphological investigations, some examinations about the urban and architectural patterns of these places are made in the fourth chapter. In addition, evaluations were made about the presence of suburban pattern in these settlements and the results were presented.

In the study, the settlements were examined according to their situation in the 19th century. During this period, there were major changes worldwide and in the Ottoman Empire. Especially, the Industrial Revolution affected the whole world and led to the establishment of a new order. Although the 19th century was chosen as the period, map of urban patterns include beginning of 1900s. This was because some suburban buildings were built in these dates in the working areas.

During the research, some research questions were asked and analysis were made to find answers. These are;

- What influenced the formation of suburban pattern in Europe?
- What is the main characteristic of suburbs?
- What were the dynamics of the emergence of suburban concept in the Ottoman Empire?
- What was the relationship between suburbs and the city in terms of their morphological analysis?
- Was there a suburban pattern in Izmir and Chios in the 19th century?
- Were the characteristics of suburbs of İzmir and Chios similar of different?
- Buca, Bornova and Kampos can be named as suburb? Why?

1.3. Literature Review

In this study, settlements with a deep-rooted history have been examined. This has revealed the necessity of a research about the history of these places. The study was carried out with a general to private approach. First of all, a comprehensive research has been made for the concept of the suburb which is emphasized in the study. This has brought the research to a higher scale and has benefited from studies in the field of urban planning. The meaning of the concept of the suburb in urban sense was investigated.

The following sources were used to examine the impact of 19th century conditions on European cities and the evolution of the concept of suburbs.; Mumford, L. (1961), Bruegmann, R. (2005), Schivelbusch, W. (1977), Nilsen, M. (2008), Kostof, S. (1992), Meller, H. (1976), Hobsbawm, E. (1999), Nicolaides, B. M. & Wiese, A. (2006), Jackson, K. T. (1985), Harris, R.&Larkham, P. (1999), Fishman, R. (1987), McManus, R. & Ethington, P.J. (2007).

While examining the urban structure of the Ottoman Empire at 19th century, studies about history were examined in order to better understand the conditions of the period. The main sources used to learn about the history of the Ottoman Empire; İnalcık, H & Quataert, D. (1994), Karpat, K. (2010), Faroqhi, S. (2004), Davison, R. H. (1963), İnalcık, H. (1978), Ortaylı, İ. (2007).

The Ottoman city structure was transformed in the 19th century with the effect of the city reforms that came with the Tanzimat. It is important to examine this issue in terms of bringing a holistic approach to the thesis. The following sources were used to analyze the Ottoman city structure in this period; Tekeli (2006), Çadırcı, M. (2013), Keyder Ç., (2010), Batur, A. (1985), Özveren, E & Quataert, D. (1994), Aktüre, (1973), Çelik, Z. (1986), İnalcık, H. & Seyitdanlıoğlu, M. (2006), Dumont, P. & François, G. (1996).

In general, after examining the situation of the Ottoman city in the 19th century, it was observed that the most influenced and prominent places in this period were the port cities. Izmir and Chios were also important port cities in this period. In this direction, a general research was done about the Ottoman port cities. Especially in recent years, the abundance of research on this subject is striking. The sources used in this regard are as follows; Hastaoglou-Martinidis (2010), Keyder, Ç. (2010), Kolluoğlu, B. & Toksöz, M. (2010), Keyder, Ç. & Özveren, E. & Quataert, D. (1994).

After drawing the main frame of the Ottoman port cities, the researches about İzmir which is one of the main branches of the thesis were started. In order to comprehend the rise process of İzmir as a port city, first of all it is necessary to understand the history of İzmir and what phases the city went through until the 19th century. There are many valuable resources related to the historical and urban development of Izmir. The main ones are; Atay, Ç. (1978), Beyru, R. (2011), Goffman, D. (1995), Kasaba, R. (1994), Kıray, M. (1998), Kütükoğlu, M. (2000), Zandi Sayek, S. (2012), Oiokonomos, K. & Bonavanture, F. S. (2001), Baykara, T. (2001), Ülker, N. (1994), Martal, A. (2007), Frangakis Syrett, E. (2006), Barbaros, F. R. (1995), Beyru, R. (2005), Bilget, A. (1949). In the light of the determinations about the historical and transforming city structure of İzmir, researches have been started regarding Buca and Bornova settlements, which are examined in particular. Among these sources, those related to architectural texture intended to make the typological distinctions of the buildings. They have dealt with the Levantine houses in the context of westernization and they have conducted detailed studies on the types of buildings. The main reference for Buca was Feyyaz Erpi's book '*Buca'da Konut Mimarisi: 1838-1934*', (1987). This book contains valuable information about the houses of Buca. Similarly, Hümeyra Birol Akkurt conducted a detailed typology study about the Levantine mansions in Bornova and Buca in her doctoral thesis named '*19. Yüzyıl Batılılaşma Kesitinde, Bornova Ve Buca Levanten Köşkleri Mekansal Kimliğinin İrdelenmesi'* (2004). These studies provide detailed housing typology analysis of the regions and provide information about the general patterns of the settlements. Thus, the process leading to the formation of a suburban pattern in Buca and Bornova and its subsequent morphological status were examined.

When examining the settlement of Kampos in Chios, the necessity to investigate the history of Chios in general has emerged. Because Kampos is a historiacal settlement that dates back to the 14th century. The situation of Kampos in this historical process and its purpose was investigated. For information on the history of Chios, the following sources were used; Keskin Yaşar, F. (2013), Mordtmann, J.H. (1993), Turan, S. (1966), Soucek, S. (2000). Kampos has a special place in Chios and it differs from the center of the island and other villages with its urban and residential fabric. The typology of dwellings, which combination of many cultures, is unique. In order to find detailed resources, I visited Chios Island and did researches in Chios Library. These following sources were used when examining the housing fabric of Kampos; Anerossis, F. & Mylonadis, L. (2009), Cerasi, M. (2007), Gavala-Monioudis, D. (2002), Philippiddes, D.

(1984). When examining the characteristics of the suburban settlement of Kampos, Bugatti, E. & D'agostino, S. (2012) played an important role. It is the study that provided me to think and research the idea that Kampos is a Genoese suburb.

Thanks to the information obtained from these sources, the urban structure of İzmir and Chios in the 19th century was examined. Also, the status of the suburban pattern was evaluated with morphological investigations about Buca, Bornova and Kampos.

CHAPTER 2

SUBURBAN CONCEPT IN 19TH CENTURY

2.1. Definition of Suburb

The term of suburb is defined as a residential area, which is located around the big city and which is integrated with the city life in terms of management and economy. The British religious reformist John Wycliffe used the term suburb in 1380, and G. Chaucer repeated it in the poem Canterbury Tales a few years later. Bruegmann (2005) states that the suburban area is a transition area just outside the city which houses individuals who are closely associated with the social and economic life of the city.

Within this trend, we can define a suburb as a community in which the consequences of these divisions and the independence of the city become clear and demonstrable. It is necessary to mention the existence of a defined class of people in the suburbs because there is class homogeneity in the suburbs, in other words, consistency in lifestyles. Therefore, co-operation becomes a natural aspect of social attitudes, as there are largely similar ideas in the suburbs (Güzey, 1991).

Until the 18th century, definitions of suburb included understanding of central and periphery, urban and rural, city and country areas as dual oppositions. However, this dual structure collapsed with the continuous expansion of the city beyond its borders and the transformation of the walled city into an open city model. Industrialized cities experienced the development of industrial suburbs in the emerging housing of the working class (Salah, 2013).

2.2. Suburbs in History

Although the framework of the suburban concept matured with the industrial city and deepened after the 18th century, it would not be right to say that the first emergence of this concept was in this period. If the suburbs are considered as low-density life practices outside the city in terms of its meaning, it will be determined that the first appearance is as old as the emergence of cities. According to Mumford (1961), the idea

of leaving behind the chaos of civilization was an attractive subject long before the emergence of the industrial city.

Aside from this evolution of the word ‘suburban’ and its spatial counterparts, it can be said that the instincts of people with power and money always exist to isolate themselves from the density of the city. The existence of the suburbs, parallel to the history of the cities, manifested itself in this context even in ancient cities. Mumford (1961) gives examples of the remains of settlements near the Al’ Ubaid temple, about 4 miles beyond the settlement, as a result of excavations at the Great Ur.

From the beginning, suburban privileges and tastes were largely reserved for the upper class. For example, at the beginning of the 13th century, the territory of a three-mile circle around Florence was occupied by expensive mansions and rich estates, and these Venetian families also did not leave behind their villas in Brenta. (Mumford, 1961).

It is possible to understand that the traces of a life established outside the city can be found in every period. And it is an unquestionable fact that people from upper income groups who have the opportunity to escape from the chaotic environment of the city can create a suitable environment for themselves in every period. The desire for a life outside the city which has existed throughout history, has entered a different phase with post-18th century developments.

2.3. Industrial Revolution and Rise of Suburbs in 19th Century

From the end of the 18th century, cities in Western Europe began to grow faster. One of the defining and most lasting features of the Industrial Revolution was the rise of cities.

The Industrial Revolution, generally seen as having begun in the last third of the 18th century, was a complex process of denaturalization. As a result of the innovations brought by the Industrial Revolution and the expansion of working fields, there was a migration movement to the cities (Schivelbusch, 1977). The increase in population density in cities was seen in post-industrial societies. Before that, over 80% of people used to live in rural areas. Small towns became big cities as immigrants began to emigrate from rural areas. For example, in Great Britain by 1850, for the first time in world history, density of population in cities was much more than the rural areas (Hobsbawm, 1999).

The expansion of cities was not only a matter of scale. There were qualitative changes that transformed city life. These changes were the process of modernization itself, and this process was accelerated between 1870-1914 to make all major cities become modern ones (Meller, 1976).

The suburbs were a very important component of the modern city. And their development was closely linked not only to economic growth, but also to technological advances in transport. In the 19th century, railways became the savior of capital owners. With the Industrial Revolution in the same period, more goods were produced in the factories. The goods produced have been delivered in a cheap and fast way to long distances. The canals and advanced road system in the late 18th and 19th century have served the modern industry. But the speed, cheapness and the possibility to reach the distant markets by the railway made the railroad a pioneer for transportation of industrial development.

In the middle of the 19th century, when new railroads began to add new commuter trains and stations, these new means of transport played an important role in the growth and evolution of the suburbs. As a result of the changes created by the railway transportation, European cities, which still look like the city of the Middle Ages, have changed. New functional areas such as business and industry have been formed and urban spaces have expanded (Schivelbusch, 2014).

As the lines were drawn towards the center, it had a significant impact on many cities because of the destruction of the slum areas and encouraging comprehensive road improvements for better access to the stations. However, transformations in local transport have had a wider impact on daily life. The commuter train and tram, which was largely introduced in the 1870s, made a clear distinction between workplaces and residence suitable for the majority of the population. The establishment of shopping and entertainment services at the center depended on better local transport. The technological destruction of the distance has made people more active in the city (Meller, 1976).

Suburbanization, which developed with the expansion of public transportation in the middle of the 19th century, had a transformative effect on the cities that have preserved the same structure for a thousand years. The dense urban structure, which was formed as a result of a flow towards the center (concentration/centralization), was reversed and an outward escape (decentralization) started (Jackson, 1985).

Railway lines spreading from the big cities encouraged a new wave of suburban development for the upper classes. These lines linked with suburbs have attracted businessmen and professionals.

After that, rapid expansion towards the periphery of the city began in England, where the effects of industrialization were most intense. Industrialized cities experienced the development of industrial suburbs in the emerging housing of the working class. Also, *'suburbs gradually came to represent a coveted, desirable place sought out by the wealthy and upwardly mobile as a place to live permanently, while still commuting to the city.'* (Nicolaides & Wiese, 2006).

The common characteristic features of these early suburbs; '*A low-density, residential environment on the outskirts of larger cities, occupied primarily by families of similar class and race, with plenty of trees and grass*.' (Nicolaides & Wiese, 2006)

The suburban houses of the Victorian Age (1830-1880), which can be included in the first examples, were aristocratic, large, spacious and high ceilings built in large lawn planted gardens, similar to Palladio style, or similar to Greek temples (Mumford, 1961).

Mumford (1961) states that the early suburbs emerged as a product of human nature, the diversity of desires, the lust for freedom, change, difference and adventure. Also, he describes the suburbs as the indicator of a romantic taste, but an escape from civic responsibility and municipal measures. And an expression of a new lifestyle that requires less effort, less alignment than the city-minded urban center. They were far from poor conditions of city centers such as; Illnesses, irregularities, prostitution, crime, violence. This was a colorful portrayal of the old country house culture, with a difference that the city was being visited every day, not from season to season.

As a result, suburbs continued their development in the 19th century due to these sociocultural and physical factors. These settlements became perceived as areas designated by the elite to escape from the city center after the 19th century.

2.4. Morphological Characteristics of Suburbs

The suburbs were the interface of the city and countryside, where the characteristics of rural and urban landscapes blur. It was not a combination of city and countryside. It was neither rural nor urban, but an intermediate area. According to Kostof (1992), it was a synthesis of the city and the country.

It should be noted that not every district outside the city is defined as a suburban. In order to define a place as a suburban, it must have some characteristics. Although there is no definite concept framework has been drawn on this issue, some specific features have been tried to be determined based on the common characteristics of the suburbs that emerged in the post-19th century major cities.

Harris & Larkham (1999) made a detailed description of the suburb. They emphasized five common features of the suburbs;

> (1) Peripheral location in relation to a dominant urban center. (2) A partly (or wholly) residential character. (3) Low densities, often associated with decentralized patterns of settlement and high levels of owner-occupation. (4) A distinctive culture, or way of life. (5) Separate community identities, often embodied in local governments.

The basic characteristics of early suburban neighborhoods can be summarized as planned for single-purpose divisions for residential, favoring domesticity in low density and detached single-family houses surrounded by extensive green and common grounds.

McManus & Ethington (2007), further explored this definition and concluded that several key variables are used to define a suburb:

Table 2.1. Characteristics of suburbs (Source: McManus & Ethington, 2007)

Peripheral Location	*At least initially the suburb is located at the edge of the urban core*
Relationship to Urban Core	*Functional dependence, sometimes with political independence*
Relationship to Countryside	*Particularly in the 19th century, suburbanization was linked to the romantic/picturesque movement and aspirations of country living*
Density	*Relative to the urban core*
Housing Type	*Most commonly single-family dwelling with gardens*
Social Segregation	*Class, race and ethnic*
Transportation	*Commuting relationship to core*
Cultural Formations	*Utopian ideal 'middle landscape' and private romantic paradise versus dystopian nature-devouring 'sprawl', vacuous aesthetic wasteland, anti-intellectual, intolerance, etc.*

CHAPTER 3

SUBURBAN SETTLEMENTS IN OTTOMAN EMPIRE

3.1. Ottoman City Structure and Evolution in 19th Century

The 19th century was a period in which political, commercial and legal innovations were made for the Ottoman Empire. The relations with the European countries also developed. The Tanzimat Period, which began with the Tanzimat Edict in 1839, became a turning point for the Ottoman Empire. With the Ottoman-British trade agreement signed in 1838 and similar treaties signed with other countries, numerous concessions were granted to foreign capital, and trade relations with Western countries became more active. This economic change has increased the commercial activities in the cities and increased the population in these cities. Problems have also started to emerge in cities that have gained a new appearance.

A number of institutional and legal changes were needed in order to effectively intervene in the classical Ottoman city area. There was a need about organizational structure. For example, the old-fashioned ruler had lost their power in the city administration, and new institutions should be organized. First, a pilot application was made in the capital city Istanbul. And municipal organizations were established in other cities to carry out public services consecutively.

As a landmark, the search for a new form of government after the Tanzimat Edict of 1839 led to significant changes in the city structure in the second half of the 19th century. The new economic policies and management style adopted by the Ottomans revealed the need for new urban centers. This transformation could have been achieved with a system. Cities could be managed by newly established form of governance not by the administrative institutions and religious foundations such as, *ihtisab ağalığı, kadılık* and *mimarbaşılık*. (Tekeli, 2006).

In 1858, the Sixth Chamber Municipality of Galata, Pera and Tophane districts was founded in Istanbul in search of a new system. Later on, in 1868, the Municipality of Istanbul, which manages the entire city, became aware of the necessity of taking the

problems on a larger scale. In the same year, in 1869, municipalities were founded in small settlements as well as big cities such as Thessaloniki.

Many different arrangements were made to find solutions to the problems of the city before the spread of the municipalities to the entire the Ottoman Empire.

The Ottoman Empire, which became more open to innovations with the Tanzimat, started to make provision about the city problems. They worked to make arrangements against fires, which were the most important problem especially for Istanbul and Izmir. According to *İlmühaber* that published in the year the Tanzimat was announced, the buildings to be constructed in order to reduce the danger of fire. They will be constructed as a quarry building instead of wood, and wide roads will be opened and the streets will not be allowed.

In 1848, with the same understanding, Ebniye Ordinance and Ebniye Declaration, which were valid only in İstanbul, was issued. And another Ebniye Ordinance has been published in 1849. These regulations were insufficient in the development of the city, and in 1858, the Regulations on the Streets, which brought the provisions of the Ebniye Regulations together, were issued. In 1863, Turuk and Ebniye Regulations, which were valid not only in Istanbul but in all cities and towns, were enacted. In this text, for the first time, water, sewage, gas pipes, infrastructure, such as the construction and repair of the government were to be done under the supervision of these regulations (Tekeli, 2006).

Following the new regulations, construction works were started within the framework of various rules and restrictions. Besides, the principle of equality of law brought by Tanzimat has also been influential in the architecture. Before this period, in the construction works of the Muslims and non-Muslims, the distinctions were made between the buildings such as building height, location selection, floor limit, material, and this distinction was eliminated in the regulations after the Tanzimat period (Batur, 1985). In addition, the acquisition of immovable property by foreigners was legalized in 1869 (Tekeli, 2006). The non-Muslims in the upper-income group, who played an active role in trade, benefited from these new regulations to repair their properties and acquire new properties.

Istanbul, the capital of the Ottoman Empire, did not have a class-based separation until the 19th century. The settlements were not differentiated by class difference, but depending on the ethnic or religious group difference. For example, the minorities were outside the city; the Greeks lived in Fener, the Gypsies lived in Sulukule, and the Armenians lived in Sulumanastır and Samatya.

There was not any difference between neighborhood income on the same property (Ortaylı, 2012). However, new emerging economic relations and forms of organization led to the formation of different social classes. This situation also impacted residential areas and the class-based divergence started as well as the national-based divergence (Tekeli, 2006). With the abolition of restrictions, non-Muslim groups with better economic conditions renewed their homes in shorter periods of time (Batur, 1985).

After all these developments, the change in the administrative and commercial fields of the Ottoman Empire affected most of the port cities.

3.2. General Structure of Ottoman Port Cities

After the second half of the 19th century, Ottoman maritime trade activities increased rapidly. After the 1850s, the Ottoman Empire, which aimed to expand, began to use steamships. In addition, the legal rights granted to foreigners through the Treaty of 1838, strengthened the trade relations with the West. These developments also affected the development of the port cities significantly (Keyder, Özveren, & Quataert, 1994).

In this period, where the economic structure was constituted by internal and external commercial activities, some port cities developed considerably. Among the Mediterranean ports which have become an important region in domestic trade, products such as olive oil, soap, dried fruit, salt, lemon, pitch, bonito, rice, cereals, coal from ships of Midilli, Bodrum, Ayvalık, Edremit, Çeşme, Foça and Chios to İstanbul (Çadırcı, 2013). The main port cities in foreign trade were Istanbul, Thessaloniki, Izmir, Mersin, Beirut, Haifa and Alexandria (Tekeli, 2006).

With the support of European companies, major innovations were made at the ports. Larger and well-equipped port facilities were built and operated by these companies, mainly in Istanbul, Izmir, Thessaloniki and Beirut. The support of European countries provided some privileges to the merchants of these countries. In the 1860s and 1870s, the Thessaloniki railway and port facilities were improved and in the 1894 the port of Beirut has been restored by a French. Another French company built new berths at the port of Istanbul (İnalcık & Quataert, 1994). Other developments in the transportation infrastructure would also make the ports more accessible. The construction of the railways was also one of the most important innovations in the Ottoman port cities.

For this purpose, İzmir-Aydın Railway which connects İzmir to the rich hinterland and increases the transport process of exported agricultural products constructed in between the years 1857-1866 as the first railway in Anatolia. When the effects of the Aydın Railway of İzmir port were strengthened by the construction of İzmir port, the speed of economic development increased accordingly (Kurmuş, 2012).

Afterwards, the construction of İzmir-Kasaba, Mudanya-Bursa, Mersin-Adana, Anatolia-Baghdad Railway were completed (Figure 3.1). The railway constructions connected to the ports improved the transportation possibilities and integrated with the ports and accelerated the flow of goods (Table 3.1).

Figure 3.1. Railroads in Ottoman Empire (Source: İnalcık and Quataert, 1994)

Table 3.1. The development of the railway in the Ottoman
(Source: Tevfik Güran, 1998)

Years	Anatolian (km)	Rumeli (km)	Total (km)
1870	174.5	-	174.5
1875	176.8	1,132.5	1,309.3
1880	178.3	1,309.6	1,487.9
1885	282.5	1,309.6	1,592.1
1890	609	1,440.5	2,049.5
1895	1,519.4	1,785.1	3,304.5

These developments affected the port cities to became more attractive than other cities in the inner parts of the empire. The population of these cities began to increase rapidly, especially after the 1840s.

Especially in some port cities, the population showed a great increase. While Izmir had a population of 100,000 to 300,000 till 1912, Beirut had a population of less than 10,000 in the beginning of 1800, and gradually increased to about 150,000 in 1914. Istanbul has largely doubled because of the influx of immigrants. In 1914 the capital contained more than a million people and, as always, remained the largest city in the Ottoman world. By 1912, Thessaloniki doubled its population and rose to 150,000 people (Issawi, 1982).

Table 3.2 shows the population change between 1830 and 1912 for Istanbul, Thessaloniki, Izmir and Trabzon.

Table 3.2. Population changes in main port cities in Ottoman (Source: Issawi, 1982)

Town/City	1830-40s	1890	1912
İstanbul	375,000	900,000	1.125,000
Salonica	70,000	78,000	150,000
İzmir	110,000	200,000	300,000
Trabzon	33,000	35,000	50,000

Another reason for the excessive population growth in the port cities was the fact that it attracted immigrants from Europe and the Mediterranean regions and the interior regions of the empire as well as the economic opportunities it offered. The majority of the population of some cities were foreigners. For example, in the 1880s and 1890s, a quarter of the Izmir population was foreign (Kasaba, 1994).

Izmir also attracted the Aegean Islands and the Greeks in Central Anatolia. In the 1890s, 30% of the population of Izmir were the main groups of the city along with the foreigners of the Ottomans. Most of them were Greek and Macedonian Slavs fleeing the war (Keyder, Özveren, & Quataert, 1994).

Many people from different geographies and cultures, most of them foreigners and non-Muslims started to settle in port cities. Figure 3.2 shows important port cities of The Ottoman Empire.

For this reason, the port cities were characterized by the majority of Christians and foreigners. On the other hand, the ratio of non-Muslims to the total population in the empire was one-fourth to one-third. Once again it was the rule in the port cities and it was the exception in the Ottoman Empire (Keyder, Özveren, & Quataert, 1994).

Figure 3.2. Important port cities in the Ottoman Empire
(Source: Zandi-Sayek, 2012)

If we look at the distribution in the population, it is possible to say that foreign and Christian groups dominate Ottoman international trade. In addition, it can be said that these groups had a more advantageous position to realize commercial activities than the Muslim ones because of the privileges got after the Treaty of 1838. Also, their knowledge of foreign languages and their ability to enter and exit to foreign countries.

Reşat Kasaba explains the advantages of foreign groups in terms of trade as follows (Kasaba, 1994):

> By means of port cities, European traders who sell their finished goods and buy the raw materials required for re-manufacturing through the port cities firstly enter into business relations with Armenian and Greek traders because of the language advantage; and then the non-Muslims realized the purchase of the commodities gathered from the peasants by the undersized Muslim traders and also conveyed the appreciation of the customers of the European goods in the port city and the hinterland to the Europeans based on the information they got from their Muslim counterparts in terms of the demand structure. For example, in Izmir, the local merchant made orders for the big families of Izmir and mediated the spread of the new bourgeois culture of taste and fashion.

Depending on such developments, a silhouette of the foreign population in the port cities, where the financial strength of the population has grown. The enrichment of a certain group has brought with it some divergences due to some class and sociocultural differences.

Keyder (2010) connects this distinction in the port cities with their growth toward keeping the socio-economic power by managing the foreign and non-Muslim merchant population in the interests of the trade. According to this idea, the port city was a class formation and class conflict. In other words, the development of capitalism and the bourgeoisie corresponds to the evolution of the port cities.

3.3. The Formation of Suburban Settlements in Ottoman Port Cities

The differentiation between income groups provided the ground for spatial disintegration in port cities. Hastaoglou-Martinidis (2010) says that the gathering of different population groups in port cities was an important part of these cities.

Previously, neighborhoods and settlements differed according to belief groups, whereas residential areas and settlements began to differentiate according to class distinction. The spatial effects of class distinction have started to be seen in the port cities, unlike the cities in the inner parts. As the income level of the upper class increased, the most attractive points in the cities began to become more accessible to them, and new living styles, socializing space and consumption habits began to form here.

Tekeli (2006) describes this new differentiation when Istanbul described its change in the 19th century and states that the change in the city center in the 19th century cannot be based only on the differentiation among the nations by expressing differentiation clearly according to the income groups. Class differentiation has begun to be an important factor besides the international differentiation in residential areas. Not all classes of each nation was living in the same neighborhoods, settled out of the city, and formed the suburbs in parallel with the transportation possibilities. In these newly formed suburbs, there were also international differences but not as sharp as in the city center. This change in settlement texture brought about the differentiation between the city center and the suburbs.

After these developments spatial transformation of Istanbul has started and this spatial transformation processes depended not only on the national development

strategies, policies and the roles that the space has acquired within this framework. This was also related to the historical roles of the city has played at both national and international levels, and to the preferences, powers and opportunities of civil or public actors in different periods. These dynamics, which emerged from different scales, blended urban and existing potentials and transformed urban space and created a new macro-form. The first transformation experienced by Istanbul caused modernity, the emergence of the nation-state and the processes of urbanization as simultaneous and supporting elements that emerged as social, spatial, administrative and ideological manifestations of industrial capitalism in the 19th century (Ortaylı, 2012).

It was assumed that the production areas required by the industry, the organization of new housing areas and regular and controlled physical spaces appropriate to the flow of goods and services would also be effective in the establishment of social order and the individuals acting accordingly would emerge. It was planned to allow urban functions and social classes to be separated and settled in space. The new urban functions that emerged with the progress of modernity along with industrial capitalism, and the cities and modern architectural styles, which have been shaped and divided into zones with the priority of efficient and controlled regulation of the growing industry and the increasing urban population, have manifested themselves in many parts of the world (Kurtuluş & Türkün, 2016).

Industrialization, urbanization and modernization, the three interdependent dimensions of the rise of Western capitalism, led to significant spatial transformations in the Ottoman capital, which was still an empire based on agricultural surplus in the 19th century. Despite the very low level of industrialization, the fact that Istanbul was an intermediate port city in world trade lead to a spatial formation in which modern built circles were exhibited became apparent in the 19th century (Kurtuluş & Türkün, 2016).

One of the factors contributing to the formation of suburbs in the Ottoman port cities was the development of transportation facilities. The transportation facilities, especially railway transportation, have increased relations with the city's vicinity and have enabled the development of the suburbs in these regions.

At this point, it is worth mentioning Istanbul, which is a developing city with suburban texture, parallel to the development of transportation facilities, especially the railway. The regular ferry that started in the 1850s connecting the Bosphorus, the Golden Horn and the Anatolian settlements and the establishment of railways in the European and Anatolian sides in the 1870s led to significant changes throughout the city.

The development of rural areas in Istanbul began to develop along the railway line and along the coastal areas with the possibility of ferry transportation. Both sides of Istanbul have undergone this new development process caused by railways. In Istanbul, ferries and railways link the two sides to the city's borders. Settlements along the route of the Anatolian Railways were connected to the center of Kadıköy. On the other hand, the ferry services between Bridge and Haydarpaşa provided the communication of these settlements with Istanbul (Batur, 1985).

In addition, ferries operating to Moda, Kalamış, Caddebostan, Bostancı and the Princes Islands were connected to the city center and suburbs of Kadıköy. Passengers using the railways were provided with rowing boats between Kadıköy and Haydarpaşa piers. The Anatolian Railways were more luxurious and developed than the Rumeli Railways because ministers, pashas and royal families mostly use them. After the development of Anatolian Railways, the area extending from Kadıköy to Bostancı became stronger and became suburban settlements. Although that this region has become a suburban city depends on many dynamics, it can be said that the Anatolian Railways have become the new means of transportation.

While the growth of the historical peninsula in İstanbul was limited with the interior of the city, Yeşilköy and Bakırköy (Makriköy) on this route grew considerably when railway transportation was provided. The villages of the Bosphorus grew from isolated areas outside the city. The watershed settlements also became permanent residences throughout the year. Spatial structure of Istanbul between 1840-1920 can be seen in Figure 3.3.

On the Anatolian side, after the development of the railroads, Muslim upper class, non-Muslim and foreigners started to move their houses to Kadıköy, Kızıltoprak, Göztepe, Erenköy and Bostancı. In the area from Kadıköy to Bostancı, there were summer palaces, royal family houses and gardens belonging to the elites. The inner parts of the Merdivenköy, Erenköy and İçerenköy mostly consisted of Turks who were mostly dependent on agricultural production, and these small villages were connected by land. The dominant road in the region was Bağdat Street. After 1895, Fenerbahçe has become the Levantine town. Similarly, there has been a growth in residential areas in the islands. In terms of social layers, differentiation came into being, besides ethnic differentiation. The historical peninsula and the Golden Horn started to lose prestige during this period.

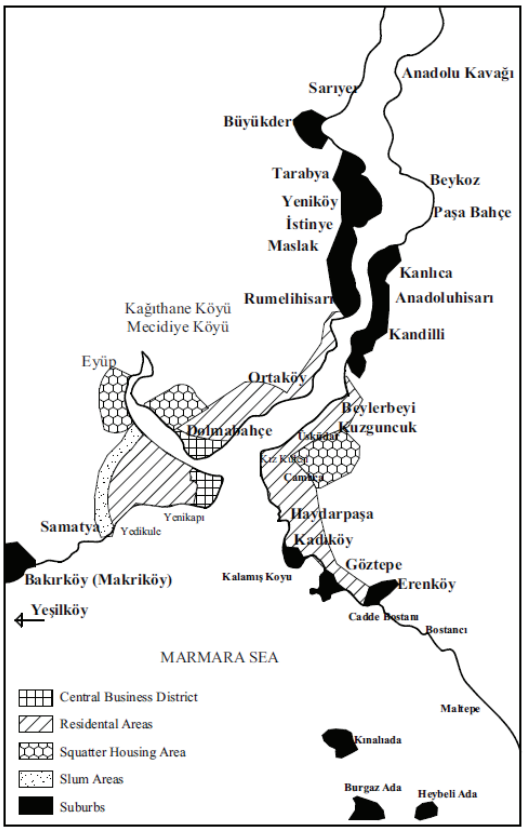


Figure 3.3. Spatial structure of Istanbul, between 1840-1920
(Source: Ortaylı, 1977)

Boğaziçi, Dolmabahçe, Nişantaşı, Pera, Yeşilköy, Bakırköy (Makriköy) and the settlements on the railway route from Kadıköy to Bostancı gained the prestige in this period. Non-Muslims settled mostly in the center of Kadikoy, especially in the suburb of Moda and Fenerbahçe. New European style mansions and houses were built in this areas (Figure 3.5, Figure 3.4 and 3.6).

Figure 3.4. Mizzi Mansion, Büyükada (Source: www.tasistanbul.com)

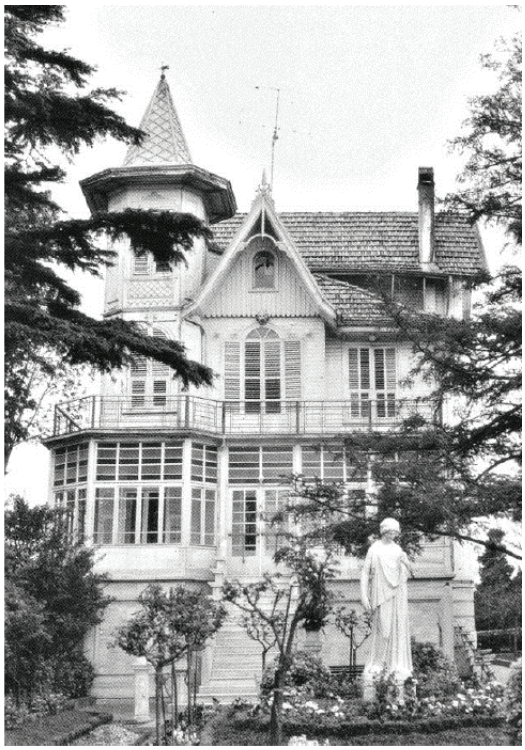


Figure 3.5. Botter Mansion, Kadıköy (Source:www.arkitera.com)

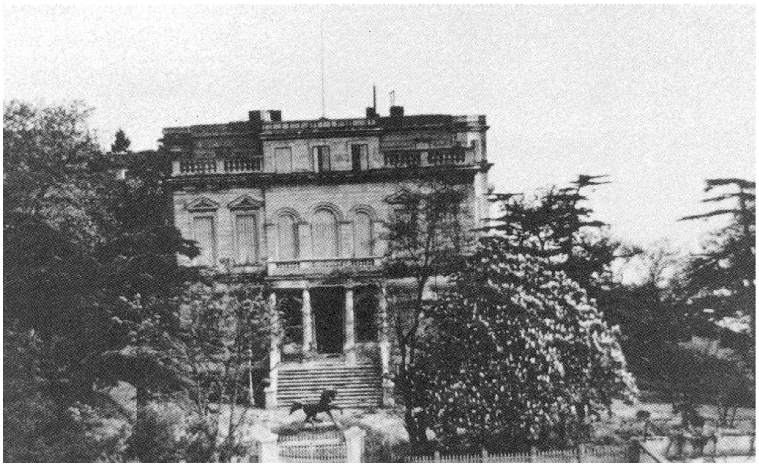


Figure 3.6. Mahmut Muhtar Paşa Mansion, Kadıköy (Source: Ekdal, 2004)

On the European side, Abdülmecid's Dolmabahçe Palace was built and moved to the prestigious areas of Galata. The Fener chiefs left Fener in the 18th century and settled in Yeniköy and Tarabya. The wealthy Greeks, Armenians and Jews left Fener, Balat and Samatya in the 19th century and started to move to Pera, to the north of the settlements and to the Bosphorus (Tekeli, 2006).

In the newly developing suburbs of Istanbul, the houses, which are the examples of the European style and which reflect the neoclassical style, started to appear.

Another port city with suburban settlements extending to the outskirts of the city center is also affected by the development of class separation, and railway transportation was Salonica. There were different ethnic groups such as Muslims, Jews and Christians in the interior of the historical city walls within isolated neighborhoods in Salonica. However, with the effect of commercial developments, urban space started to enter a different order and started to grow out of the walls. With the construction of a new port in the city center, commercial activities have increased and the financial power of the people who make a living with trade has increased as in other port cities. Therefore, spatial organization has been shaped within the framework of class differentiation instead of belief groups. The groups with high incomes have started to settle in the newly formed suburbs outside the city (Hastaoglou-Martinidis, 2010).

To accommodate modern port facilities and facilitate transportation, it was necessary to destroy the medieval walls. The construction of the new pier in Thessaloniki and the construction of railways in the western part of the city required the destruction of the seawall in 1869 and large sections of the side walls in 1890.

With the demolition of the city walls, the construction of the quay connecting the port to the newly established residential area outside the city walls has been completed. Customs buildings, various administrative structures were built in the areas obtained by filling, and a walkway was formed as a walking path for the city dwellers.

With the destruction of the old Vardar gate and the eastern parts of the city walls extending from the White Tower, the city was opened to the outside world for the first time in history, and the suburban growth process, which has continued until today, has begun (Mazower, 2006).

In the 1890s, the tramway was going beyond the White Tower and to the east of the city allowed the emergence of a beautiful new suburb of woodland on the shore. The name of this region was Kalamaria. The municipality planted acacia trees on both sides of the street to beautify the area and established a police station to protect the inhabitants. Many of the rich families of the city moved here and built their villas resembling the tower across Mount Olympus. Those people living in these villas could enjoy the most beautiful views of the city on their patios.

One of the most imposing villas in the region was the Allatini Villa (Figure 3.7), where Sultan Abdülhamid was exiled after the Young Turk revolution.

Figure 3.7. Villa Allatini (Source: www.openhousethessaloniki.gr)

In addition, it was possible to come across houses like palace of Greek, Bulgarian, Jewish and Turkish families in Kalamaria. Villa Ida, Chateau Mon Bonheur and Villa Bianca were some of the villas that have survived until today. It was possible to see many different construction styles in this region. There were some wealthy families who did not want to move away from the city center, but the rest of them settled in Kalamaria and enjoyed being away from the city's diseases, overcrowding, crimes and poverty.

Kalamaria became a place of escape for the upper income group. However, at the other end of the city Bara region became the residence of poor peasants and the increasing number of refugees (Mazower, 2006).

This distinction between neighborhoods within and outside the city center caused a different understanding of space. The rich families of the city had the chance to move away from the cramped environment in the center and to live in an environment that is in line with their increasing prestige.

The suburbs of Salonica, in the seaside and promenade areas, had a beautiful view and were the showcase of the city. But it was not possible to say the same for the city center. Behind the port buildings there was a city center with cramped and irregular streets. Foreigners arriving by ferry to visit the city could not believe this huge difference between the majestic promenade spots and the center seen a few blocks away.

Moreover, the lack of public safety and hygiene in the city center were among the main problems. The old streets in the walls were very narrow, most of them did not even have a name. There was no map, and it was difficult to find directions for foreigners. A visitor commented about this situation;

> "There are no guide books in Thessaloniki and it is very difficult to know how useful the minarets are." (Mazower, 2006).

The inhabitants of the city were classified by Ottoman officials and their nickname was meaningless to those coming from outside (Mazower, 2006).

Figure 3.8. General view of Salonica, 1896 (Source:gallica.bnf.fr)

In Beirut, which is one of the important port cities, suburban settlements began to form in the same way in the 19th century because of the same factors as the general port cities. With the development of trade, there was a growing group of people in the city. This group, which could be called a local bourgeoisie, has increased their financial powers by trading with Europe. They began to create new living spaces outside the city, making the class differentiation in the city clear. This new bourgeoisie seized out-of-town areas and built houses into the surrounding hills, reflecting its new wealth.

The existence of both new mosques and churches in these settlements was evidence of the fact that people from both religions took part in this community. In short, it is possible to mention the existence of an urban space in Beirut, which does not differ by religion or ethnic identity, but by class differences (Buccianti-Barakat, 2004).

Christian Europeans, who later migrated to the city, caused a significant change in the general character of the region, known as Ras-Beirut, after the establishment of the Syrian Protestant College (later the American University of Beirut) in the Hamra region in 1866. Hamra became a European-style suburb on the periphery. Besides the large

number of fields in Hamra in the past, there were only a few settlements of single storey farmhouses built of sandstone blocks. After the elite group was settled, two or three-story and red-tiled villas were built. And the difference in the housing pattern became obvious. This diversity in the housing texture was indicative of a more privileged socio-economic situation of the villagers compared to those living in farm houses (Khalaf & Kongstad, 1973).

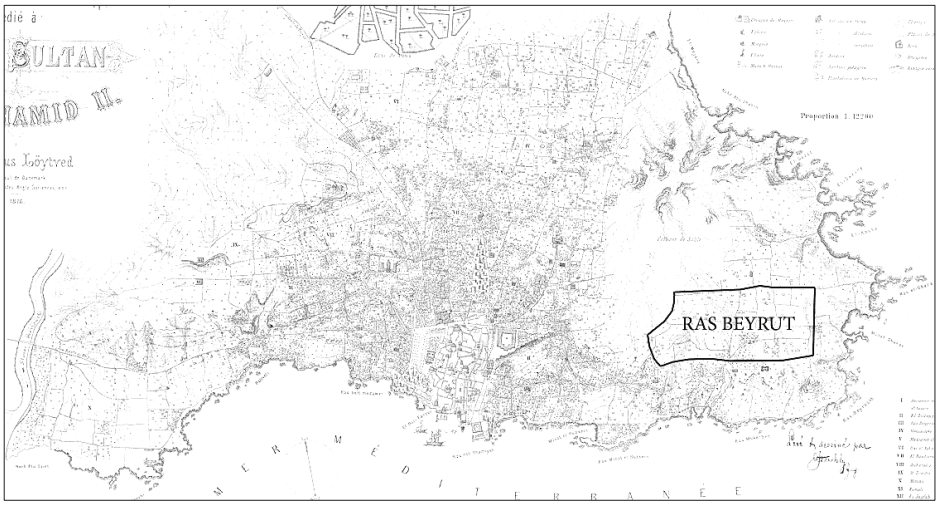


Figure 3.9. Beirut map in 1876 by Löytved (Source: Khalaf & Kongstad,1973)

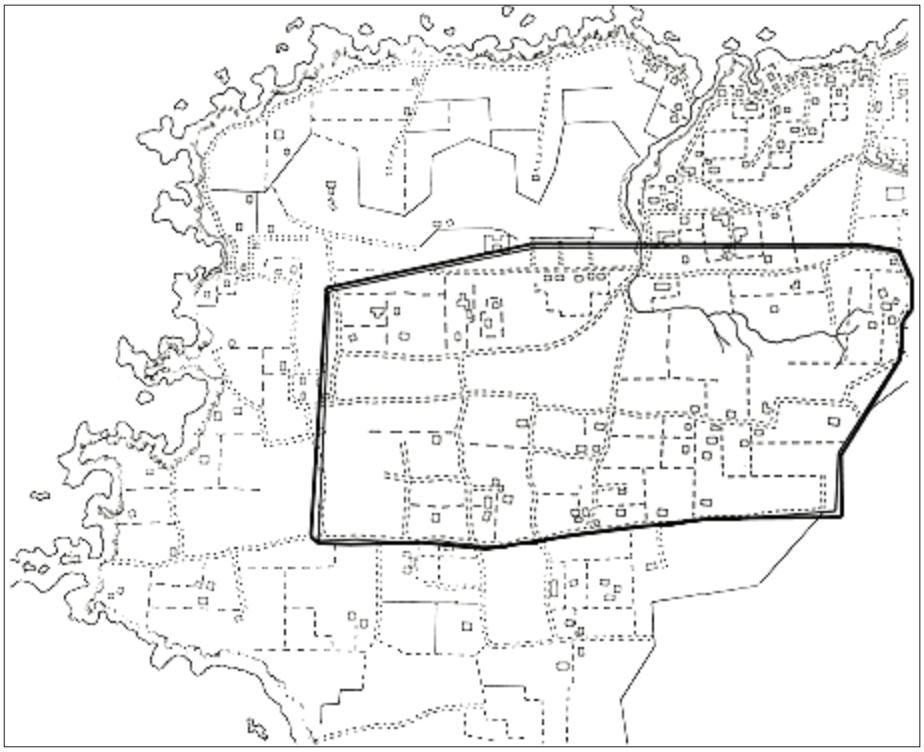


Figure 3.10. Ras Beirut in 1876 (Source: Khalaf & Kongstad,1973)

Figure 3.11. General view of Beirut, 1870's (Source: www.oldbeirut.com)

In summary, the expansion of Ottoman's commercial policy after the second half of the 19th century affected the port cities and caused striking changes in the economy of these regions. The port cities, which attracted the foreign and non-Muslim population, started to have a different structure than the whole empire. With the impact of new economic activities, new groups of people started to form. The elite group of foreigners, traders, intermediaries and senior executives of newly formed companies, which provide goods flow to foreign countries, has taken their places in the port cities. As a result, there was a class separation between the high-income groups and the citizens of the middle and lower levels. The neighborhoods, which were grouped according to ethnic and religious groups, were now grouped according to their income level. Therefore, the spatial equivalents of these divisions in the city began to show themselves.

Port cities have become a center of attraction not only for foreign traders but also for the working class from the interior, and thus the population of cities has increased. With the increasing population, urban problems such as epidemics, lack of infrastructure, and lack of public security have emerged.

Because of these, the desire to live in decent places where they feel safer among the elite layer was born. Until the middle of the 19th century, the excursion areas in rural areas, usually used for day trips, began to turn into settlements after these developments.

The ease of access to the bays has made these places attractive. As in Istanbul, the villages, which are located outside the city center, have been transformed into residential settlements as a result of the increase in transportation facilities. The development of transportation facilities has been made possible by the conversion of the settlements into permanent settlements. In addition to sea transportation, especially the increase in railway transportation facilities has made them continuous suburbs.

Although the reason for the construction of the railway by the Ottomans was to connect the cities with Europe and other cities, the railways connected with the areas outside the center of the city, allowing cities to grow outward and to develop new settlements in the countryside. People from the upper income group began to settle in these areas by gaining property from the regions close to the railroad, and many houses began to become permanent residences. Therefore, they had the chance to live a life close to nature away from the chaos of the city with privileged. Although problems in urban centers continued, the inhabitants of the suburbs moved away from all these problems and lived a more isolated life. Even if they were working in the city center, the places where they lived were spacious and decent areas outside the cities. While the low and middle class lived in a city with the increasing number of problems in the city center, the upper income group lived in a beautiful environment full of airy and greenery with the most beautiful views.

In the next chapter of the thesis, suburban settlements around Izmir and Chios which constitute the main framework of the thesis will be examined.

CHAPTER 4

EVALUATION OF SUBURBAN SETTLEMENTS IN İZMİR AND CHIOS

4.1. İzmir

İzmir was founded as Smyrna name in around 8500 BC, at the end of the bay, which has the same name as the city and has a deep recess in the land. This bay is composed of two parts starting in the north-south direction as a wide bay and ending in a lesser perpendicular direction and ending in a narrower bay. This shape of the gulf has ensured that the city is protected against the attacks coming from the sea. Furthermore, the presence of small islands such as Uzunada and Hekim Island in the right-angled part of the bay allows for the prediction of the attacks coming from the sea. This feature played an important role in making the port of Izmir a suitable harbor for sheltering. In addition, there are links and connections that facilitate the connection of İzmir with the interior of Western Anatolia and other Anatolian cities. All these features ensured that İzmir was a convenient port city as an export gate that sent out the products of Anatolia (Kütükoğlu, 2000).

İzmir, was dominated by the Roman, Byzantine, Arab, and then the Byzantine. Then, after many invasions and exchanges, it was finally taken over by the Ottoman Empire. İzmir, which continues to exist with the management of different states and civilizations, has become a multi-layered city.

Izmir, the Ottomans after passing into the province of Aydin has become the center of a county connected to the *sanjak*. This district was located in Karşıyaka in the north, Bornova in the east, Buca in the east, Torbalı in the south, Çeşme, Seferihisar and Karaburun. İzmir was initially connected to the Aydın sanjak and then joined the Sığla sanjak in 1573, which was included in the province of Kaptanpaşa. It was annexed to the province of Aydın in the 18th century and from time to time became the center of the province since 1841 (Kütükoğlu, 1988).

İzmir has been continuously developing since its foundation. Beyru (2011) explains the main reasons for this; it is a natural starting point located in İzmir, in the

south near Küçük Menderes and Büyük Menderes, in the north, near the fertile valleys of the Gediz and Bakırçay Rivers. It also has a very sheltered harbor and passes through the caravan roads extending beyond Aleppo, Baghdad, Tabriz, Isfahan.

Also, Kasaba (1994) says that İzmir was a Mediterranean port and that its point of origin occurred in two separate phases; the first phase is the short opening period that emerged in the first half of the 16th century and the second phase is the longer phase extending from the middle of the 18th century to the beginning of the 20th century. He also stated that the real turning point in the development of İzmir was the 17th century, and this period played an important role in the city's transformation.

4.1.1. The Development of İzmir as a Port City

There is a common belief that the first movement that started Izmir's ascension was the beginning of the 16th century when Aleppo began to lose its importance in trade between Europe and Asia. In the same period, the road which was first passed through Erzurum and Bursa and continued towards the Balkans and continued to Venice, then started to shift from west to south, from Bursa to İzmir. (Kasaba, 1994).

After the 17th century, Izmir was getting more prestige than Bursa. In the 15th and 16th centuries, a large part of the trade that went through Bursa or ended in Bursa was in the hands of Ottoman or Iranian merchants. The close relations of the two groups and the administrative officers of the city were based on a long history (Kasaba, 1994). In addition, these two groups had important shares in the trade of Bursa. Because of these connections, the traders of Bursa had become rich and influential. Bursa traders, who were part of this trade network, did not want to be the collaborators of European and Armenian traders, but they aimed to maintain the status quo. At the same time, Bursa was an important center for the production of silk fabrics and was a major part of the silk from Iran. Because of the wars and problems between the Ottomans and Iran, Iran's supply of raw silk decreased and the merchants of Bursa tried to sell the silk from the European markets, not for the local producers.

In other words, the groups dealing with international trade at the end of the 16th century saw that they had to compete with local merchants because of the decreasing supply of raw silk in Bursa (Kasaba, 1994).

Izmir was in a very convenient position to become an intermediary in international trade. It was possible for the mixed population to reach a compromise with the Armenian merchants, as opposed to Aleppo and Bursa, there was no production of silk fabrics that would compete for decreasing raw materials in Izmir. In the early 17th century, Dutch, English and French traders wandering around the Aegean in search of new goods and markets, as well as silk, directed them to Izmir, a port where they could access and transfer the products of Western Anatolia. It is also worth mentioning that the production activities in Izmir and its surrounding area will be connected with the European market, not in this period, but later in the 18th century.

Most of the goods purchased from the port of Izmir in the 17th century was imported from Iranian silk, Ankara lint and the goods coming from Asia. Exports of raw cotton, carpets, fruits and natural stem dyes produced in Western Anatolia began to be produced in the 18th century (Kasaba, 1994).

With this developments, both the physical environment and population structure of the city have changed. The population of İzmir, which has been subjected to the flow of many people from different regions, has become ethnically complex and diverse. After this date, İzmir continued to develop in the 18th and 19th years and became an important trade center.

The professional groups that fueled the rapid development of Izmir's commercial infrastructure in the first decades of the century; brokers, bankers, interpreters, exporters, executives, wholesalers, retailers, ship builders, market traders, brokers, porters, and international merchants.

Arabs, Armenians, Greeks, Jews and Turks who wanted to include in trade activities migrated to the city. These people and communities began to cluster in the professions they had experienced. Thus, in the 1620s, an international trade network was established by the Armenians who knew Persian, Turkish and European languages and, İzmir's potential was recognized and a silk bazaar was created in the port. In the 16th century, the Jews had the tax-power in İzmir besides the wealth and political power they got in the community (Goffman, 1995).

As a result of the capitulations signed between Ottoman and European states, the Britain sent their consuls to Izmir in 1611. In the same way, France opened their consulates in 1619. Thus, it was started to be mentioned about İzmir which was not mentioned in the travel books about 17th century.

Kasaba (1994) reports that a French traveler who arrived in Izmir in 1630 wrote:

> There is a big trade. Silk, wool, mohair, leather, cotton, all kinds of goods from all over the Eastern Mediterranean are brought to Izmir. No city could make more profit than other traders İzmir in Turkey.

4.1.2. Transformation of Spatial Structure

Beyru (2011) states that he could not find much information in foreign sources about Izmir before the 17th century. The visits to the city increased after this date, and many travelers came to Izmir; the city gradually has begun to be recognized. As a result of this recognition, the city began to host various religious mission influences with the migration of Armenians and Jews and some Greeks. Following these developments, the consulates in Chios Island of moved to Izmir, where the prestige increased during the first quarter of the century. Immigration triggered by increased commercial activity and religious activities carried out by different religious groups also affected the physical structure. Neighborhoods began to differentiate based on ethnic origins.

Starting in the 17th century and until the end of the 19th century, settlements in Izmir exhibited a spatial ranking consistent with social hierarchies in the empire. The neighborhoods Muslim, Jewish, Armenian, Greek and Frank (European) intertwined with each other and spread to the seaside's urban area. In the south, it was rising on high sloping hills overlooking the sea (Zandi-Sayek, 2012).

Although there are no maps and documents expressing the urban pattern of İzmir before the 19th century, the travel books written at the end of the 17th century and the beginning of the 18th century can give an idea about this.

Beyru (2011), who did a detailed research about this subject, conveys the general appearance of Izmir before the 19th century;

> Small port city in the east of the ridge is located in the neighborhood and a small Turkish Cypriot neighborhood in the east of them. The Jewish quarter was in the vicinity of today's Havra Street and as in many other examples, between Turkish neighborhoods and the bazaar district. Starting from the northern end of the small inner harbor, there is a long main street that crosses the city from the north by following the coastline at that time… This street is called by Turks Mahmudiye, Teşrifiye or Sultaniye and called Frank Street by foreigners… On the sea side of the street, the consulates and houses, warehouses and workplaces of Levantine merchants were listed. The two sides constituted the Frenk Neighborhood. In the land direction of Frenk Mahallesi, the Rum neighborhood of that period, the present-day Basmahane, and the Armenian quarter in the Çankaya area were among these areas.

In more detail, the regions of İzmir which differ according to religious and ethnic origin were as follows; Its synagogues and Jewish quarters appeared to be cramped between the Armenian quarter and the Turkish neighborhood. The Turkish neighborhoods approached the sea with an Arabian bakery street, and the other end was near Basmahane Station. Keçeciler, Mezarlıkbaşı, Kestelli Street and İkiçesmelik were the other regions where the Turks were located. The Jews settled at the end of this region. Afterwards, they settled in the upper parts of Kemeraltı and started to reside in the closest places to trade.

The Greeks settled in the area between the Armenian Quarter and the Alsancak Railway Station, which corresponded to the back of the Frank neighborhood. The liveliest streets of the Frank neighborhood could be reached here. There were usually two storey houses. The Greeks were the most privileged group and used it very well.

Approaching the sea sides, the Frank districts were seen, and these began from the current Pasaport area and continued northward. Consulates and post offices were found here (Atay, 1978).

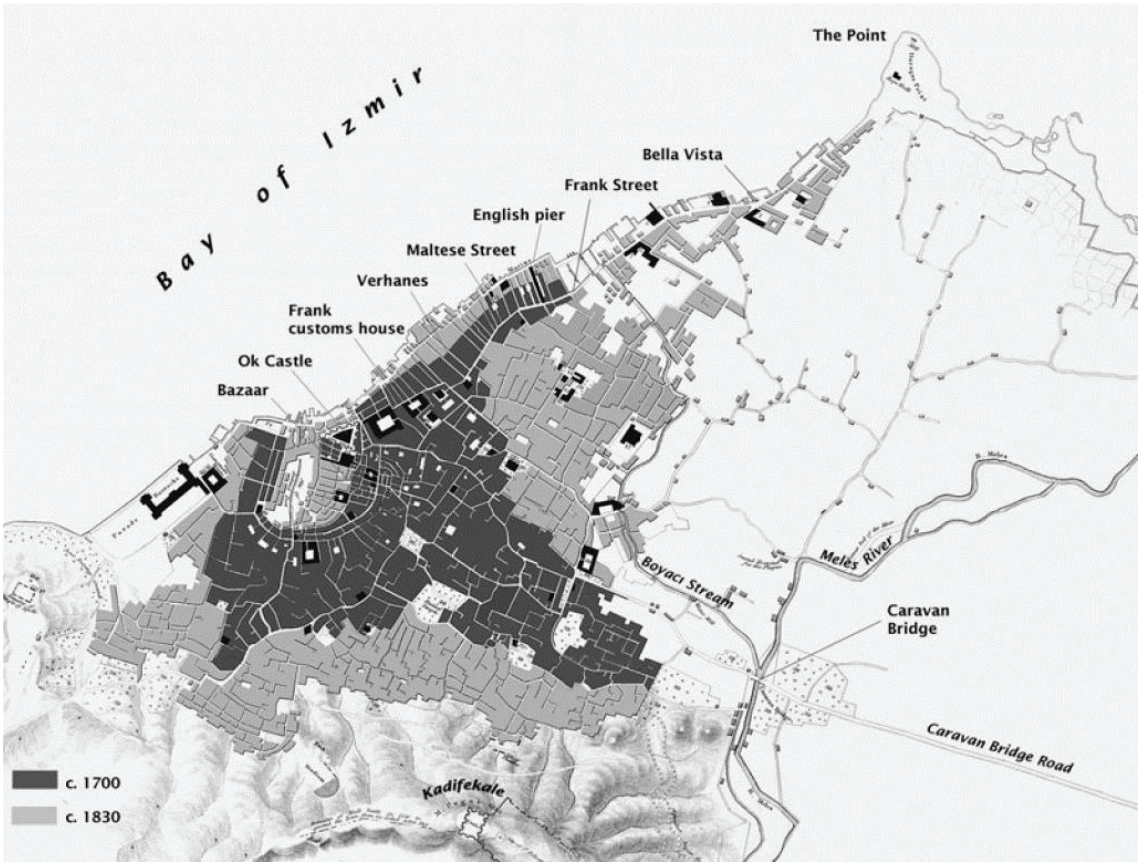


Figure 4.1. Urban expansion of İzmir between 1700-1830 (Source: Zandi-Sayek, 2012)

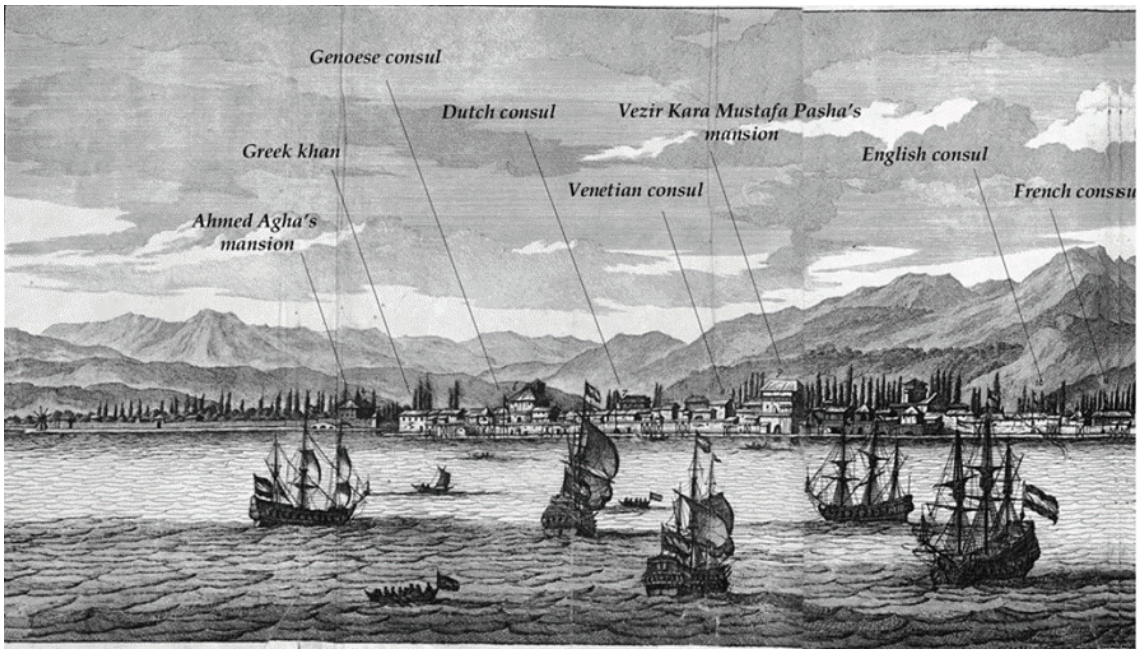


Figure 4.2. İzmir as seen from the bay, by Cornelius de Bruyn, in 1680.
(Source: Zandi-Sayek, 2012)

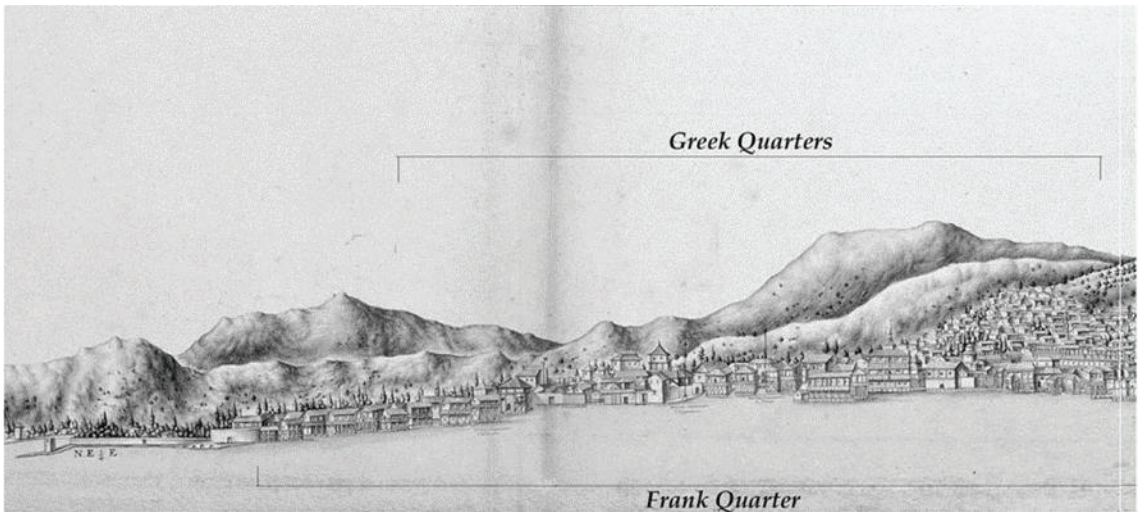


Figure 4.3. Izmir as seen from the bay, by Benjamin and Pierre de Combes, in 1686
(Source: Zandi-Sayek, 2012)

In the years following these developments in Izmir, there was a big construction boom in the second half of the century. It can be said that the physical plan of the southern part of the city was shaped in this period and a bazaar was built for trading of goods. Most importantly, the number of khans serving the merchants was 25 at the beginning of the 17th century and by 1670 it reached 82. The city's streets were rebuilt in this period, new

streets were opened, sidewalks were laid, and an aqueduct was planned to be built to bring water to the city (Kasaba, 1994).

Increasing customs revenue, as well as the amount of goods shipped, the social and urban environment around these commercial activities also contributed to the development of the city. İzmir had a commercial structure focusing on the Frank neighborhood and the bazaar in the two centuries following the development of the 17th century and the 19th century. Like in other Ottoman cities, the bazaar was the heart of economic life and activities. The Izmir bazaar was located in the south of the city and extends between the port and the residential areas where it serves. In addition, it was at the end of the road linking İzmir with the Karavan Bridge. The bazaar area developed in an area comprising dense and narrow streets around an old inner harbor that was dried and filled in the middle of the 18th century.

The small shops were lined up along the same street and the khans around the courtyards became the workplaces where the goods to be traded and the local merchants used. These khans district in İzmir had a wide texture that is not in the others of Ottoman cities. It was formed around the old inner harbor and gradually spread over the area occupied by the inner harbor.

There were many coffee shops, mosques, Turkish baths and many shops in the bazaar. By combining commercial activities in a particular region, commercial and residential areas were separated from each other.

In the Frank neighborhood, unlike this situation, commercial and residential functions were combined. This area, after the quarter of the 17th century, the Frank neighborhood in the north of the market first developed to meet the needs of international trade, and from the beginning it combined both commercial and residential functions. It was designated as a settlement for traders who came to trade after the quarter of the 17th century, whose commercial activities were protected by some agreements and had to reside in the country for some time. Instead of staying in khans like other cities, they rented private and security stone buildings.

The ground floors of these buildings were the shops and warehouses, and the upper floors were surrounded by large terraces. These dwellings were known as *frenkhane* (Frankish houses). One side of these houses was directly related to the sea and had private piers. In addition, there were private vaulted gates that could be locked to provide a protection against the dangerous situations and epidemics.

The Frank Quarter was an indicator that Izmir was not an ordinary port city. The consulates, churches and the bridges opened here have formed a texture (Ekşioğlu-Çetintahra & Karataş-Ünverdi, 2018).With the increase of commercial growth over the next two centuries, the region was constantly expanding and physically and functionally integrated throughout the city (Zandi-Sayek, 2012). In the middle of the period in which the city maintained its increasing attraction, in 1688 there was a very severe earthquake. Afterwards, the city was rebuilt with the support of the government and local resources. The second growth in the history of Izmir began in the middle of the 18th century and continued uninterruptedly until the last quarter of the 19th century.

In the second half of the 18th century, commercial communities in Izmir were able to respond to the interests of Europe in the Eastern Mediterranean. At the same time, the foreign trade of the Ottoman Empire began to expand. There was an official increment in exports, and the current values in the port of Izmir increased by tenfold from 1770 to 1870 and imports also increased by eight times.

Most importantly, the majority of the goods exported from Izmir did not constitute transit goods. There was a growing demand for goods of Western Anatolia from Europe. In this period, Ankara mohair and Iranian silk were replaced with Bursa silk and Izmir cotton. Natural root paint, opium, raisins and figs were added to the exported goods (Kurmuş, 2012).

The British and French played an important role in these increasing commercial activities. They worked together with the network of agents in Western Anatolia to form a network. The Greeks also gained financial strength by becoming prominent in the production and sale of local goods and Armenians also gained new financial opportunities.

4.1.3. Developing City Structure in the 19th Century

İzmir, which was an important trade center throughout history, had been one of the rapidly developing cities in terms of economic and social aspects after the declaration of the Tanzimat Edict. At the beginning of the 19th century, Izmir became the trade center of the empire and agricultural products were the main products for export. Acorn and madder were the main ingredients, while cotton yarn, dried figs and grapes, barley, sponges and raw silk were the other products and most of the goods were sent to England.

After the 1838 Trade Agreement, the vast majority of commercial activities were carried out by foreign traders (Çadırcı, 2013).

The foreign population growth, which started in the 17th century, increased with the developments in trade. In 1850, there were merchants from 20 different countries in Izmir, which had large commercial establishments, and 17 countries had consulates in the city.

In this period, the city's international trade, like its population, was growing dramatically. Following the economic slowdown experienced during the Napoleonic Wars (1799-1815) and the Greek War of Independence (1821-29), İzmir's foreign trade entered a new path of rapid growth and it was now the main trading partner of the empire.

İzmir was always ahead of the Ottoman and other Ottoman ports in terms of trade volume. The Anglo-Ottoman trade agreement and similar treaties signed with European powers have also lifted the age-old trade monopolies in the empire and reduced tariffs and increased imports by almost six times. At the same time, İzmir continued to improve its role as a foreign trade center by increasing its export growth by threefold. Agricultural products and raw materials accounted for most of the export goods. Figs and grapes, which were the most valuable crops until then, grew in the neighboring vineyards and were sent from İzmir to the international market.

The foreign trade of Thessaloniki and Beirut, the most important ports of the Eastern Mediterranean, in the 1880s did not even reach 40% of Izmir's. Izmir's exports did not fall below 3 million pounds in the first half of the 19th century, and this figure rose to over 5 million between 1904-1905. Imports in 1873-74, 1878-79 and 1881, exceeded 4 million pounds. Izmir's foreign trade balance was always in favor. During this period, the traffic in the port of Izmir was on an increasing course while 1295 ships entered the port in 1863 with 448,807 tons, in 1895, 2495 ships with a total of 1,814,486 tons were entered (Kütükoğlu, 2000).

In this period, many factories were established in Izmir which increased its role in the trade scene. Among these were the gin factories that separated the cotton from the British capital and the factories that extracted oil from the seeds. There were also cotton oil factories established with British capital. In addition, a paper mill was established as another facility operating steam power.

The 19th century was a period in which İzmir was gradually shining. Izmir, one of the port cities affected by the commercial and administrative policies of the Ottoman

Empire, underwent a transformation during this period and became the second largest city of the Ottoman Empire after İstanbul.

The attraction of İzmir continued after the railway and port construction. A modern port with international ferry traffic and railway lines connected the city to the rich hinterland and changed the nature and volume of business activity. Commercial opportunities, the population of the city after the 17th century mixed with the migratory flow of foreign traders in this line progressed again.

Besides foreign merchants, more than twice as many immigrants, seasonal workers and transient sailors, as well as communities of various ethnic, religious and national origins, migrated to the city between 1840 and 1880. While the size of other cities and towns in the region remained relatively constant, since the 1840s, the population of Izmir rose more and more rapidly from the empire as a whole.

Table 4.1. İzmir population according to travel and archive resources (Source: Kütükoğlu, 1988)

Date	Source	Turkish	Greek	Armenian	Jews	Frank	Total
1699	De la Motray	-	-	-	-	-	24,000
1702	Tournefort	15,000	10,000	200*	1,800	-	27,000
1714	Lucas	100,000	20,000	8,000	-	-	128,000
1723	de Saumery	-	-	-	-	-	300,000
1731	Tollot	50,000	12,000	7,000	7,000	-	76,000
1733	Thompson	15,000	10,000	600,000	2,000	400	28,000
1739	Pocock	80,000	7-8,000	2,000	6,000	-	100,000
1768	Riedsel	-	-	-	-	-	120,000
1776	Ch. Gouffier	65,000	21,000	6,000	10,000	200	102,000
1778	Sestini	97,000	30,000	8,000	12,000	3,000	150,000
1786	Miranda	-	-	-	-	-	150,000
1794	Dallaway	-	-	-	-	-	100,000
1820	Turner	60,000	30,000	8,000	8,000	2-3.000	100,000
1834	Texier	75,000	40,000	10,000	15,000	10,000	150,000
1844	Sayım icmali	15,500	-	-	9,300	-	50.000**
1868	Slaars	-	-	-	-	-	187,000
1870	Scherzer	-	-	-	-	-	160,000
1890	Salnâme	-	-	-	-	-	145,813

*With Franks

**The total of the Greeks, Armenians and Franks was accepted as the sum of Turks and Jews

In this period, changes in the spatial structure along with the commercial and socio-cultural transformations occurred. The urban core was continually being rebuilt in order to improve infrastructure and to rebuild areas damaged by fire, and to renovate the administrative district.

Izmir, a city centered around the commercial center, grew beyond the borders of the city after the middle of the century. Banks, postal services, insurance companies, brokerage houses, commercial packaging and storage warehouses, dry goods warehouses, hotels, commercial clubs, theaters, cafes, print shops and similar modern institutions were the visual signs of a radical economic and cultural explosion. While neighborhoods were built for the working class in the periphery of the city, the high-income groups built large gardens and villas. Also there were neighborhoods shaped according to ethnic groups (Figure 4.4).

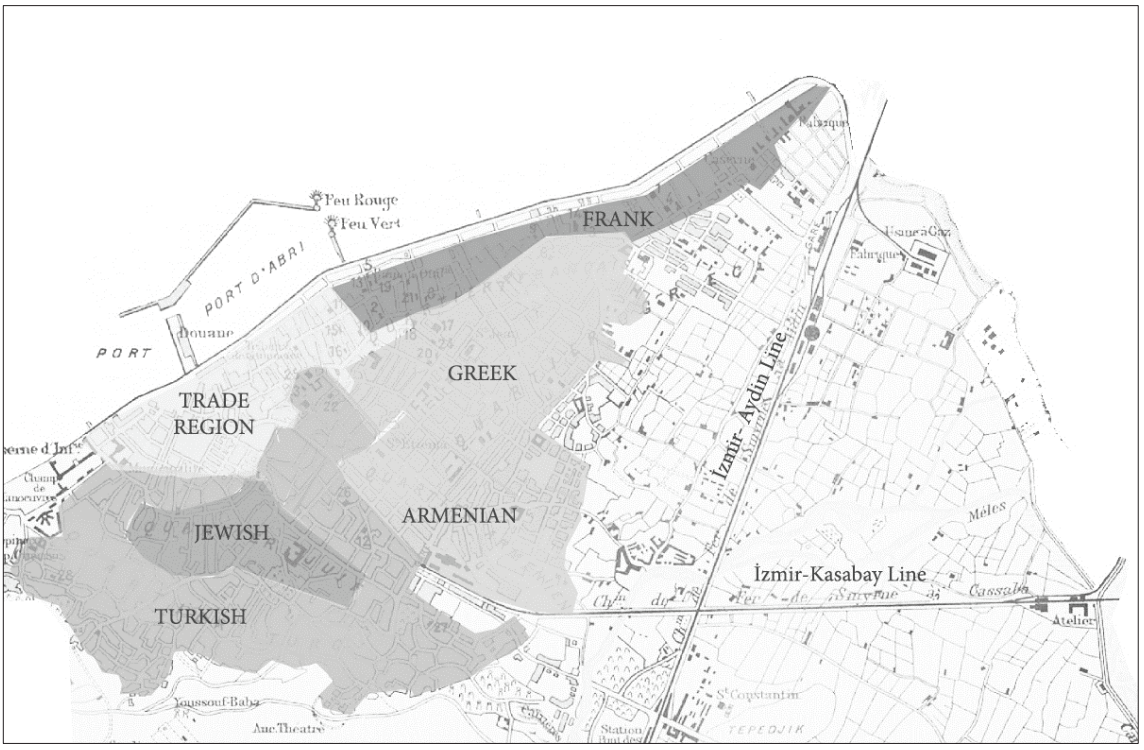


Figure 4.4. Izmir neighborhoods, 19th Century (Source: Beyru, 2011)

The government offices that built in the gulf and an impressive military barracks block were evidence of the bureaucratic expansion of the Ottoman.

The two-mile-long coastline with attractive buildings brought a new face to the city, while offering opportunities for inter-class, inter-religious and international

encounters. The expanded and renovated common institutions, such as churches, mosques, synagogues, schools and hospitals, displayed the wealth of new boss class (Zandi-Sayek, 2012).

Beyru (2011) examined the morphology of the city in this period, prepared in 1817, the original uses the map found in the Berlin Cartography Institute (Figure 4.5) According to this map, it is observed that the depth of the sea side parcels of Frank Avenue has increased gradually over time. Beyru (2011), based on the narratives of 19th century travelers and writers, concludes that part of this region was filled in this period.

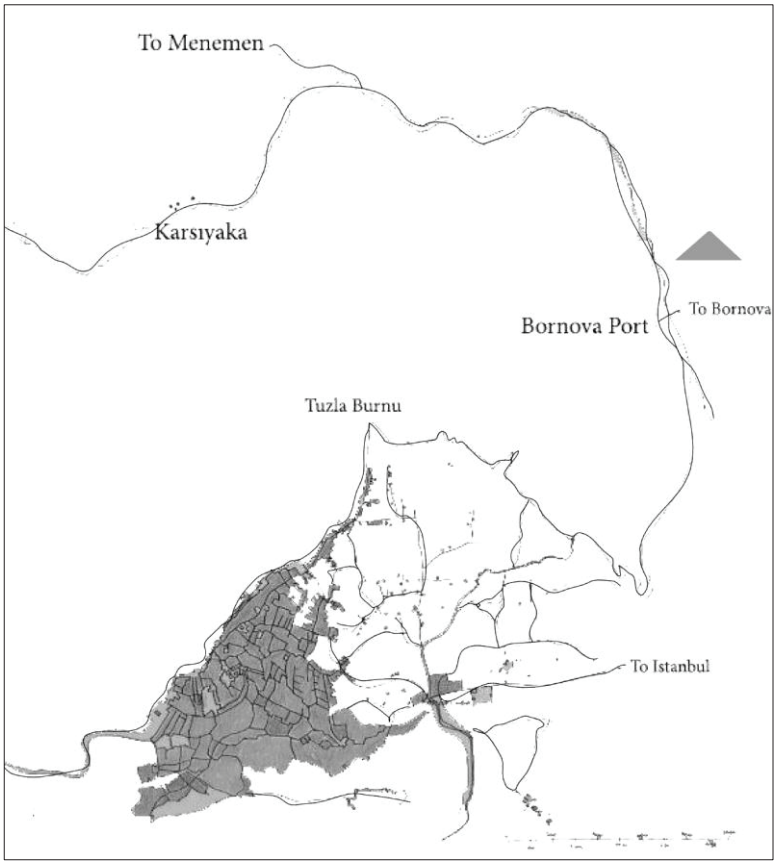


Figure 4.5. İzmir map in 1817 drawn by Graves (Source: Beyru, 2011)

As we can read from the map, it can be said that the development of the city in the northern direction, which is the boundary of the Boyacı Stream, is far beyond the borders of the development. This extends beyond the boundaries of today's Gündoğdu to Alsancak as an extension of the road, which is still a linear extension. There was a settlement pattern that developed around the shore and bazaar. While the city was

developing in the north, there was no significant change in the south. On this side, the Turkish and Jewish cemeteries served as a border and cannot be exceeded.

While Bornova and Buca cannot be seen in the map, Karşıyaka appears to be small and detached from the city center. Also, there can be seen Bornova Pier which was the starting point of the journey between the center and Bornova during this period. Beyru (2011) notes, there is also a road between Izmir and Bornova, which is not preferred because it requires passing from stream beds and swamps. At the turn of the century, it is known that for the trips on this route, passengers were brought to the Bornova Pier with boats and then have been reaching the village with horses or donkeys. The use of cars alongside horses and donkeys, and steamships as well as boats, was only possible by the middle of the century. As can be seen from the map of 1817, Karşıyaka has been seen as a very small and insignificant settlement. There were only a few coffee houses and few dwellings in this period.

4.1.4. Formation of Suburban Texture

The second half of the 19th century was a time when Izmir changed and transformed in all respects. This change has had spatial effects. The city began to grow and evolve out of its boundaries in the city center.

The rural areas, which consisted of camel roads, horses and donkey journeys after the boats, were affected by the changes in the city and increased the whole city.

The main settlements, which became the suburb in İzmir; Bornova, Buca, Seydiköy and later Karşıyaka. Although Seydiköy is considered as one of the suburban settlements, it has been left out of the settlements that constitute the case study reviews because of the lack of sufficient resources and maps related to the region.

Buca and Bornova were main settlements with the active position and continuity of the Western groups within their physical and social structures. Karşıyaka gained its suburban identity in the beginning of 20th century.

These places were more recreational areas, but they became the summer villages for upper income groups. Afterwards, these villages became permanent settlements with the expansion of the city with railway transportation. This transformation took place due to many dynamics. Some triggered each other and others indirectly contributed to this transformation.

Since İzmir had an important place among the port cities, it has been greatly affected by the change and transformation process. The development of trade provided a new port to the city and the construction of the first railroad in the Ottoman Empire. In addition to commercial activities, the development of transportation facilities caused the city to get a structure close to the West. As a consequence of all these developments, the formation of a high-income group consisting of foreign traders, who were mostly interested in trade, caused a class distinction that had not been felt so much in this city before. The increasing financial strength of this upper-income group brought with it the chance of having some opportunities that the middle and lower parts of the city did not have.

In the period following the middle of the century, the problems of the city which has been growing day by day, started to increase linearly. With the increasing population, an atmosphere of chaos began to form in the city center. Also, migrant workers were placed in the neighborhoods above the old orchards and marshlands, although they did not have the appropriate roads and infrastructure to inhabit. And middle-income group was living in neighborhoods that were crowded with each passing day in the city center. The upper income groups, who have benefited from the city's facilities at the highest level while continuing to live in this way, have tried to search for new places.

They also made use of the opportunity of developing transportation facilities to make settlements such as Buca, Bornova, Karşıyaka and Seydiköy, which were previously villages. They began to live in stylish European suburban mansions as a sign of their increasing income. As in other port cities, they could create their own ideal living environments by being located in the airiest, green and isolated areas of the city. In doing so, they continued to work in the center of the city without completely interrupting their contact with the city.

The urban space, which was open to be affected by economic, managerial and socio-cultural developments, has taken shape in line with these factors. The spatial structure of İzmir in the 19th century can be seen as a reflection of the process of development and change. The main factors influencing the formation of suburbs were; Railway construction, port construction, socio-economic segregation, city center problems; fires, epidemics and infrastructure problems.

- **Railway Construction**

Izmir's connection to the hinterland was provided by caravans, which required a long and risky journey until the middle of the 19th century. In the 1850s, silk, olive, grape, acorn, licorice, mohair, carpet, olive oil, cotton, wine, madder, leather products were getting from West Anatolia and were brought to Izmir Port through caravans, or with carts. The fabrics brought to the region by foreign ships and other products were delivered to the interior with the same way. However, because of inadequate of the caravan roads, transportation was often interrupted. Additionally, transport prices were very high and were increasing depending on the distance. Foreign merchants were aware that connecting Izmir to the Western Anatolia region would increase the commercial movement and profit rates (Kurmuş, 2012).

For this reason, the British trader Robert Wilkin asked for privilege to build a railway between Izmir and Aydın in 1855 with four other partners. In 1856, this privilege was granted, and they transferred to another group in the UK. Thus, the construction of the railway has started. The first 70 kilometers of the line was ordered to be completed in 1860. However, the concession changed hands in May 1857 and the plan of the line which was to be completed in three stages by the establishment of a company called The Ottoman Railway Company. The first 70-kilometer section was completed on November 14, 1861 and Izmir-Aydin was opened on June 7, 1866. The second railway line connecting İzmir to the hinterland was started in 1863 and finished in 1866. In the following years, Kasaba line was extended to Bandırma and the Aydın line to Söke (Kütükoğlu, 1988).

The first line of construction in Anatolia was İzmir-Aydın Railway and it was not only the investment in the Ottoman Empire but also represented the most modern technology of its era. This connection between İzmir and the rich hinterland increased the production of exported agricultural products. Also, facilitated the continuity of the agricultural workforce among the production areas, and fulfilled a precondition for the development of trade in Western Anatolia.

When the effects of the railway were strengthened by the construction of the Izmir Port, the speed of economic development increased accordingly.

Developments in infrastructure provided an environment that improved urban living conditions. With the roads reaching Buca and Bornova and the suburban lines, these villages became suburban settlements preferred by rich merchants in the city.

Figure 4.6. Map of the *vilayet* of Aydın, showing the Izmir-Aydın and Izmir-Kasaba railway lines and branch lines (Source: Zandi-Sayek, 2012)

With the railway developed in the second half of the 19th century, a new relationship between city center, suburban areas and the working areas emerged. It was a new relationship was found in Izmir for the first time in the Asian cities of the Ottoman Empire. With these newly developing relations, places such as Buca, Bornova, Şirinyer, and Seydiköy, which were previously known as partially residential and recreational areas and also as independent settlements, were frequently visited on a daily basis after the construction of the railway (Beyru, 2011).

Kıray (1998) explains this situation as a result of the new level of income and the new transportation technology. She emphasizes new lifestyle in Buca;

> ...15 of the French directors have chosen a place to live Western-style mansions, while building a partially isolated environment for themselves in a small village in the valley of the Kemer River behind the hills of İzmir. Then, there came a very interesting "suburb" with the settlement of some upper middle-income traders and those who would provide the necessary services. This settlement is mainly chosen because of the fact that contact with the city is mainly provided by train.

Buca was connected to the city with a 40 km. line which starts the Punta (Alsancak) station and leave from the main line to follow the Kemer River. Until the

1900s, trains on this road only came from Buca at 9:00 am and arrived at Alsancak Station at around 9.30; At 12.00 in the afternoon returned to Buca, brought back those at 14:30 in the afternoon and returned and stayed there in the evening. These trains did not stop at any station and the passengers did not buy tickets. As it is understood from this, only the foreign company directors and the upper class residents of Buca were benefiting from this opportunity. The terminal station in Buca was also housed in a rose garden like a private mansion. It was almost adjacent to the corner formed by the three mansion parks and other corners were used for private carriages (Kıray, 1998).

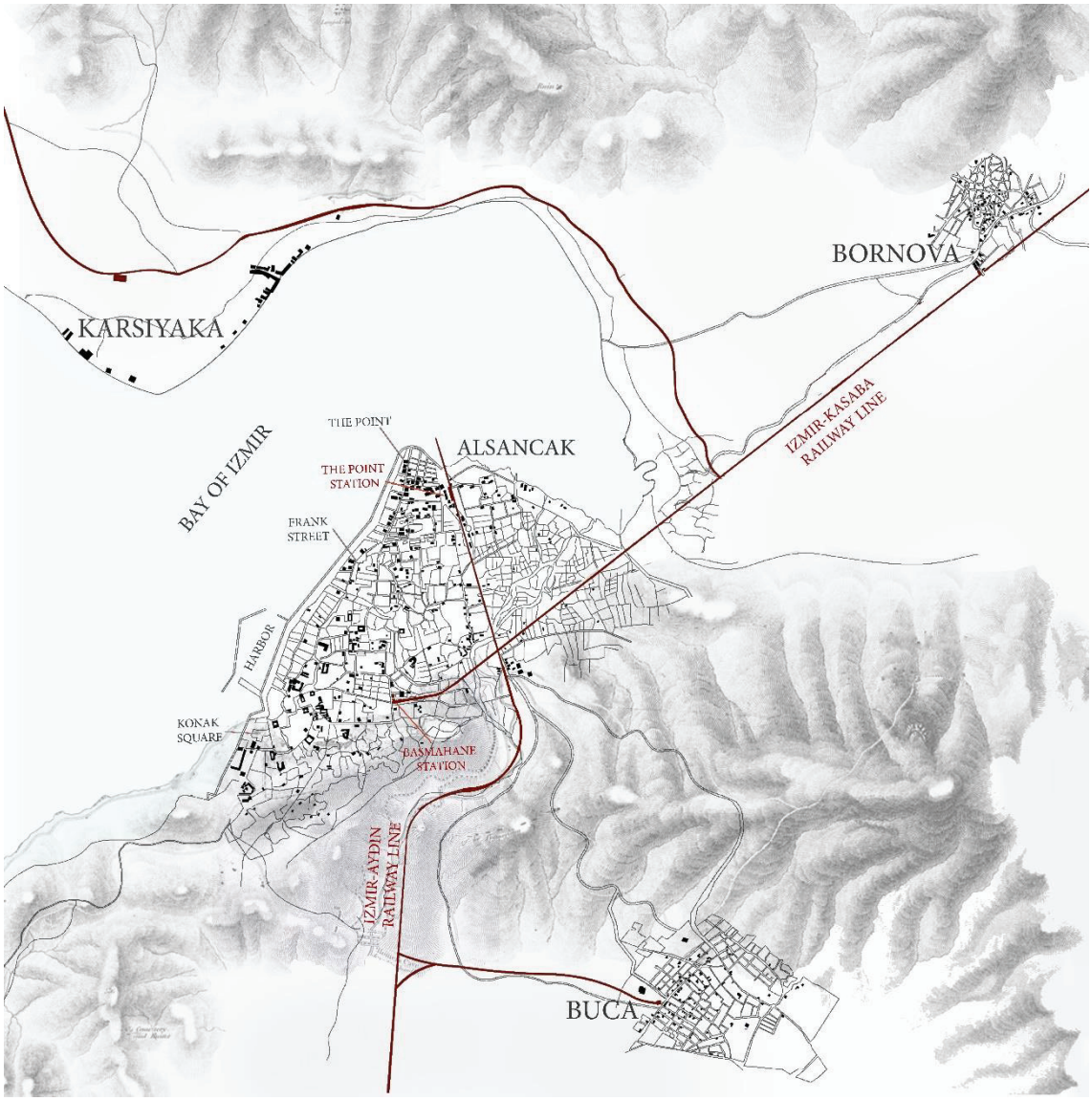


Figure 4.7. Map of Distribution of Suburban Settlements in İzmir at the end of the 19th century, redrawn by the author according to map of R. Copeland (Source: Zandi-Sayek, 2012)

On the Izmir-Kasaba line, a separate line was built between Basmane Station and Bornova. A group of British merchants and "manager" families settled in the gardens surrounded by large walls near to station. Train was allowed to even use by other people, but the British wagon was private, no one else could be there other than themselves. Thus, those who control İzmir's transportation and trade have chosen an isolated settlement, and they cannot be compared with the Turkish, Greek, Levantine and other European populations of the city (Kıray, 1998).

The necessity of the processing of grapes, figs and tobacco required the daily flow of the workers to the city in a way that was not only the elite group. The human movement of the central business district was now also provided by suburban trains. Besides Bornova and Buca, there was also a shuttle to Gaziemir on the Aydın line until Karşıyaka which became a new settlement on the Kasaba line. Furthermore, in 1891, gulf ferries began to operate, providing access to settlements around the gulf.

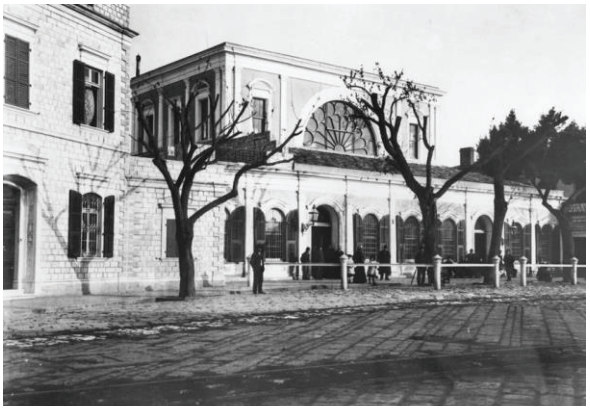


Figure 4.8. İzmir–Aydın railway station at the Alsancak. The station was also the terminal point of the suburban line to Buca (Source: Zandi-Sayek, 2012)

Figure 4.9. Basmahane station, 1890 (Source: Zandi-Sayek, 2012)

- **Port Construction**

The purpose of the construction of the railway in Izmir was to ensure the rapid transfer of goods to the port and to ease the flow in trade. The port was no longer sufficient for increased commercial activities. Even at the end of the 1860s, Izmir did not have a modern port. Therefore, since the 1850s, plans to improve the coastline and to build a new port had been on the agenda. After the decision to build the port, many changes had been made regarding the concession companies, and a contract was signed with Joseph et Élie Dussaud Frères, a French contracting company owned by the French construction engineers Joseph and Élie Dussaud brothers. The Dussaud brothers had specialized in the port construction projects in the Mediterranean and had previously built the ports in Marseille, Cherbourg, Trieste, Algeria and Port-Said.

When completed in August 1875, the new port of Izmir included two well-protected berths for commercial operations, a pier of about 800 meters, a customs office, quarantine offices, lighthouses, passport and telegraph offices and warehouses.

The larger ships used were larger docks with a 49-acre surface, and the smaller of 29 acres for coastal ships. Along the coast of Sarıkışla, where there were military barracks, and Tuzla Burnu, near the head of the İzmir-Aydın railway line, a fill of 3.5 miles was made between the land recovered from the sea. The shortest part was 0.8 miles long and was in front of the bazaar and the old commercial area of the city.

The construction of the new port and railways allowed İzmir to become the catalyst of a major maritime trade between Western Anatolia and Europe. In the 1860s, it became the last stop for direct connections between England, France, Italy, Austria, Germany, Greece, Russia and Egypt.

Figure 4.10. İzmir port in the 19th century (Source: Zandi-Sayek, 2012)

Figure 4.11. İzmir port in the 19th century (Source: Zandi-Sayek, 2012)

The construction of this new modern port was a turning point in Izmir's transport network. Izmir has now made the transition from the caravan to the railway, and with the new port it has reached a sea transport where steam ships were used instead of sailing ships. This strengthening of the transportation network has further increased the connection of the city with the outside world.

When the project was completed in 1875, the region between the empire barracks and the northeast end of the inner port became a lively commercial center with public health offices, maritime offices, banks, insurance companies, trade agencies, and warehouses.

In addition, the construction of a modern port allowed the public to reach the shore freely. In this narrow lane, casinos, hotels, cafes, clubs, consulates, shops and other entertainment facilities have been brought together. This region has become the showcase of the city and the socialization area of the upper class.

From the middle of the 19th century, Izmir has become an indispensable center for Western traders. In 1864, the British consul Cumberbatch mentioned about İzmir Port in İzmir Trade Report;

> ...This port is the most important port of the eastern Mediterranean; There is no other like Izmir Port in the world in terms of capacity and ease of entry. It is completely surrounded by mountains. It is deepened immediately after the coast. There is a strong protection at the entrance of the bay; The entrance is narrowed to half a mile and is connected to the Gediz's alluvial earth-formed mouth, but since this entrance is well lit and marked, maritime is not dangerous here. Anchorage is good, and the harbor is protected against the wind blowing from all directions. Ships can come to port to unload. Since the gulf is 6x8 miles in size, numerous ships can enter here Körfez.

According to the British Consulate Reports İzmir Trade (1864-1914), İzmir Port was a major technological and entrepreneurial success that increased the regional competitiveness of the city. Improved loading and more reliable transport facilities, coupled with the two railways that accelerate the transfer of goods from the inside, helped Izmir to become an international port, dominated by market economies, in an increasingly interconnected world.

Figure 4.12. View of the Cordon with carriages and strollers by Rubellin & Fils, 1880 (Source: Zandi-Sayek, 2012)

Figure 4.13. Commercial activity along the Cordon by Rubellin & Fils, 1880 (Source:Zandi-Sayek, 2012)

- **City Center Problems**

This transformation, which was completed with the construction of the port, affected the city in many respects. The city was experiencing a growth phase well above its capacity. In addition to the positive effects of this growth phase, there were some effects that caused some problems. The city, whose infrastructure was not very adequate for such a growth, began to enter into a disorder and congestion with its structure gathered around the commercial center. The city had been the scene of disasters such as fires and earthquakes for many years. It was also a city where epidemic diseases frequently experienced great losses due to intensive human circulation. The growth of problems in the city center created a fear for the elite group, and they wanted to build a more isolated life for themselves. In this section, we will examine the problems in the city center. These problems can also be grouped under the following headings; physical, social and health-related problems.

There were many urban problems during some periods in İzmir, but especially in the 19th century, many earthquakes, fires and epidemics occurred. Fires caused great losses and could not be stopped because of the wooden houses and narrow streets. In 1834, 1841, 1844, 1861 and 1882, devastating fires took place in the city and many buildings were damaged. After a huge fire in 1834, most of the Frank neighborhood had to be rebuilt. Another catastrophic fire in 1841 led to a comprehensive reconstruction of Muslim and Jewish neighborhoods by destroying about four thousand houses, public buildings and twenty-five hundred stores. Four years later, in 1845, several hospitals serving the Armenian quarter, various parts of the Christian population, and the great sections of Frank Street and Greek neighborhoods have been burned. Most of the buildings in the city were destroyed and rebuilt during the 1835-1845 years (Zandi-Sayek, 2012).

In addition to these disasters, plague epidemics in the 17th, 18th and 19th centuries have also made the city difficult to live. During these centuries, plague and cholera outbreaks were frequently seen in Izmir and caused a large decrease in the population. The plurality of plague epidemics was because of the fact that İzmir was on international trade routes.

Kasaba (1994), quoting from Panzac, says that the number of those who died during the 18th century by being affected by the plague epidemics was equal to 60,000 to 100,000, was almost the same with the population of the city at the beginning of the century. In the 19th century, epidemics continued to be a major problem for the city and

an epidemic reduced nearly 20 percent of the population in 1812. In addition, cholera, which first appeared in 1831, continued to break out in the city during the 19th century. In the summer of 1831, 1849, and 1865, severe epidemics took thousands of lives, and in 1865 caused more than 4000 deaths (Zandi-Sayek, 2012).

Temporary and personal precautions have been taken to avoid epidemics, such as avoiding physical contact. The elites slaughtered in villages where their secondary houses located, such as Buca and Bornova. These were safe places because they were located outside the city center.

The unprecedented transformation of İzmir, especially in the middle of the 19th century, had important effects on the physical conditions and social life of the city. In addition to transforming the nature and volume of commercial activity, new transport technologies have also seriously challenged the existing infrastructure of the city. The traffic of the city, ferry lines, transport companies, and railway constructions started to increase with the arrival of the streets to be filled. Beyru (2011) found that travelers who had visited Izmir in the first half of the 19th century frequently mentioned that they had difficulty in going from one place to another in the city. Travelers emphasized that access to the main roads and bazaars in the center was quite difficult. In these regions, as well as the crowd of people, disturbance of the pavement, the narrow roads and the streets make the access difficult.

Although this was not the case for each district of the city, the fact that the crowded regions were depicted in this way summarizes of the city's general outlook. Especially, the important neighborhoods were more well-kept, the new stone pavement work was carried out on, and the street lighting was put on Frank Street in 1834 and 1835. According to Beyru (2011), these changes on Frank Street were not applied for other neighborhoods. For example, Turkish neighborhoods were dark at night and it was not possible to walk without lanterns.

On the other hand, industrial facilities taxed existing water and drainage systems, making water supply and waste emissions were chronic problems for the city (Zandi-Sayek, 2012).

The streets in the city center were hardly internally open, and there were narrow and poorly furnished roads. In addition, open sewers and piles of garbage accumulated in the streets threatened public health.

Besides the physical condition of the streets, the social situation began to be quite complicated. The increase in social and economic inequalities had also changed the

character of Izmir's public spaces. A diverse mix of people with diverse backgrounds, professions and experiences had to share the streets of Izmir as never before. The rise of pickpockets, and street attacks, which list the punishments for expressing religious bias and harassing passers-by, were significant indicators of tension types that characterize everyday urban life.

The government officials, local leaders and traders who were concerned about this change of the city came together to make new arrangements to meet the needs and resolve the problems. The existence of a municipality was needed as they knew the need to be an authorized unit to respond to the problems in the city and to make the necessary arrangements. The organization in the growing city could provide the local institutions, but not the one large institution that served the general.

In 1860, the leaders of the city conveyed their requests to the Grand Vizier regarding the establishment of a municipal organization in the same position as the municipality in Istanbul. However, in accordance with the request of the people of İzmir to reach the municipality and the wishes of the city leaders (this time among the foreign merchants) in 1867, the municipality was officially opened as of 1868. The aim of the decision on the establishment of the municipality in İzmir was to find solutions to the problems of the municipality, such as the negligence of the streets and marketplaces (Serçe, 1996). However, at the time of this municipality to find solutions to the problems of the city and the services to reach the maturity of the subject was very possible much later.

Consequently, the mobility experienced because of population growth and transportation opportunities in the city center led to some urban problems. The city which suffers from natural disasters, has become more difficult with increasing urban problems. The low and middle class could not react to these problems or to improve their living spaces. The upper income group had the luxury of building more sterile and safe places by changing the living spaces with their shares in increasing commercial activities. This depressed situation in the city has had an impact in this context.

For this reason, Buca and Bornova, which were summer villages with secondary dwellings, became suburban settlements until the end of the 19th century in this process. It was possible to see the ideal way of life of the upper income group in these settlements. Even though they were working in the city center, they spent only a few hours of their days there, and then returned to the beautiful, spacious places where they had a home by the railway which provided a comfortable journey. On the contrary, low and middle-

income groups were living with problems in a growing city day by day. This was a striking fact of the difference between the suburbs and the city center.

4.1.4.1. Buca

Buca name came from the Bovios word, which means a village on the edge in a corner in Greek. Almost every person in the village was engaged in viticulture and agriculture (Atay, 1978).

Buca became an important residential area in the 17th century and accelerated in the 18th century with the character of village. It was developed within the scope of social dynamics.

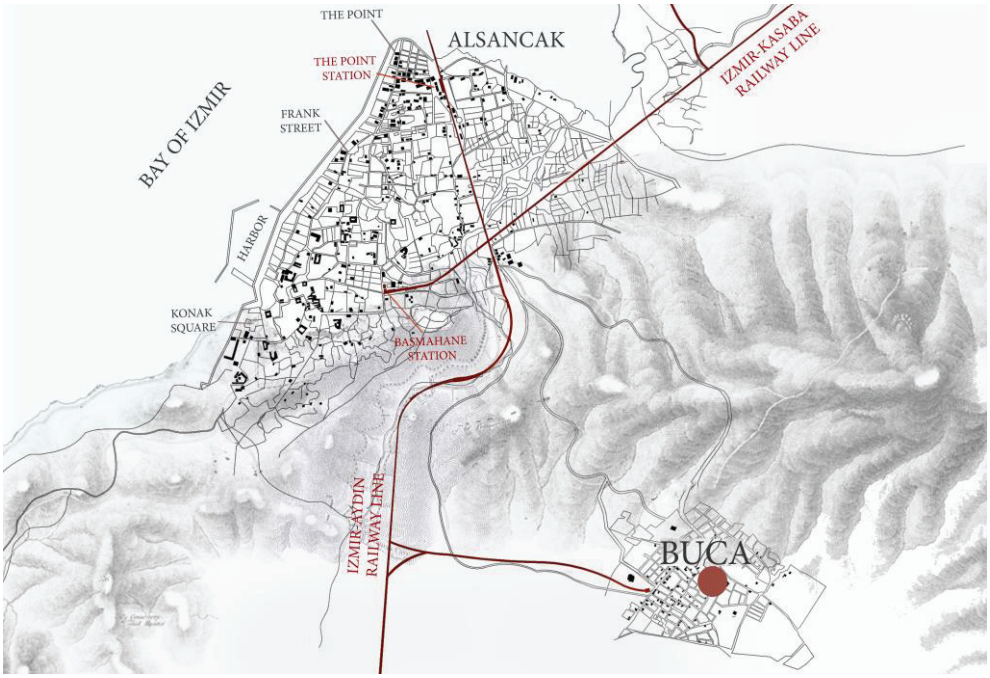


Figure 4.14. Location of Buca, redrawn by author according to map of Demetrius (Source: Zandi-Sayek, 2012)

In the beginning of 19th century, the population of Buca was doubling and it was about 4-5 thousand. Buca, which attracted the attention of foreign minorities, had 1 Greek, 1 Catholic, 1 Refome church and 1 mosque. There were also a famous market and entertainment club in and horse races were helding (Atay, 1978).

Until the middle of the 19th century, transportation to the city was done through a path with donkeys and mules. Turner, who visited the settlement in 1816, stated that the

road linking Buca to Izmir was not good, and when they entered the city, they saw the narrow and bad way (probably Ottoman inhabitants) neighborhoods, and then the well-maintained district of Frenk (Erpi, 1987).

With the extension of Izmir-Aydın railway to Buca in 1860, which was an important development in Buca history, transportation became more comfortable. A line separated from Paradiso (Sirinyer) was connected to Buca and the suburban life was revived with the establishment of the top executives of the railway company in Buca (Atay, 1978).

The ethnic structure of the Buca settlement, which was formed as a Greek village, became a suburb where the increasingly diversified Levantines and the British settled large mansions. General view of Buca at the end of the 1800s can be seen in Figure 4.15 and Figure 4.16.

Figure 4.15. General View of Buca at the end of the 1800's
(Source: www. levantineheritage.com)

Figure 4.16. View of Buca from Forbes Hill, 1800s (Source: www.levantineheritage.com)

At the end of the 19th century, the Greek community and the Levantines (British, French, Italian, etc.)were living in the lower quarter, which was located in the south of the settlement, and the Turkish community was living in the upper district in the north (Erpi, 1987).

4.1.4.1.1. Typo-Morphological Analysis of Buca

After looking at Buca's historical development, it will be tried to understand the process of turning Buca into a suburban settlement by using typo-morphologic analysis. The physical form and the urban connections of Buca, which has become a suburban settlement by the construction of the railway, will be examined.

The analysis of the urban morphology of Buca will be done to understand the transformation in 19th century. This will be done by analyzing Buca's urban and architectural morphology.

4.1.4.1.2. Urban Morphology of Buca

Buca settlement began to develop as a secondary residential area in the 18th century. Previously , it was a scattered settlement and a small village can be seen Figure 4.17. In the 18th and 19th centuries, Greeks and wealthy Levantine families used to live together in Buca. In the second half of the 19th century, Buca went beyond being a summer village and developed as the main habitat of many Levantine families. The connection of Buca to the city center by rail in 1860 can be described as a breaking point. Connecting Buca to a train station played an important role in settling the top executives of the railway company, and it provided Buca to develop both socially and physically (Birol Akkurt, 2004).

In Buca, there was a layout that offered a combination of suburban formations and grid structure similar to the city center. There was a grid urban pattern formed by the Greek houses and a pattern that did not fit into a particular order of Levantine mansions. These mansions could easily be distinguished from each other.

While discussing this grid texture in Buca, it is useful to refer to the section where Akkurt (2004) examines Buca in her thesis. Akkurt (2004) states that the İzmir-Aydın

railway line played an important role in the formation of this grid texture similar to the one in the city center.

The significant density in Buca's residential areas was the habitat of Western groups. In addition to the pavilions of wealthy European groups in large gardens covered with cypress trees, the residential houses in the middle stand out, which were followed by a grid-planned settlement of middle-class Western groups and wealthy Greeks.

The urban morphological analysis of Buca will be done by analyzing the plan unit diagrams and the general character of the buildings.

Figure 4.17. Buca in R. Copeland Map, 1834 (Source: Beyru, 2011)

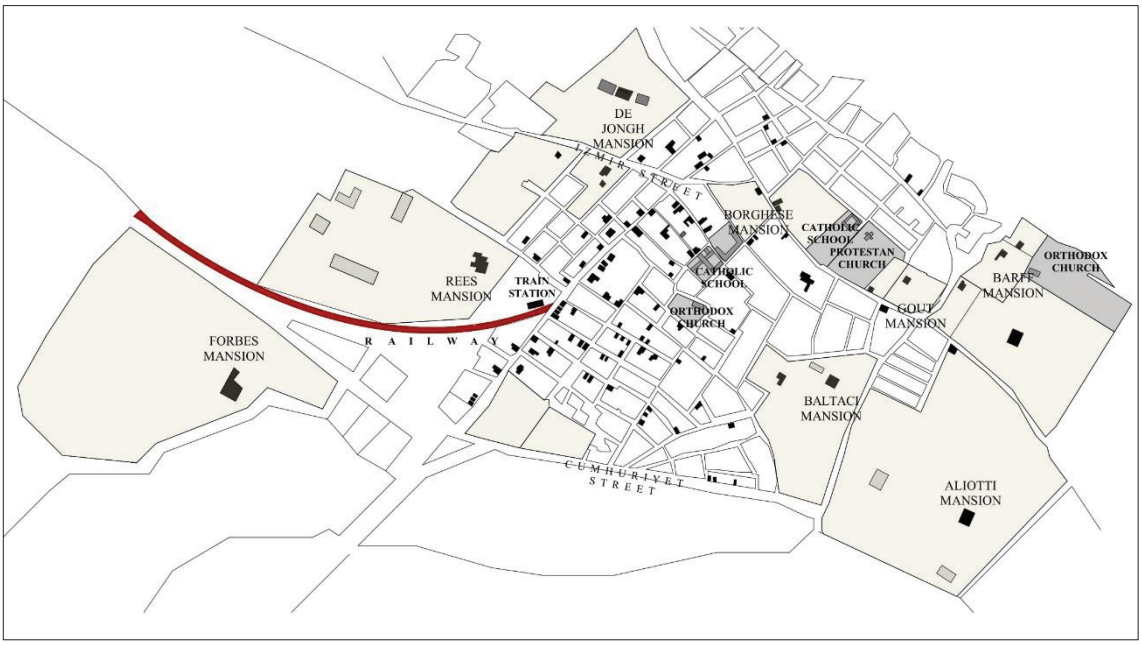


Figure 4.18. General Plan of Buca in 19th century, drawn by the author according to location of houses in 19th century and 1910s (Source: Erpi, 1987)

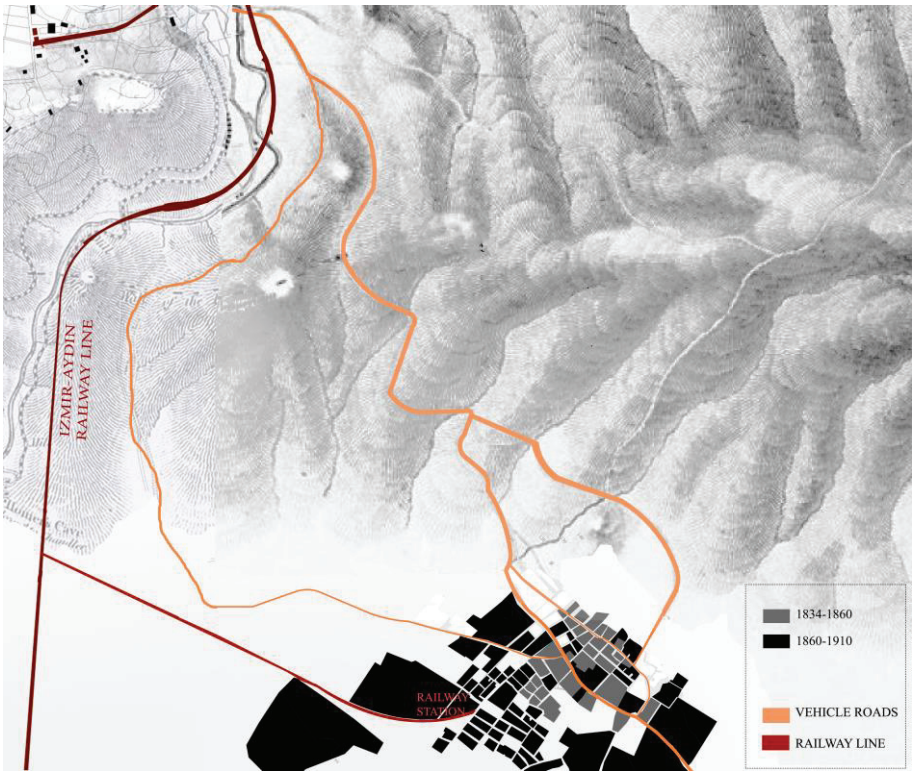


Figure 4.19. Evolution of urban pattern of Buca.

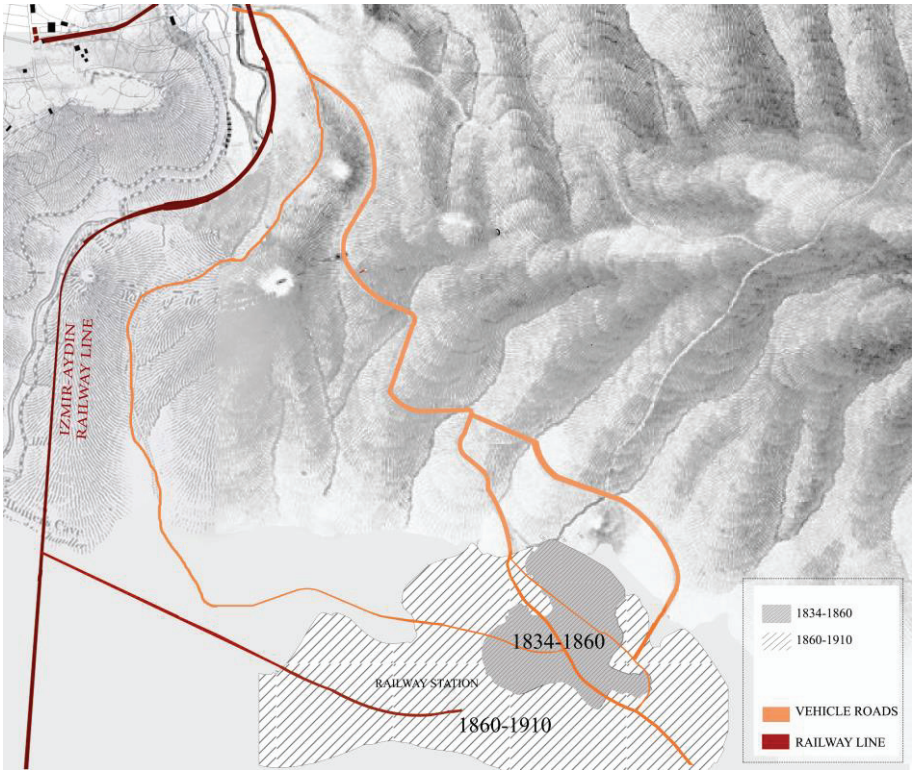


Figure 4.20 Schematic drawing of urban growth in Buca

Looking at the map of Buca in the 19th century, Figure 4.18, it is seen that the settlement has a more regular pattern. The presence of a residential pattern concentrated around the station is striking. When the map of 1834 and the pattern of the 19th century are compared (Figure 4.19, Figure 4.20), the growth of Buca stands out. This growth has been focused on housing pattern and concentrated around the train station. In Buca, the parcels are large and regularly separated (Figure 4.21) and the roads have a uniform geometry. The main transportation axes take the train station to the center (Figure 4.22).

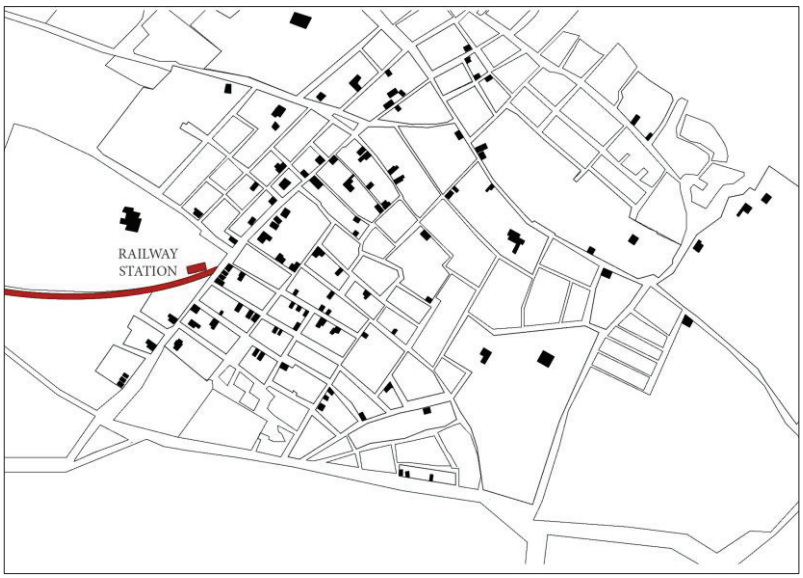


Figure 4.21. Plots and blocks of Buca (Source: Erpi,1987)

Figure 4.22. Axis of Roads (Source: Erpi,1987)

As a result of these typo-morphological investigations, it is determined that there was an urban pattern that developed in the 19th century. And the focus of this development was the mansions in the large gardens. The settlement was concentrated around the railway station. Although there was sometimes an irregular street pattern in, there was a grid street texture in places where Levantine houses were concentrated.

4.1.4.1.3. Architectural Morphology of Buca

In the second half of 19th century, a coherent architecture developed in Izmir, which included some facade form elements, which could be called a fake classicism in the neo-Greek type of official buildings and this style was called Chios type. The housing architecture in Buca is generally covered by this style. In addition, the Chios type of architecture became more widespread in Buca and gained a character with sharp lines. Erpi (1987), separated these structures which developed between the years 1860-1920 into several types.

In the region where the Greeks were living, the streets and structures of the city which form the urban pattern, were in a certain geometric order. The parcels were not very large and the dwellings were usually with gardens. The gardens sometimes surrounded the residence, but looked like a courtyard. In accordance with the passage of the carriages, the roads that were intersecting in a similar character and with a grid shape made up the transportation scheme.

Also, Levantine mansions had an important place in Buca's residential architecture. These houses were more irregular and independent of grid texture. These structures were in the large gardens and isolated with foreign and high walls. Erpi (1987) says that the deep difference between social classes is intended to hide behind walls and trees. There was no common style in Levantine houses as it was in Chios type houses. However, to put it into a style, it can be defined as eclecticism, which usually shows the form and function of compilation. There were also a few Muslim communities in Buca. However, the existence of a particular architecture related to this section could not be determined. Muslim neighborhoods had an organic city pattern which was not very regular and started to develop later.

Erpi (1987) divided the Buca houses into two general groups typologically. First group; Houses belonging to indigenous people, mainly in the Chios type, which were

formed by the Greek minority. Second group; Foreign-owned mansions belonging to Levantine families settled in Izmir. There were two different types of housing, which were differed from each other, but this was not the case of the typological distinction.

Erpi (1987) did this grouping according to facades and the architectural expression is based on external appearance. The general urban texture of Buca consists of the first group houses in Chios type. Although the oldest building in this type of housing was built in 1838 and the newest building in 1934, they reflect different and high-level architectural values. Based on this, Erpi concluded that there was an advanced urban environment in Buca at the beginning of the 19th century. It is not possible to separate the Levantine mansions in the second group according to certain style categories. It can be said that this because of the cultural diversity of the Levantine families. In general, Buca houses have a fine sense of aesthetics, and there is a very rich variety.

Erpi (1987) has examined the houses in Buca and he separated them these groups; Buca House, houses with the bow window (*cumba*), two-storey without bow window houses, single-storey houses, one and a half storey houses, distorted corner houses, houses not belonging to any species. Also, Birol Akkurt (2004) compiled the structures in the area in three main groups as Large Scale Levantine Pavilions, Residential Buildings with Feature and Western Traces, and Urban Housing Sampling.

Although the houses in Buca were mostly European influenced and similar styles, they differed in details. This is a reflection of the aesthetic tastes of home owners. Houses were seen as a symbol of social status and were often used for parties, meetings and recreational activities. Plan types were also shaped according to the lifestyles and tastes of the owners. Buca houses, stand out with wide gardens and aesthetic details. The characteristic of three houses which selected from Buca were analyzed in the Table 4.2, Table 4.3 and Table 4.4.

NAME OF THE BUILDING: BALTACI (BALTAZZI)MANSION **DATE: Middle of the 1800's (Estimated)**

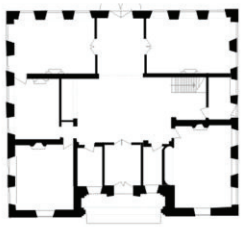
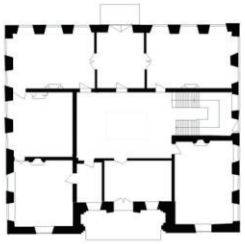
LOCATION & SITE PLAN	FACADES	FLOOR PLANS
 SITE PLAN Land Area: 41.601 m²	 	 GROUND FLOOR PLAN  FIRST FLOOR PLAN S:1/500
EVALUATION	**EVALUATION**	**EVALUATION**
-Near the Railway Station. - Wide Garden Including Decorative Pools and Sculptures - Latin European Style Landscape. -Detached Outbuildings	- Palladian Style -Symmetrical Order - Arched and Marble Columns - Flamboyant Entrance Facade - Simple Street Facade	-Simple Geometry - Symmetrical Layout

Table 4.2. Baltacı mansion

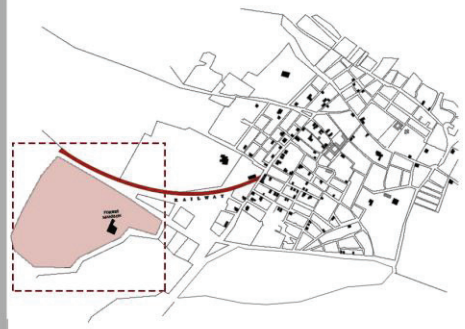
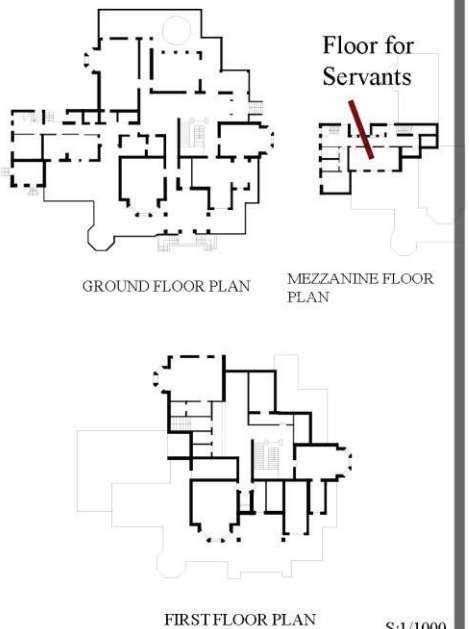
NAME OF THE BUILDING: FORBES MANSION	DATE:1908	
LOCATION & SITE PLAN	**FACADES**	**FLOOR PLANS**
 Land Area: 134,212 m²		
EVALUATION	**EVALUATION**	**EVALUATION**
-Near the Railway Station. - The Land is Remarkably Wide. - Located on a Hill. -Surrounded by Pine Trees.	- Eclectic Facades. - Splendent Entrance with Hellenistic Elements. - Random Layout. -High Tower Structure as an Expression of Social Status.	- Reflects Economic Power of Owner. - Randomly Arranged Eclectic Plan Scheme. - Surrounded by Terrace. -Mezzanine Floor for Servants.

Table 4.3. Forbes mansion

NAME OF THE BUILDING: REES MANSION **DATE:Around 1890-95 (Estimated)**

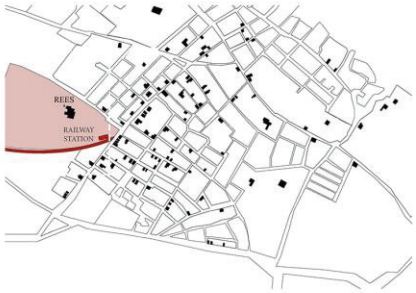
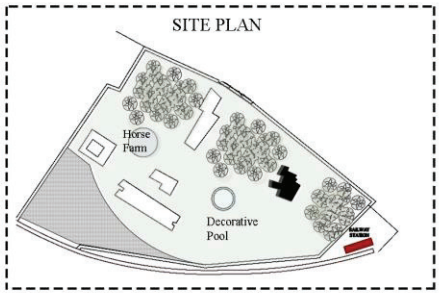
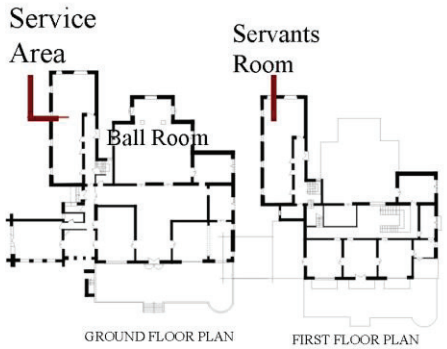
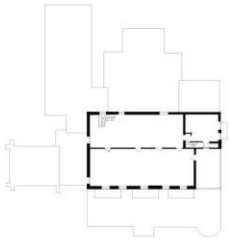
LOCATION & SITE PLAN	FACADES	FLOOR PLANS
  Land Area: 97.624 m²	 	  S:1/1000
EVALUATION	**EVALUATION**	**EVALUATION**
-Near the Railway Station. - Wide Garden Including Recreational Activities. - Well Designed Landscape.	- Simple but Garish Facade. - High Tower Structure as an Expression of Social Status. - Simple Geometry.	-Plan Designed According to Luxurious Life. -Rooms for Social activities. -Tower and Second Floor Designed for a Flamboyant Appearance, not According to Space Requirements.

Table 4.4. Rees mansion

4.1.4.1.4. Evaluation of Suburban Characteristic of Buca

After analyzing the urban and architectural typologies, the suburban character of Buca should be evaluated. For this, an evaluation was made according to the criteria determined by McManus & Ethington (2007) and these characteristics were explained in the Table 4.5. Accordingly, it would be correct to consider the settlement of Buca as a suburb.

Table 4.5. Evaluation of Buca's suburban characteristics

Peripheral Location	*Located edge of the city core*
Relationship to Urban Core	*Connected to the city center for commercial activities and business areas.*
Relationship to Countryside	*Country living and recreational areas*
Density	*Low density*
Housing Type	*Single-family dwelling*
Social Segregation	*Upper class Levantine and Greek families*
Transportation	*Primarily railway and secondly vehicle roads*
Cultural Formations	*Previously secondary housing. then the desire for an isolated life outside the city.*

As a result of the researches and morphological investigations, some evaluations about the settlements were made. Buca was a settlement on the periphery of the city center

and it was a village visited only for recreational activities before the railway transportation. Although there is an organic pattern in the places where the Greeks live, the settlement generally has a grid pattern. Most of the Levantine mansions were located in large gardens. The mansions were important in terms of expressing social status, that is why there are many different styles of mansion in Buca. Especially the houses which have tower structure have become a symbol of social status. The facades were flamboyant in some of the houses and others were simple. However, they always had aesthetic elements. The plans of the houses were shaped according to the social status and lives of the owners. Most of the houses have common areas and ballrooms for parties. There are also separate units for servants. The houses were generally built in neoclassical style under the influence of the European culture.

Looking at the general settlement pattern and architectural character of Buca, it is possible to say that it is a suburb in every aspect. In particular, the fact that the railway was the primary transportation option supports this argument.

4.1.4.2. Bornova

Burnabat, that is evolved from the word meaning the city at the tip 'Burun Abad' and it taken the name of Bornova in the Republic Period. It was formed a small Ottoman village in the north of the *arasta (çarşı)* region and established to meet the needs of other settlements in the region.

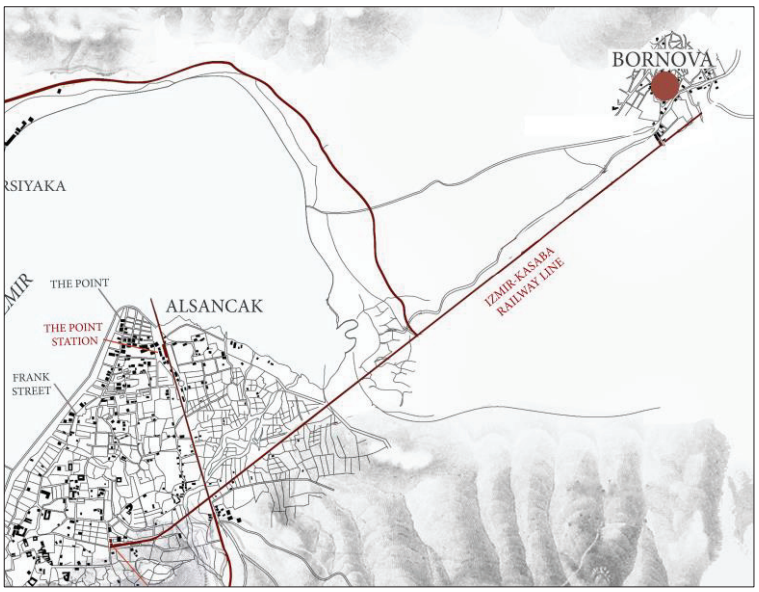


Figure 4.23. Location of Bornova

Bornova was a settlement center where various agricultural products were grown, especially paddy, due to its fertile plain and rich water resources. Flax and hemp in later periods; and later on it is seen that it produces industrial products such as cotton. Besides these products, it played a very important role in meeting the food needs of the inhabitants of the region and İzmir with different products. Traditional agricultural products were the main source of livelihood of the population living in Bornova.

In the 16th century, the population of Bornova was much higher than the surrounding villages. As a matter of fact, in 1575, the population of Bornova reached 100 households. In the following years, while the population of Bornova increased intensively, a decrease has been observed in the population of surrounding villages. Looking at this line of development, we see a migration from the surrounding villages to Bornova.

In the 17th and 18th centuries, Levantine families began to settle in Bornova. However, Bornova was a summer village during these periods, and there were mostly second houses using for weekends and summer.

Bornova was approximately 2 hours away from Izmir with the transportation facilities of the 19th century. One was connected to the city in two ways, one by the road passing over the Kervan Bridge and the other from the Bornova Pier by sea. In 1861, a private company provided a paid connection from Çınarlı (Mercantile Bridge) as a branch of the city line from the Basmahane train station (Atay, 1978).

Bornova, was a village with secondary houses of Levantines, and there was a lifestyle close to nature and isolated from the city center. Birol Akkurt (2004), quotes in her thesis the words of Francis Herve who visited Bornova at the beginning of the 19th century;

> … On the right and left side, the latticed balconies of the villas of the merchants and the white smoothie walls were wrapped and covered with several vines. Many of the villas are extremely charming, while others represent a great taste. The gardens adjacent to each other are as beautiful as possible and contain rarest plants of the east. In Bornova, there were at least 50-60 of these types of mansions. The wide doors provided access to the gardens of these mansions. There are benches on each side of the entrance, where maybe a dozen people can sit. There are groups of families in the sitting time…. With the darkness of the evening, various groups are drawn to their homes for evening tea or dinner. You can come to this kind of party from midnight until one in the morning. Then the village where the elegant mansions are so inviting is silent. In Bornova, the neighborhood where the Turks, some Jews and a few Armenians lived, is quite Eastern. The bazaar is covered with vines…

Bornova, after the middle of the 19th century showed a significant development and the effects of Izmir-Kasaba railway line, which was put into service in 1865, was very

important. This line became an important turning point in the urban development of Bornova and trains from Basmane as a branch of the line started to come to there. After the construction of this line, many Levantine families left their homes in the city center and started to settle in Bornova.

Figure 4.24. Train Station in Bornova in beginning of 1900's
(Source:www.levantineheritage.com)

4.1.4.2.1. Typo-Morphological Analysis of Bornova

After looking at Bornova's historical development, it will be tried to understand the process of turning Bornova into a suburban settlement by using typo-morphologic analysis. The physical form and the urban connections of Bornova, which has become a suburban settlement by the construction of the railway, will be examined.

The analysis of the urban morphology of Bornova will be done to understand the transformation in 19th century. This will be done by analyzing urban and architectural morphologies.

4.1.4.2.2. Urban Morphology of Bornova

Bornova was a village until the 19th century, and after the 18th century. It attracted the attention of Levantines and secondary residences were built. It can be seen urban pattern of Bornova in 1834 Figure 4.25. Bornova

Since the beginning of the 19th century, it had been a secondary housing area and its relations with the city strengthened with the construction of the railway. This small village became a permanent settlement with the prestige of the Levantine community involved in commercial activities.

In the center of Bornova, there was a configuration taking the mosque to the focal point and the bazaar and residential areas around this center were observed. Bornova was a village settlement around a bazaar, this settlement form had shown itself as a center developing around the Great Mosque and the Grand Bazaar. Those around it were mostly Muslim neighborhoods and intersected with the Jewish Quarter in the northeast (Figure 4.26).

With the beginning of new way of life, spatial divisions also increased and a disintegration occurred. There were 8-10 thousand inhabitants in Bornova at the end of the 19th century.

Most beautiful buildings in Bornova were located in the neighborhood of Havuzbası Street (Rue Des Fontaines), Göçmen Quarter and the station. In the upper neighborhood, there were houses belongs to lower class (Atay, 1978).

The continuous development of the Levantines changed the general face of Bornova and led to a new life culture. Levantine mansions, in large gardens surrounded by high walls, began to dominate the general pattern of the settlement. Birol Akkurt (2004) reported that the Jewish and Armenian neighborhoods along with the Turkish neighborhoods were spread over the hillsides. In the south of the center there were Levantine houses and the Greek communities were located to the east of the center. The Levantine community, rather than the other settlements in Bornova, created a space of their own apart from the Turkish, Greek, Jewish and Armenian groups, and they shaped their structures according to such variables as social status, family relations and social relations. Wealthy Levantines were located around certain axes and were located in a defined area. Middle-class Levantines and high-income Greeks also settled on the periphery of these axes (Birol Akkurt, 2004).

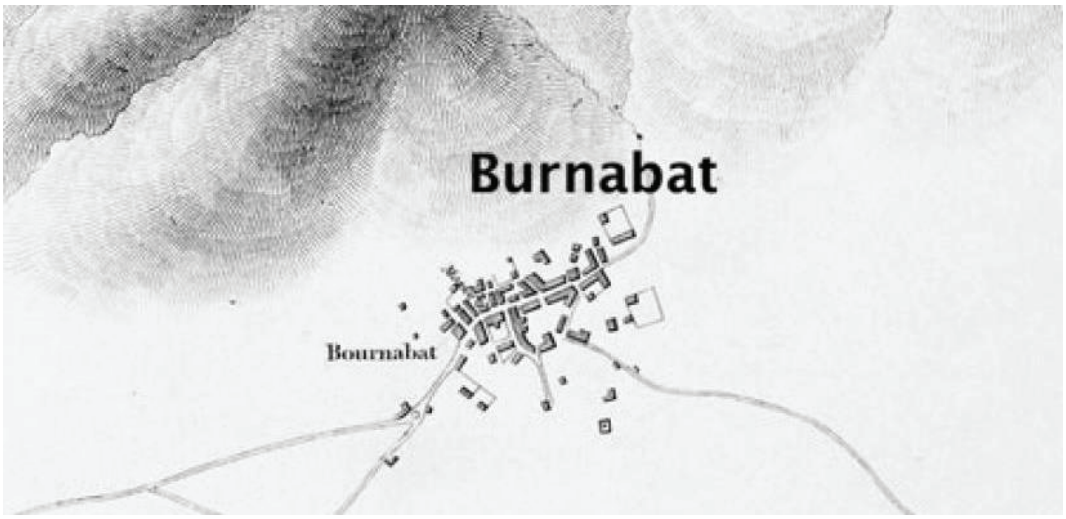


Figure 4.25. Bornova in R. Copeland map, 1834 (Source: Beyru, 2011)

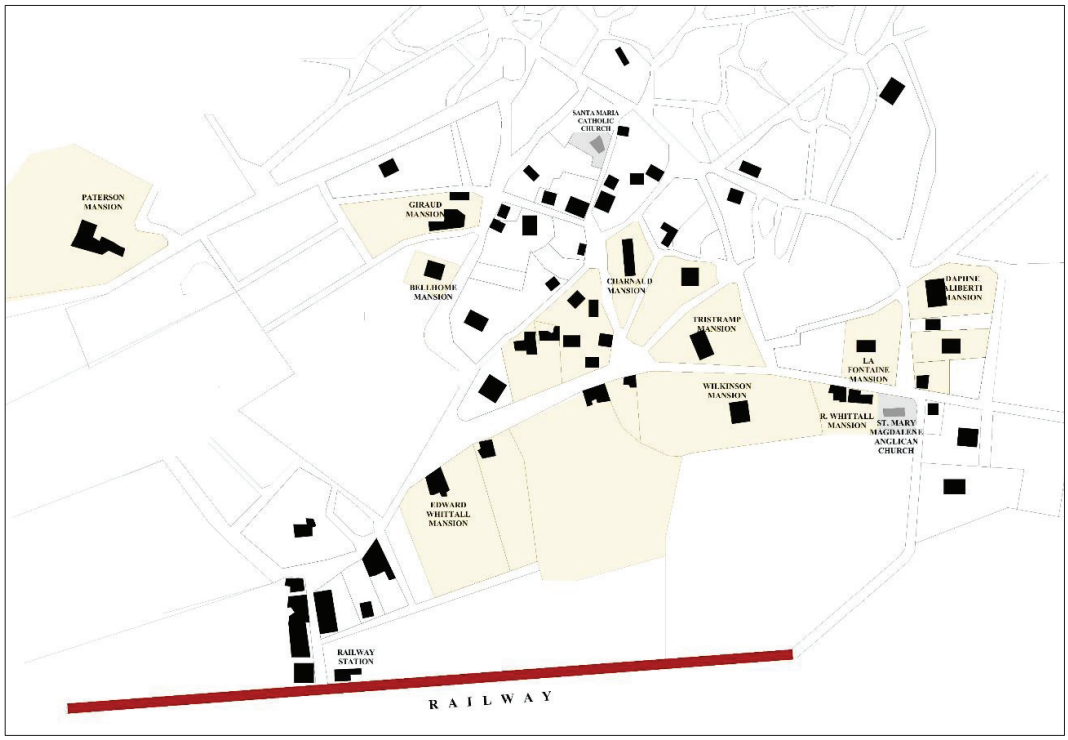


Figure 4.26. General Plan of Bornova in 19th century (Source: Birol Akkurt, 2004)

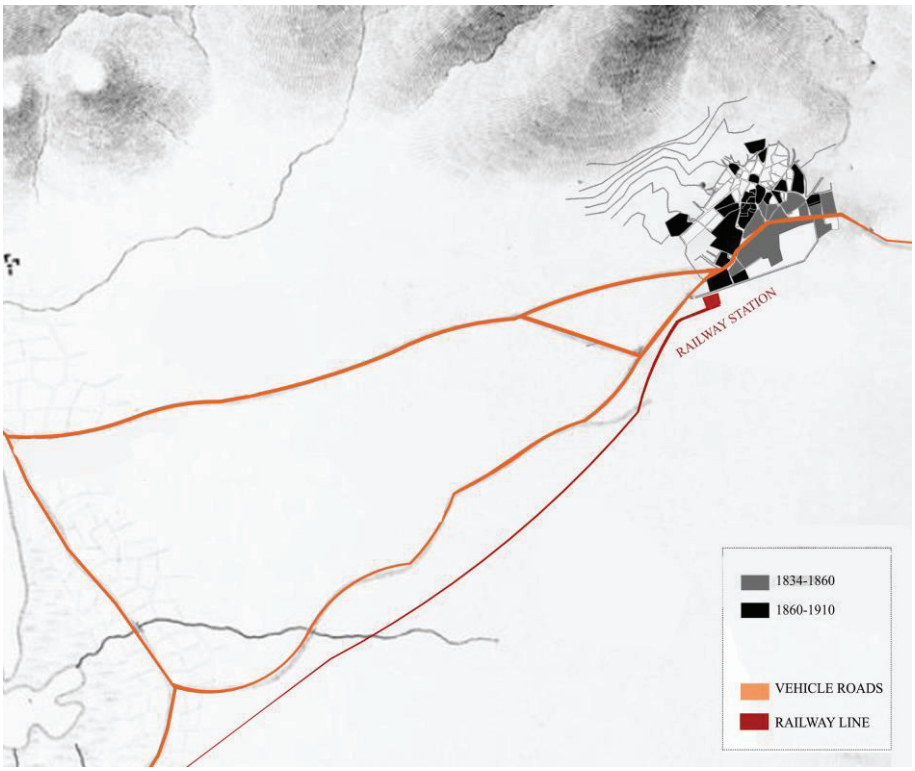


Figure 4.27. Growth of Bornova

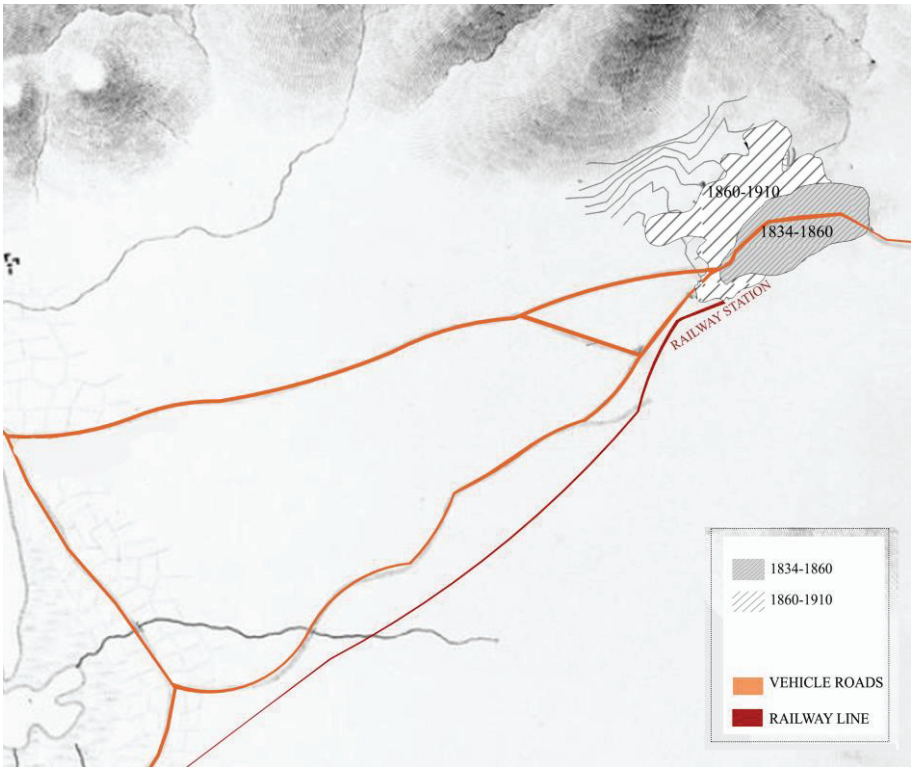


Figure 4.28. Schematic drawing of growth of Bornova

Urban patterns of Bornova which belong to two different periods are compared and growing urban pattern is identified between these periods. Mostly the areas close to the train station were preferred to settle like in Buca. The parcels have a wide and organic pattern and close to each other (Figure 4.28, Figure 4.29). The street pattern is likewise an irregular geometry and main road connections are arranged to reach the station (Figure 4.30).

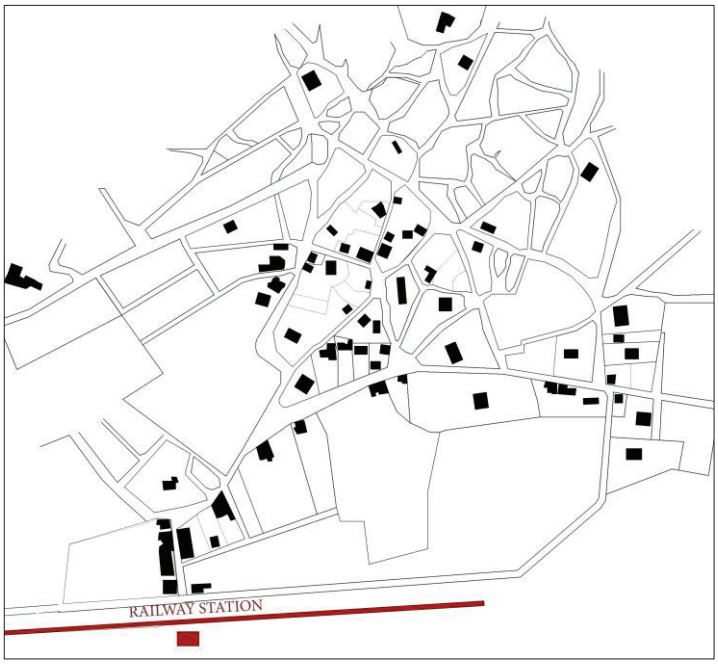


Figure 4.29. Plots and blocks of Bornova (Source: Birol Akkurt,2004)

Figure 4.30. Axis of Roads (Source: Birol Akkurt,2004)

There is a housing pattern in Bornova which is concentrated around the station and the residences are located in large gardens similar with Buca.

4.1.4.2.3. Architectural Morphology of Bornova

In Bornova, where the living space of the Levantine community was intense, the physical environment developed around the frameworks determined by this community. The class differences between the different people and the development of a settlement around different lifestyles had been emerged in this context. According to Birol Akkurt (2004), a dual structure emerged as the reflection of this formation in Bornova. There were two types of structure in housing types, one of them was the small-scale single dwellings and row houses. It was a synthesis of Western and Ottoman styles and it looked like the pattern in the city center with materials, systems and spatial constructs. The other one was the large-scale houses, which represented the style of the culture to which they belong and with the more original architectural approaches.

The focal area of the settlement was around the train station in the south because of its effective role in the development of the Bornova and the suburban identity of it. The main structures of the settlement as follows; Pandispanian, Bari, Balliani (C.J.Giraud), Tristramp, C.Whittall, R.Whittall, Wilkinson, Edwards, La Fontaine, Belhomme (Wolf), Paterson and Aliberti (Wolf) kiosks.Some Levantine houses in Bornova were built in wide gardens, some were framed by high walls, and built as adjacent facades to the road. The large gardens of the houses were beautifully landscaped and very elaborate. Kuyulu Ersoy (2013) says, well-kept gardens were used as indicators of social prestige and most of the flowers were importing from abroad.

The facades of the Levantine houses were generally made in symmetrical order and had a simple design understanding. The top cover system was provided with roof-covered roofs surrounded by canopies. A general feature of the facades was simple as well as rectangular windows. The movement on the front was provided by these windows, and they also used imported materials. The shape of a dwelling was developed according to social status and possibilities of the owner's. While the dwellings were shaped in this way in a special context, the whole of the settlement began to get closer to a Western view. The Levantine group which adopted a Western way of life, caused Bornova to look like a modern center with their mansions which were built with a European planning and

architectural understanding (Kuyulu Ersoy, 2013). Bornova houses were mostly European influenced and similar styles but they differed in details. This is a reflection of the aesthetic tastes of home owners. The characteristic of three houses which selected from Bornova were analyzed in the Table 4.6, Table 4.7 and Table 4.8.

Table 4.6. Charnaud mansion

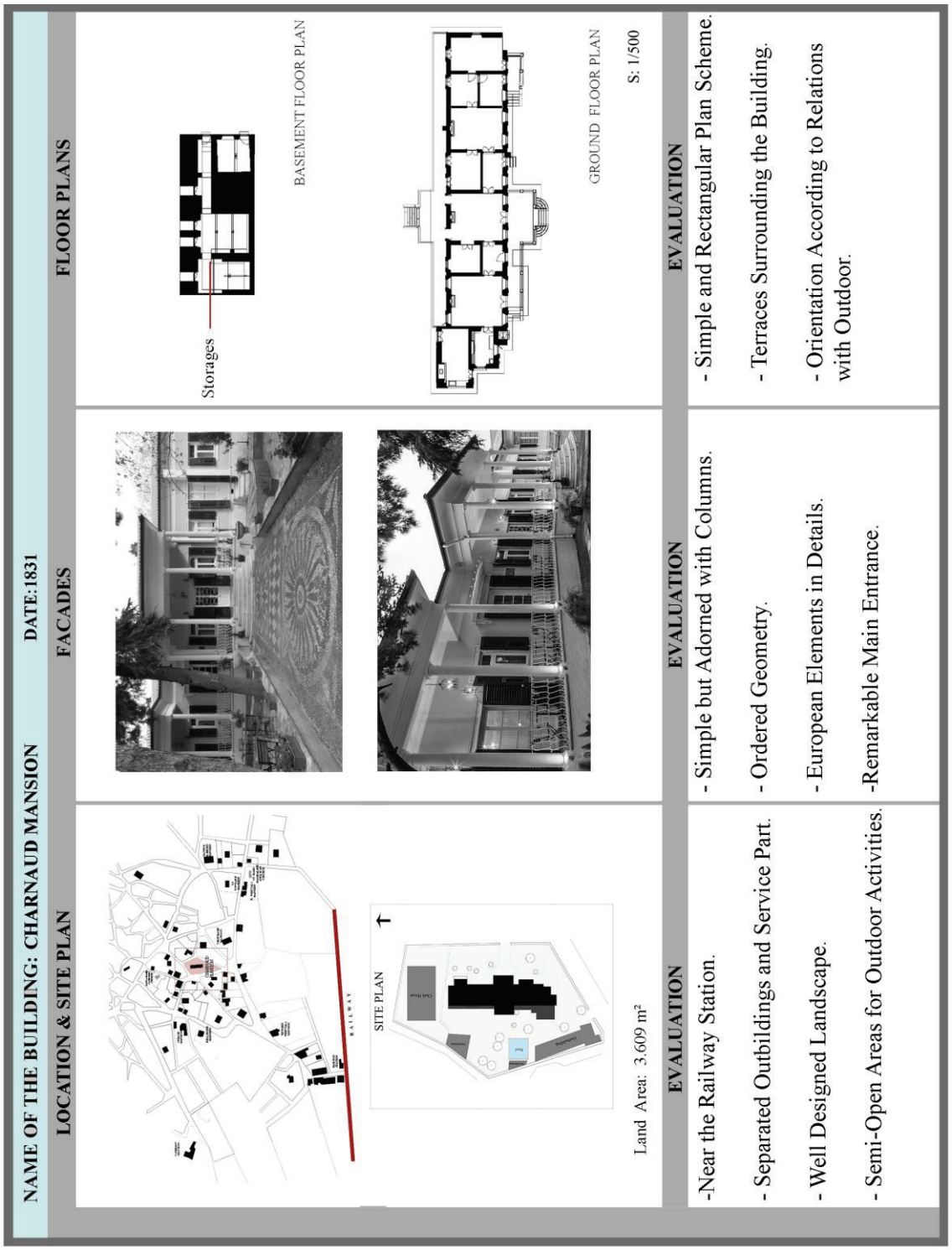


Table 4.7. Paterson mansion

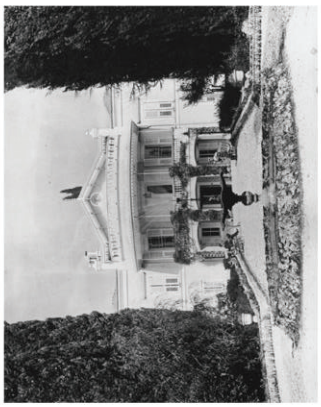
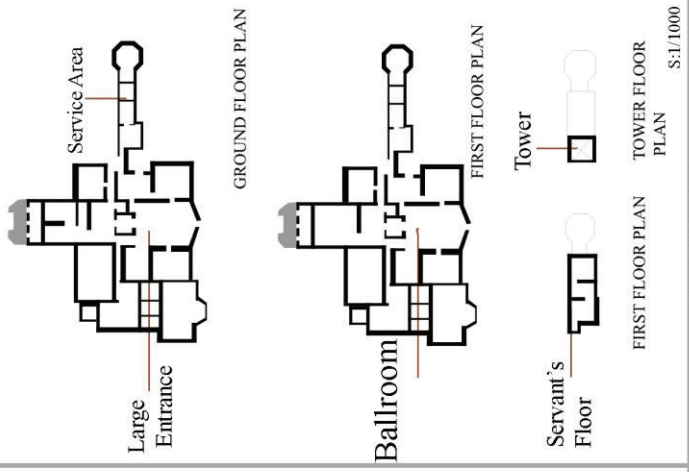
NAME OF THE BUILDING: PATERSON MANSION	DATE:1860	
LOCATION & SITE PLAN	FACADES	FLOOR PLANS
		
EVALUATION	EVALUATION	EVALUATION
-Near the Railway Station. - Golf Course for Competitions - Bowers for Parties and Activities	- Entrance and South Facade Flamboyant as an Expression of Social Status. - Tower Structure. - Remarkable Balconies and Overhangs.	- Reflects Economic Power of Owner. - Rooms for Social Activities like Ballrooms. - Privacy in Owner's Area.

Table 4.8. Wilkinson mansion

4.1.4.2.4. Evaluation of Suburban Characteristic of Bornova

After analyzing the urban and architectural typologies, the suburban character of Bornova should be evaluated. For this, an evaluation was made according to the criteria determined by McManus & Ethington, (2007) and these characteristics were determined in the Table 4.5. Accordingly, it would be correct to consider the settlement of Bornova as a suburb.

Table 4.9. Evaluation of Bornova's suburban characteristics

Peripheral Location	*Located edge of the city core*
Relationship to Urban Core	*Connected to the city center for commercial activities and business areas.*
Relationship to Countryside	*Country living and recreational areas*
Density	*Low density*
Housing Type	*Single-family dwelling*
Social Segregation	*Upper class Levantine and Greek families*
Transportation	*Primarily railway, secondly vehicle roads and maritime lines*
Cultural Formations	*Previously secondary housing. then the desire for an isolated life outside the city.*

Similar to Buca, Bornova is settlement on the periphery of the city and was a small village in the past. And after the railway transportation there was an increase in the housing pattern and the pattern were concentrated around the station. This is an indication of the advantage of being close to transportation. The parcels are larger than the ones in the city center and have an organic street pattern. The majority of the settlement is

composed of houses and houses have aesthetic tastes as an indicator of their owner's income status, and particularly the entrance facades are designed in detail. Like in Buca, the plans of the houses were shaped according to the luxurious lifestyles and social lives of the owners. Most of the houses had common areas and ballrooms for parties, and there were also separate units for servants. The majority of houses were located in large plots, where recreational uses were important. Some houses have gardens, a golf course and even livestock farms. Most of the houses were influenced European style especially with their gardens. It can be said that this settlement was also suburb because of all these features and railway transportation.

4.2. Chios

Chios has an impressive history based on the Phoenicians said to have named the island and is very close to the shores of Asia Minor in the Northeast Aegean Sea. The island of Chios was under the sovereignty of the Hellenic, Roman and Byzantine Empires, respectively. In 1124-1125 and 1172, the island was ruled by the Latinos, the Zaccaria family. In 1566, the island entered the Ottoman government and taken by Greece in the Balkan War of 1912 (Keskin Yaşar, 2013).

Figure 4.31. Location of Chios (Source: www.omnia.ie)

The historical process of Chios is diverse, and the social structure, which was shaped by the fact that the Venetians had commercial privileges, showed itself in the

feudal structure between the 11th and 16th centuries. The location of Chios was remarkable for its commercial and strategic importance connecting the Middle East and Europe. After the three-month siege, in 1346 the Genoese successfully occupied the Byzantine island of Chios. During the Genoese occupation, many powerful and wealthy Genoese commercial sites and warehouses settled on the island to control the trade of mastic, silk, screed, salt and tar. They were mastic villages (mastichochoria) in south of Chios, Mastichochoria settlements were built between the 14th and 16th centuries as a fortress to protect against leaks and to prevent smuggling of mastic. Chios Island had been an island centered in trade and shipping for centuries. Therefore, this model brought with it the needs and insights of architecture such as Banks, Broker Offices, Government Agencies and Insurance Agents. There was a harbor-oriented settlement in Chios at all times. There are plans and general view of port in different period (Figure 4.32 and Figure 4.33).

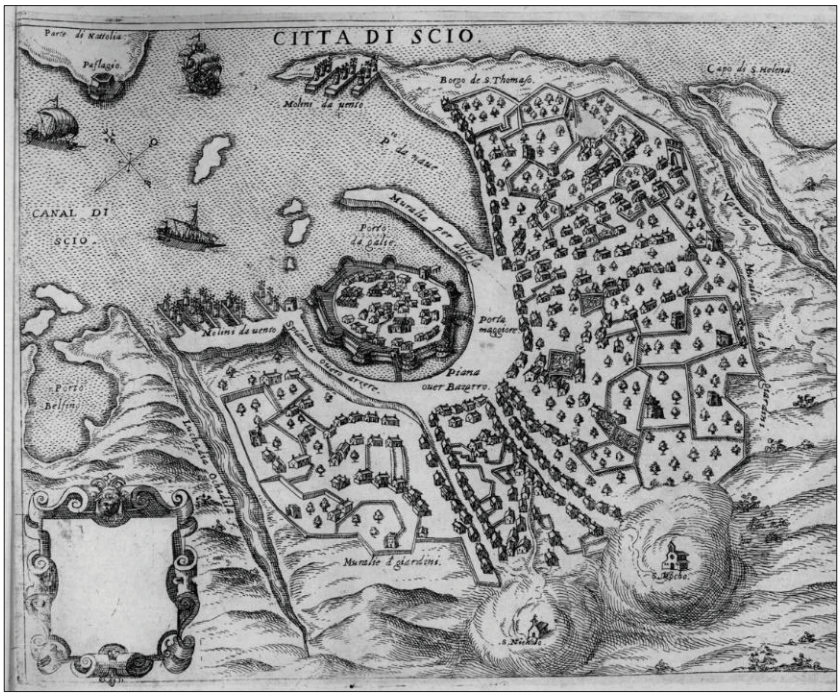


Figure 4.32. Map of Chios, 1574 (Source: Philippides,1983)

There is a turning point for Chios, there was a rebellion against the Ottoman Empire, in 1822 and during the suppression of the rebellion, the island suffered many damages. Also, an earthquake in 1881 destroyed many lives, and many unique architectural works were damaged.

Figure 4.33. View of the Port of Chios in 1688
(Source: www.levantineheritage.com)

4.2.1. Development of Chios as a Port City

Chios gained importance in the 14th century as it played a vital role as a trading hub for trade between the West and the East. It also grew up as an important stop point for Constantinople and Levant expeditions (Bugatti & D'agostino, 2012).

With the arrival of the Turks on the Island (1566 - 1912), although the sovereignty of Genova ended, transformations started for economic and social life. The people of the island showed a great improvement in the management of the Turks in the commercial sense and later in the maritime sector. This development reached its highest level in the 18th century. During the presence of Turks on the island, there were lots of developments in these fields; Cultural, financial, social and architecture.

The Turkish occupation did not bring permanent settlements or mass colonization on the island, but not to a degree where at least the racial composition of the city could be changed. However, the privileges given to the island of Chios since the 16th century allowed this region to continue to develop further. The conditions of the Turkish administration were favorable to the Greek population. With the experience of *Chians* (Inhabitants in Chios) in trade led to an impressive development in production and economy. Then reached the peak in the early 19th century, and Chios has actively participated in the trade again.

For the Ottomans, the importance of the island was caused by the production of mastic which gave the island its name. In this sense, they tried to ensure continuity of production of mastic by introducing exemptions to the regions where mastic production was made.

Geographical position of maritime activities was also very important. In terms of customs duty, the island which trades in connection with Çeşme was an important port for İzmir. In this respect, economic growth and favorable administrative conditions over the centuries Turkish occupation led to cultural development and, of course, development in all fields. Architecture kept its high quality, and successfully combined the characteristics of the old local style with the characteristics of the present architectural movements of the time.

4.2.2. Transformation of Spatial Structure

The port of Chios began to lose its value when Izmir became an important port. Nevertheless, it had maintained a transit and stopping point. By the middle of the 19th century, the current port of Chios was worn out and could not meet the demand. Negotiations were under way to make a new port for increasing commercial efficiency. The existing port had to been repaired, cleaned and it was necessary to construct a new pier and buildings such as customs and warehouse. After long years of winning a concession, Chios Port and Pier could be opened in 1900 (Figure 4.34).

Figure 4.34. Port of Chios, 1908 (Source: www.levantineheritage.com)

After the Chios Rebellion in 1822, the island suffered massive losses. However, with the measures taken by the Ottoman Empire, the old commercial vitality was restored. In fact, the new period of Chios benefited from the fortune they had never before. After the Chios Rebellion, most of the island population migrated to countries such as England, America, Russia and Greece (especially Shira, Piraeus) in order to provide them with a new business and living space. Previously, some *Chian* families succeeded in establishing a connection between the Eastern Mediterranean and the Black Sea via Marseille, London, Liverpool and Manchester by importing grain and importing processed cotton products.

Within the commercial Greek communities, the Epirits (Ioannina), Vlachs and Chios were separate groups. But the fact that the trade network of the Chios was relatively stronger than the other groups. And it was based on the fact that maritime trade had more advantages than land trade. Maritime trade provided more opportunities for capital accumulation.

Major Muslim officials working on the island within the administrative organization of the Ottoman Empire became wealthier by operating the vineyards, gardens, and other real estates they purchased. Apart from this, the source of income for the Greeks in the island were trade and banking.

The main agricultural products of the island, such as mastic, citrus fruits and almonds, had a great place in the enrichment of the people. However, the developed industrial branches such as leather and silk have weakened due to the fact that people invested their money in speculation towards the end of the century, and increased migration and earthquake.

4.2.3. Developing City in 19th Century

Over the centuries, especially between the 11th and 19th centuries, the city within the walls of the fortress was the center of the political, financial and social life of the island of Chios. Only in the 19th century did it gradually lose its importance and went into decline.

In the period when the Genoese ruled the island, the port was given its final shape after the works carried out in 1440 and reached its full development. The castle, located in the vicinity of the harbor, was the heart of the city. The north and east sides of the city

were surrounded by a wide ditch from the city walls. Within the historical process, the most developed region on the island covers the Chios City and Port. Population also increased in these regions, and the city has developed around the harbor and the castle. It was effective on the structural pattern of the city. During the existence of Turks on the island, a period has occurred in which important events occurred and natural disasters produced destructive results. In this respect, it is possible to say fortress structure for the only structure that stood in the historical process for Chios City. There was a settlement pattern that developed around the castle. The port structure was also very important in historical and geographical terms. The port served as a stop and rest point for the ships coming from Istanbul and go to Istanbul.

It is possible to find some information from paintings and maps about the regional separation of the island. As the town of Borgo or Borghi, the city outside the walls mentioned in the records consists of Greek neighborhoods named as Borgo-Grecorum and Latin once named as Borgo-Latinorum.

As in the previous years, the large square that continues to exist next to the harbor to the south of the citadel is mentioned in the records as early as 1259 and in the report of 1359 in the 15th century. Some regions mentioned in the records were Apolataria, Egremos, Vlattaria, Parikia, and also Paleokastro, Kapella, Troulloti, which were more unpredictable than the Aplotaria neighborhood, as well as the aristocratic neighborhoods of Egremos and Vlattaria in Borgo-Grecorum. In the 16th century, Aplotaria reached the south from the moat of the Kale, deeply in the Kampos area and formed the main artery outside the walls of the city (Anerossis & Mylonadis, 2009).

During the years of the reign of Genoese, the social segregation of the city was marked by distinct sections for the cities. There were Genoese, Greeks and Jews families. The neighborhoods were typical in neighborhoods with distinct lines of the city. The Genoese tried to give the city of Chios the urban planning of the big municipalities of Italy. The resemblance between Chios and Genoa was impressive. Those common characteristics stated by Gavala- Monioudis (2002);

- The development of the quarters on the many knolls that surround the harbor and the castle.
- The imposing places with grandiose staircases, hanging gardens and terraces overlooking the sea.
- The impressive and rich decoration of palaces and churches.

- The pointed wooden roofs of the building, called '*travakes'*
- The height of the buildings. The building of the city of Chios and especially those belonging to the Genoese lords were very high. The building in Genoa of those times had five floors.
- The construction of a whole square, that of '*Palacai*', which was a copy of the Banchi square of Genoa.

Throughout the years of occupation and until the catastrophes took place in the 19th century, the city could maintain the appearance of an Italian town where Genoa was built. Only the castle was visibly neglected and the rest of the city retained its splendor. The walls were still distinguished in the part inside the castle and the outer walls. After the Turks conquered the island, Christians were driven out of the city. Only Turks and especially Turkish guards were allowed to live in the fortress, and the Jewish population continued to live there for the first centuries after the occupation.

The harbor, which was full of houses that the Turks could use and live was protected by Turkish guards. At the same time, the church buildings in this area were converted into mosques and 5 - 6 mosques and places of worship were located in the area. There was also a prison for the detainees from Istanbul. On the other hand, in certain documents, the walls of the Turks, according to their own shape of the wide trenches, solid towers and walls are mentioned (Figure 4.35). The mosque, the bathhouse, the lodge, the fountain in the foundation structure is located in the castle, and the Christians were right behind the castle walls.

Considering that Turks were afraid of organizing street plans and innovations, there were not big changes in Turkish part of the island. After the Turkish occupation and the gradual lowering of the fortress, the city outside the city walls, at least the Christian part, developed considerably and took over the leading role in the city's social and financial life (Philippiddes, 1984).

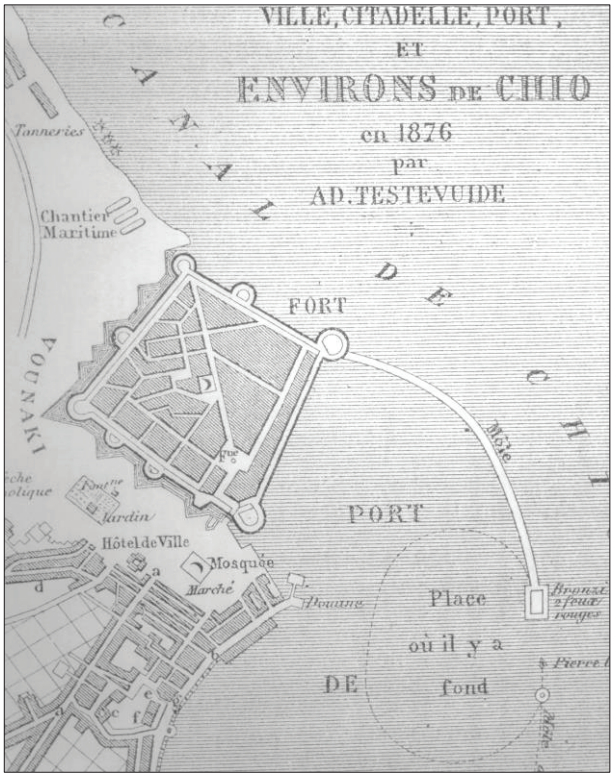


Figure 4.35 Plan of Chios Port and Centrum in 1876
(Source: www.omnia.ie)

4.2.4. Formation of Suburban Pattern

The developments in the Turkish period can be described as the period up to the 1800s and the emergence of great works up to the 1800s and the emergence of new construction techniques. In general, architecture plan samples of Chios were commercial floor shops, cafes, shops, workshops and so on.

The traditional period in which great works emerged; It is the period in which the foundation of the traditional Chios Houses. Houses generally had two floors, built next to the other. The effects of Genoese architecture continued to be seen even after two centuries of Turkish rule over the island. Traditional Chios Architecture is a unique and vernacular architecture. The most important factor that affects this is the fact that stone, marble and various stone materials availability and use.

In the post-1800 period, the island was under many influences. The most important effect the trade on the island was not only the Ottoman (but at the time limited trade with Izmir and Istanbul.) Trade relations were established with other countries such as Italy, France and the Netherlands.

Using wood material became widespread and the load-bearing system developed. In this period, the use of stone bay window (*cumba)* and balcony became widespread and outflows occurred on the facade of the building. While the neoclassic elements of the period were in various forms in the buildings, rococo and baroque style were preferred in terms of decoration. The style of architecture was defined by the preservation of old parts and the articulation of new ones.

Chios Type houses were formed during this period. The Earthquake in this period destroyed the city in 1881 as a natural disaster with devastating effects. After the earthquake, the reconstruction of the buildings and the city continues until the war years.

Figure 4.36. Chios after the Earthquake in 1881
(Source: www.levantineheritage.com)

4.2.5. Kampos

The distribution of products to international markets including mastic and citrus, and the participation of *Chians* in international trade for a long time (14th to 21st century) has created richness throughout the Island and led to creation of Kampos. The settlement maintained agricultural activities and influenced by both Italian and Islamic prototypes (Anerossis & Mylonadis, 2009).

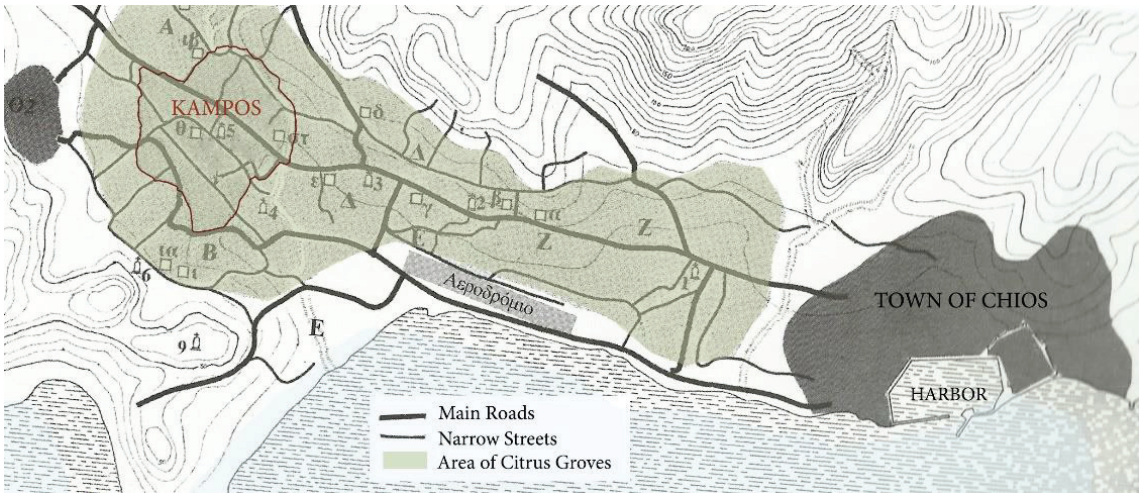


Figure 4.37. Location of Kampos (Source: Anerossis & Mylonadis, 2009)

Figure 4.38. Watercolor drawing of Kampos by Willian Gell
(Source: Anerossis & Mylonadis, 2009)

The architectural and historical heritage of Kampos, a suburban area in the city of Chios, has the character of a cultural choral originating from the existence and dominance of different ethnic and cultural groups. Chios grown and gained importance in the 14th century as an important break point for Istanbul and European expeditions, as it plays a vital role as a trading hub for trade between the West and the East. The main warehouses were inextricably linked to the plain of the nearby Kampos neighborhood in the island of Chios, the capital of the island. Because of its efficiency and agricultural tendency, this

lowland island became very important for the economy. A fertile natural environment made this area particularly suitable for homes originally built as towers (Bugatti & D'agostino, 2012).

During this period, Genoese tried to control some stoppages to occupy the coastal areas and the eastern islands of the Aegean Sea to support maritime traffic.

4.2.5.1.1. Historical Evolution of Kampos

In 1346, Genoese families took control of the island of Chios (after the first attempt in the early part of the century which lasted over twenty years); Until then, Chios was under Byzantine rule. Merchant families had the administrative autonomy for more than two centuries. The Genoese settled in Chios, and built their summer houses in the Kampos neighborhood. In the 15th century, they introduced new architecture styles to the island and transformed the existing towers to create villas. Although their families of Genoese origin and maintained connections with the city of Genoa for centuries, they integrated into the Greek families there for centuries and settled in the island's society (Bugatti & D'agostino, 2012).

Genoese lords and then rich Greek traders began their farming activities in the Kampos and organized export trade. They started to settle in the houses located on agricultural lands, and these were the first examples of good houses.

In 1566, the Ottomans conquered the island and architectural elements that had a clear Ottoman layout can be seen in the city of Chios. Different cultures in the city of Chios provided a synthesis of multiculturalism especially in the Kampos neighborhood. They created a kind of architectural list with distinctive architectural styles and construction techniques. This was the most interesting aspect of making this settlement a unique example (Cerasi, 2007).

There were many explanations described by visitors from the 14th century on the corner of this exclusive corner of the Mediterranean, Kampos. Here notes of some travelers (Anerossis & Mylonadis, 2009);

In 1684, Mansuette de Nanteuil wrote:

> What is also pleasant on this island is that all the inhabitants have a villa where they spend a large part of summer. There are beautiful houses with lovely gardens, above all in the place called 'Kampos' near the sea. The large number of these villas makes the city appear to have been built

in the forest of Lebanon, because among the smaller trees there are lemon, orange, pomegranate, fig and all species of rare and fragrance fruit trees.

Pietro della Valle wrote:

In the morning we set out on our ride to the city passing through a plain studded with mansions that are among some of the most beautiful I have yet to encounter.

James Dallaway, a pastor at the British Embassy in İstanbul in 1794, writes:

As we left the town, the whole valley to the sea is so thickly peopled and cultivated as to be a continuation of its streets. A space of six or seven miles is completely occupied by country homes, gardens and orangeries of many acres... The houses are all of stone, large and lofty, with the best rooms at top, opening to terraces. Some of them, evidently contemporary with the Genoese, look like castellated towers of a capricious form.

The island was famous with mastic and the Ottoman government considered Chios one of the most valuable provinces of the Empire. In the 16th and 17th centuries, Chian's fleets and commercial interests covered the world.

Besides their trade, they were producing and exporting orange, lemon, fig, wine, linen and turpentine at its own mansions Kampos. These well-known rich merchants and ship-owners were importing architectural and decorative styles at Kampos to decorate their houses both in the town and the countryside. During this time, the Kampos region preserved the landscape character of an Italian country town, in particular Genoa. In 1822, however, the paradise on Chios island suddenly ended. After a failed revolution against the Ottoman rule during the Greek war of independence, the Ottoman troops slaughtered or enslaved over three-quarters of the Greek inhabitants on the island and burned the mansions of Kampos. Residents who escaped the anger left Kampos and fled abroad. After 1840 the situation improved. The Chian families, enriched in Greek colonies in Russia, Romania and Alexandria (Egypt), gradually restored and renewed life in the region.

There are very few protected goods from the period of Genoese and Ottoman occupation in the Kampos plain. They built most of the mansions after the 1881 earthquake. Both Italian and Islamic prototypes influenced the form of these neoclassical mansions and properties.

In 1912, the Chios Island came out of Ottoman rule and joined Greece. Many abandoned mansions, gardens and orchards at Kampos were bought by wealthy *Chians* from Egypt and the United States. The new mansions built on the ruins of old houses,

while keeping the architectural features of the region, also included neoclassical elements that followed the fashion of classicism that was popular at that time (Keskin Yaşar, 2013).

After World War II, income from fruit orchards is divided into smaller areas, in addition to their owners and properties larger than 30 acres. In 1990, the Greek Ministry of Culture, along with its natural and architectural heritage, uniquely combined housing and agricultural activities, declared the Kampos as a Historic Site (Anerossis & Mylonadis, 2009).

There are about two hundred properties here, surrounded by high stone courtyard walls with historical and architectural significance.

Figure 4.39. A street in Kampos, taken by the author

Figure 4.40. Street of Argenti House, taken by the author

4.2.5.2. Urban Morphologhy of Kampos

The Genoese settlement model and villa type had an impact on the local pattern of Kampos. It has a settlement model which represents a typical Genoese suburban settlement model.

The urban pattern of Kampos was very similar to typical Genoese suburbs named Albarro and Sampierdarena, which established between the 15th and 17th centuries outside the city walls of Genoese (Figure 4.41), (Bugatti & D'agostino, 2012).

Kampos is not so far from the center of Chios, but it differs from the urban pattern of the city center (Figure 4.42. Kampos in R. Copeland's map in 1834. It is an isolated suburb with its unique urban and architectural pattern. Houses and roads are arranged in a geometric order. Houses have relations with the road but the lands are surrounded by high walls.

Bugatti & D'agostino (2012) state that Kampos generated a unique example in many respect. Although architecture and urban complexity of it were not similar to the Balkans, the Greek islands of the Aegean Sea, there were some common components in the architectural background.

Cerasi (2007) describes Kampos as a typical Genoese in terms of suburban land segmentation, grid-shaped street layout, land use and house-street relationships. However, he says that the housing pattern was also close to the Ottoman style in detail, such as portals above the outer doors. The house plans, unlike the Ottoman and Arab regions, resembled Genoa villas and have traces of the pre-Renaissance period. The effects of Ottoman, Old Genoa, modern Greek, 18th century Ottoman, Rococo and even Syria can be observed in Kampos.

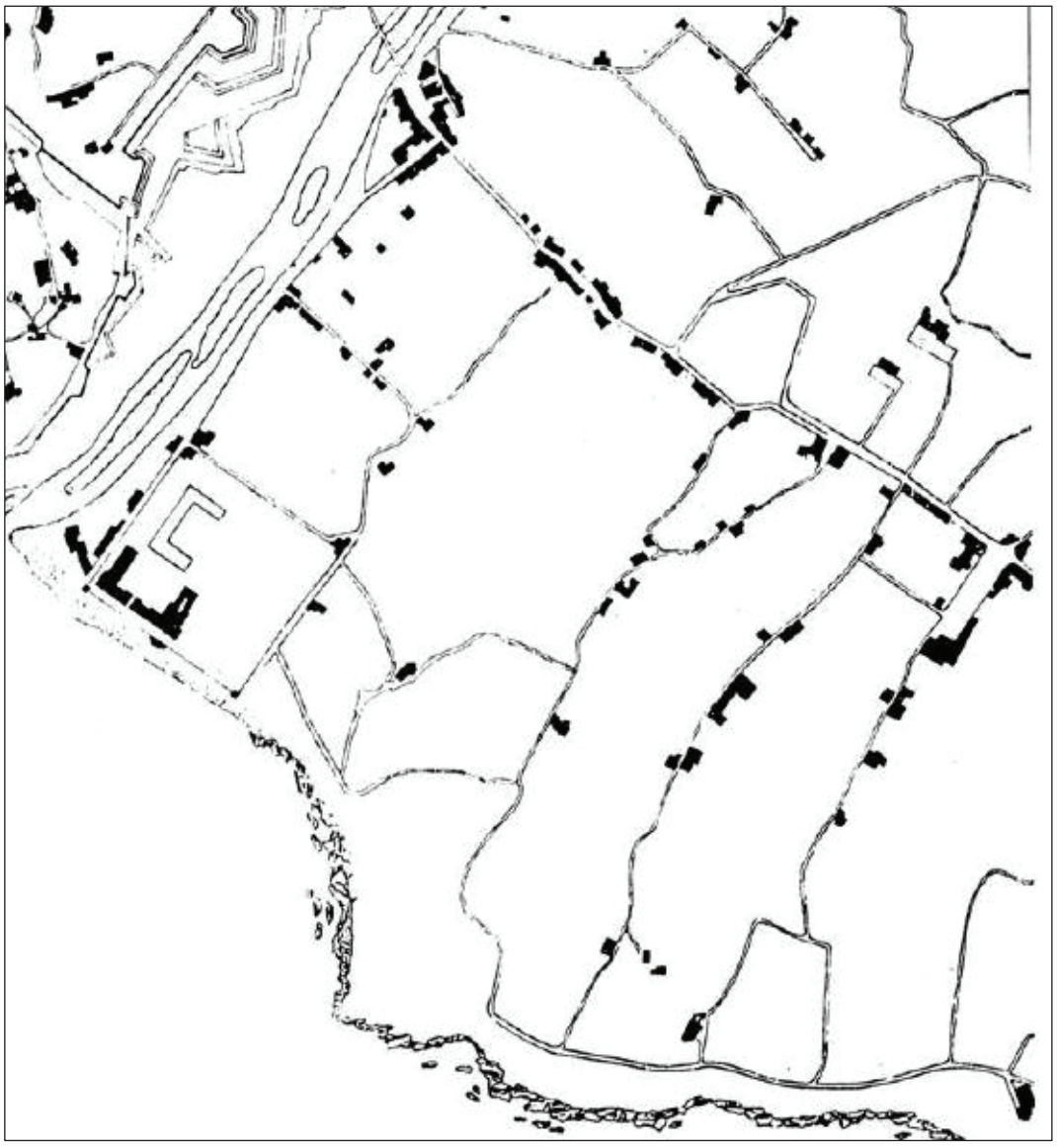


Figure 4.41. Urban pattern of Albarro in 16th -17th century
(Source: Bugatti & D'agostino, 2012)

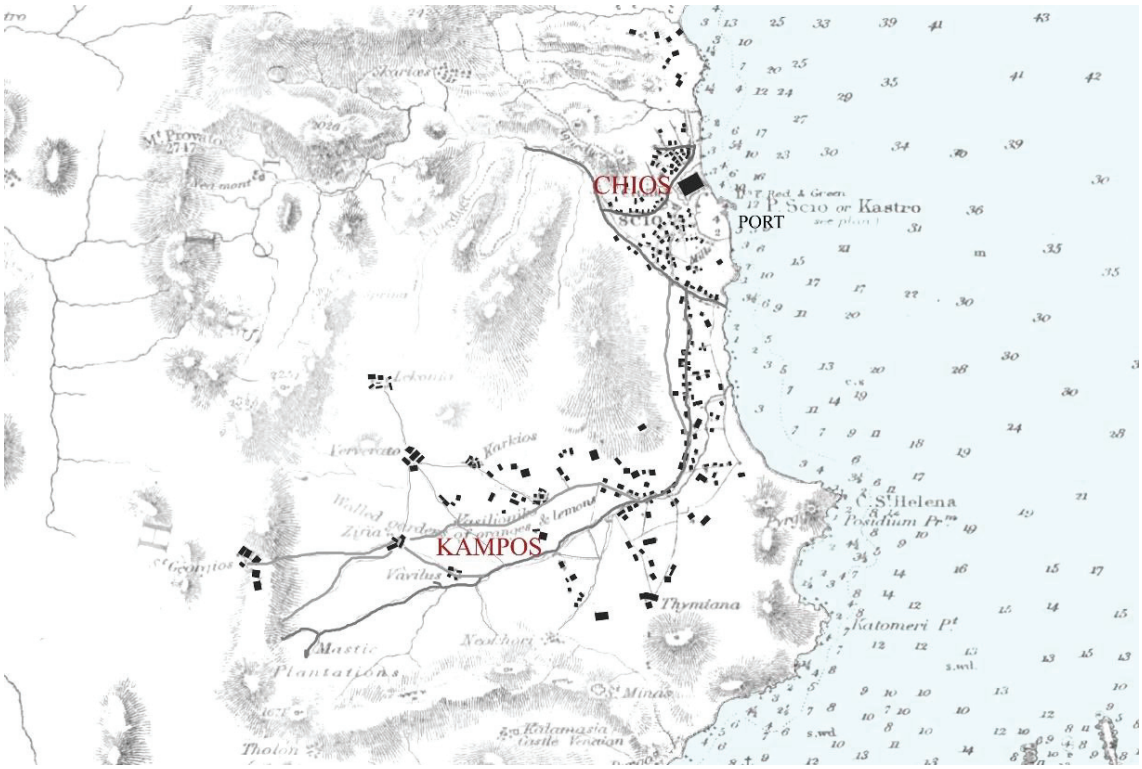


Figure 4.42. Kampos in R. Copeland's map in 1834 (Source:www.omnia.ie)

Figure 4.43. Plan of Kampos and town of Chios (Source: Smith,1951)

When the urban pattern of Kampos in 1834 is compared with the urban pattern in 19th century (Figure 4.44), there can be seen a growth. However, Kampos did not become suburban during this period, it has evolved as a settlement supporting agricultural activity outside the city from the past.

The parcels of Kampos are intertwined and the roads are like labyrinths. Since the parcels are reserved for agricultural activity, they are large and have connections with the road. The entire layout is dominated by a grid pattern, which has supported the development in the same order (Figure 4.45, Figure 4.46, Figure 4.47, Figure 4.48 and Figure 4.49).

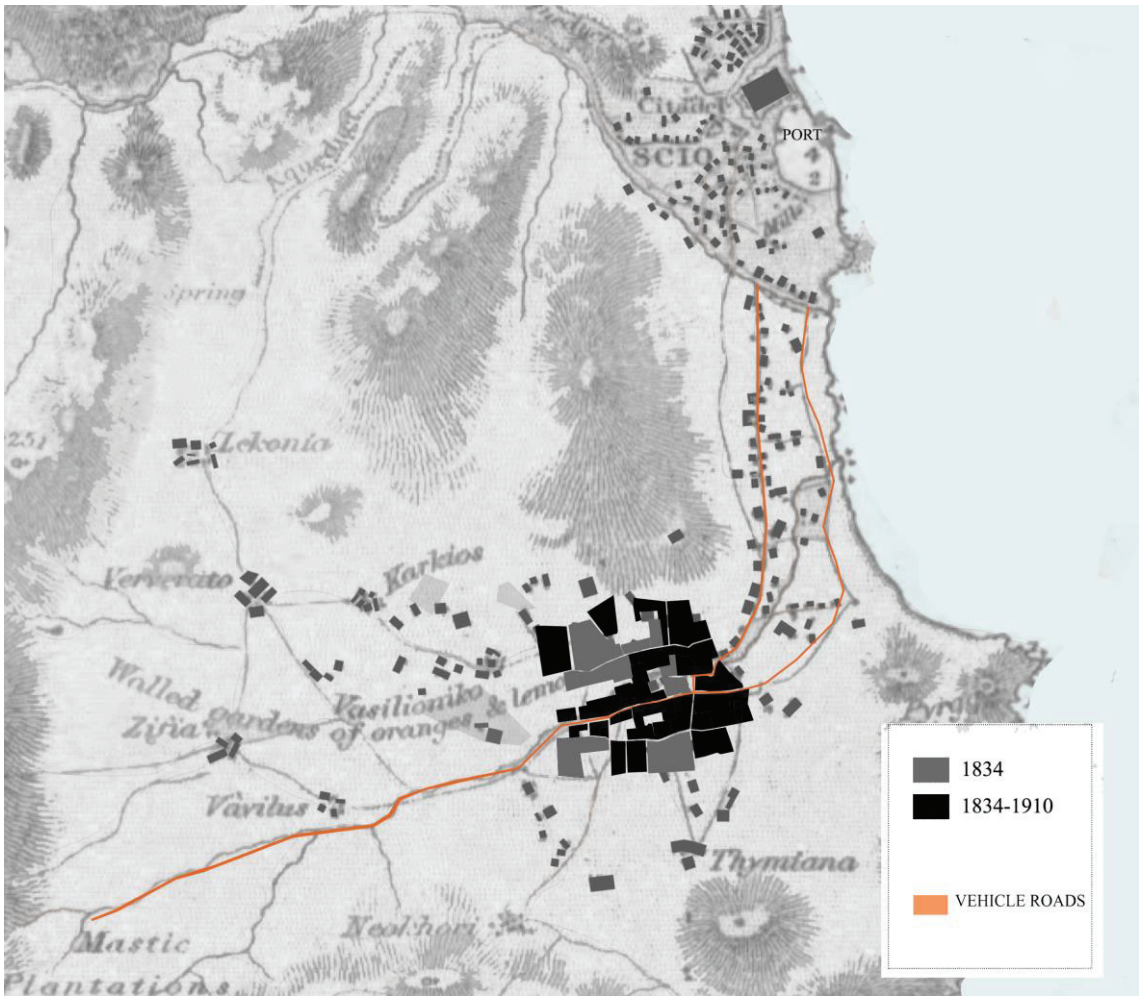


Figure 4.44. Growth of urban pattern of Kampos

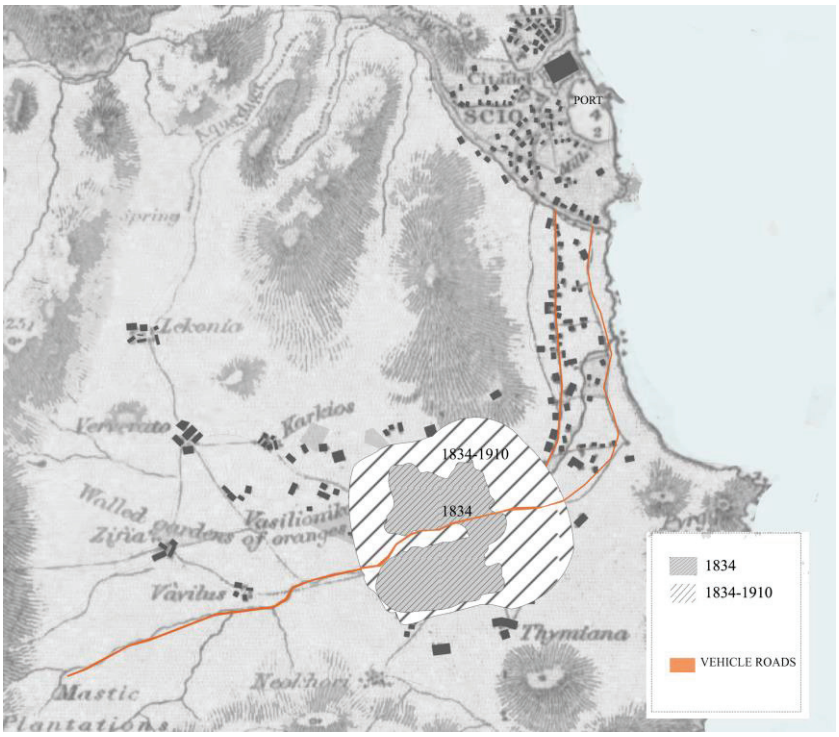


Figure 4.45. Schematic drawing of growth of Kampos

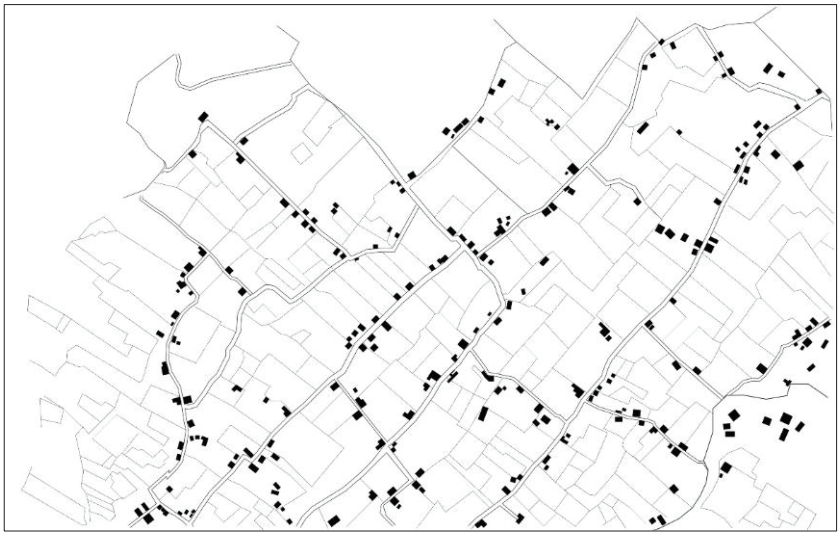


Figure 4.46. Plots and blocks of Kampos (Source Smith,1951)

This geometric layout of Kampos shows that it is in a typical Genoese suburban order. Kampos is differentiated from the general of the island with this feature. These physical features also provided isolation to Kampos and made it sheltered against to external dangers.

Figure 4.47. Parcelling of Kampos (Source: Smith,1951)

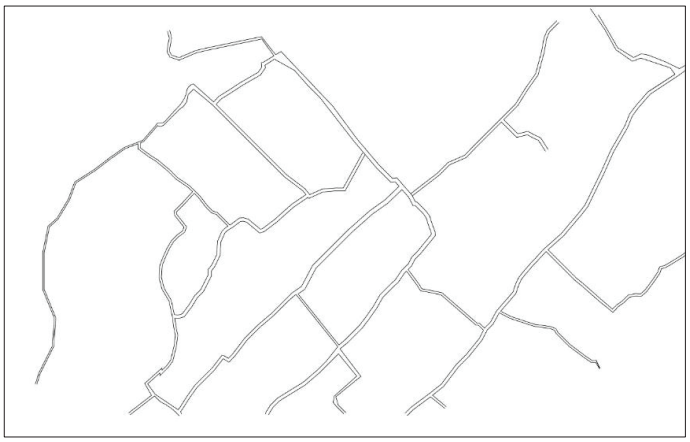


Figure 4.48. Axis of Roads in Kampos (Source: Smith,1951)

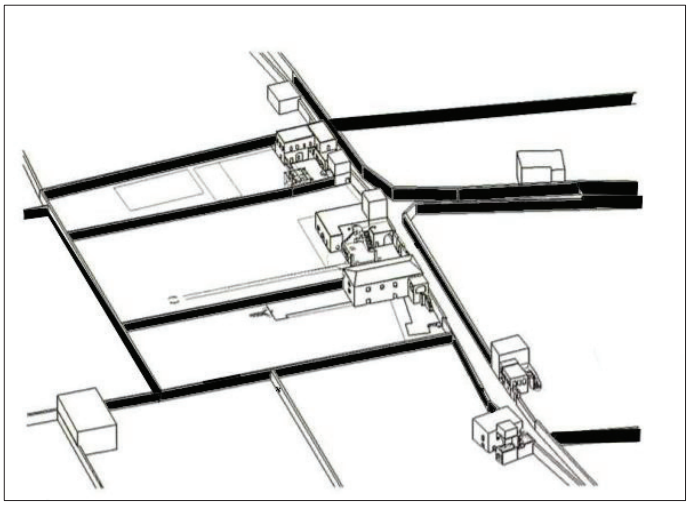


Figure 4.49. Typical urban fabric of Chios (Source: Cerasi, 2007)

4.2.5.3. Architectural Morphology of Kampos

The simultaneous existence of different cultural factors characterized the evolution of Kampos villas in the historical process. The houses in the Kampos neighborhood were built in the 14th century first as storage towers.

The Genoese who imported the tower model of Genoa to Kampos probably transformed these towers into villas by adding new elements and volumes.

Mansions of Kampos was shaped by the influence of both Italian and Ottoman prototypes in and after the 14th century. This species was assimilated and altered by the local culture, and the idea of a new villa and architectural character, which continued until the 17th century (Anerossis & Mylonadis, 2009).

During its historical evolution, many styles influenced the Kampos villa. There were many traces of the Ottoman vernacular monumental architecture, many features and elements common to the stone architecture of the region of Anatolia, Syria and Cappadocia and included some similar aspects (Figure 4.50).

As mentioned earlier, Kampos was very similar to Genoese's suburbs Albarro and Sampieardena. To understand the idea of the Genoese suburbs in Chios, Bugatti and D'agostino (2012) compared the Genoese housing pattern in Albaro and Sampierdarena with the housing texture of the Kampos and reveal some basic analogies with this comparison. The morphology of each of the three regions comprise the path system generated by the network of main streets and orthogonal ways of branching more or less perpendicular to them. The main network extends parallel to the coastline and is directly connected to the city. The layout of the road system created an irregular grid of narrow lane paths between high stone walls that hide home plots. These walled interiors were usually called 'creusa'. The term initially referred to spontaneous paths to the tops of the city of Genoa along the ridges rising from the sea. Later, the term was extended to other short roads and streets furnished with bricks or "risseu" (pebble or paving stone ornament), in the rural areas between the dry stone walls along the orchards, or on the streets connecting the villas to the main streets.

In the three urban textures that they examined, the villas were positioned along the creusa and arranged in order without forming a definite region relative to each other. They were arranged in the alternate order, and the general perception was one of a harmonious rhythm of space and volume. The villa was almost always on the street border

of the land and dominated the open space. This was determined by the need to make use of land plots for agricultural purposes, especially for citrus cultivation. This explains why the plot develops deeper than the width of the street, creating a very distinct and characteristic creusa-wall-villa-open space array. The Genoese and the Venetians manifested the construction methods at various times in the Italian region of Kampos. The first mansions built in the Kampos, resembled towers in some parts of northern Italy, such as Genoa, Liguria, and Verona in Veneto (Bugatti & D'agostino, 2012).

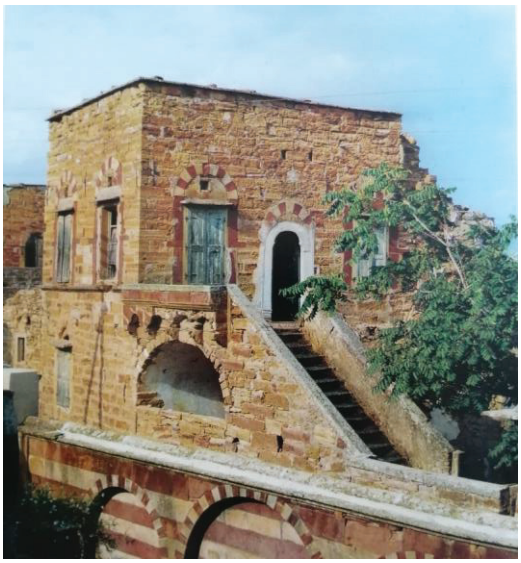


Figure 4.50. Typical Kampos House (Source: Philippiddes, 1984)

In Kampos, the unique relationship between the land morphology and the road network caused the main roads being more or less flat, while secondary roads follow the slight slope of the soil and connect to the waterways and the sea. In some cases, these roads can be filled with water and transformed into small streams.

In addition, the architecture and the garden in the houses were used as an integral whole, mainly used to enjoy the city and also include agricultural activities. Kampos has been a suburban that advanced with agricultural activities. It was not far out of the city center and transportation was not difficult as in other port cities. Therefore, it was easy to reach the city center without the need for a railway and ferry service. This is separated from other suburban settlements with this feature.

The courtyards and orchards also had some effects from Italy; The properties were surrounded by high stone walls with a large entrance door, and the walls were made from local materials that offer a wide perspective to the courtyard.

Also, the water supply technique for both domestic use and garden watering with the use of water generators and cisterns had been imported by the Genoese to Kampos. Water on the settlement played an important role as a means of both agricultural watering and aesthetic pleasure.

The Ottoman culture influenced on the architecture of Kampos, and it can be observed especially in the decorative details of the period after the 16th century: Black and white pebble courtyard, the marble cisterns, marble arched columns with typical decorative details, closed gardens, stone walls with red and beige stones (mansion and the door) and the general scene of a garden hidden behind high stone walls (Cerasi, 2007).

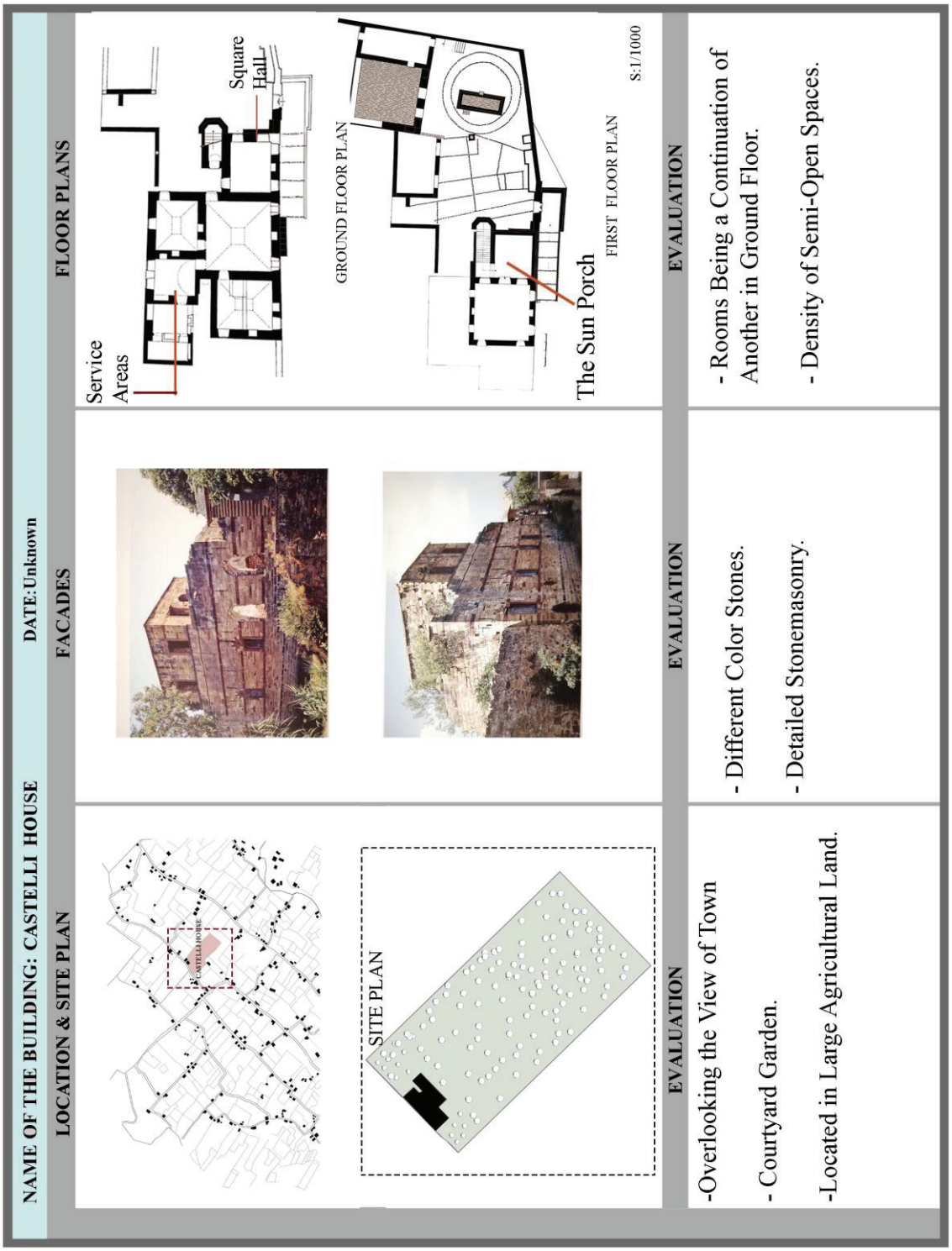
In Kampos, greenery and open spaces were denser than the houses because of the agricultural use of the plots. There was an acceptance of nature as a whole and independent of man-made independence. The balance between architecture and nature showed itself with architectural elements, there were always a pergola and a cistern.

If the general character of the Kampos villa is mentioned, it was usually a two-storey building, not a single geometric volume. The ground floor, which was more introverted and mostly related to the garden, seems to be more compact regarding the *creusa*. In the upper parts, the volume of the main housing floor was illuminated by stepping back to form towers and terraces that intensify the sense of verticality. The masonry work of the main building and wall was treated with the same technique comprising average-sized bristles placed along horizontal paths. In the main building of the villa, the stone was better processed, which gives a very strong and solid appearance (Anerossis & Mylonadis, 2009).

Figure 4.51. Drawing of Argenti House in 1881 (Source: Philippiddes, 1984)

Kampos is great combination of different elements and cultures and there are some common features in houses. There can be seen the repetition of gateways, paved gardens, taircases, one or more building volumes, pergolas and cisterns. The architectural characteristic of Kampos were analyzed in the Table 4.10, Table 4.11 and Table 4.12.

Table 4.10. Castelli house



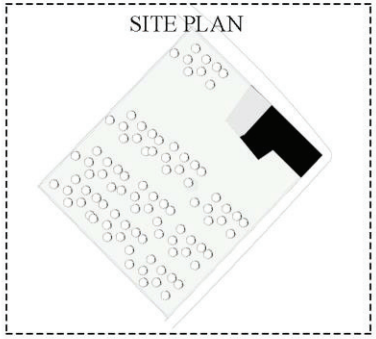
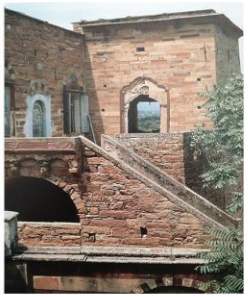
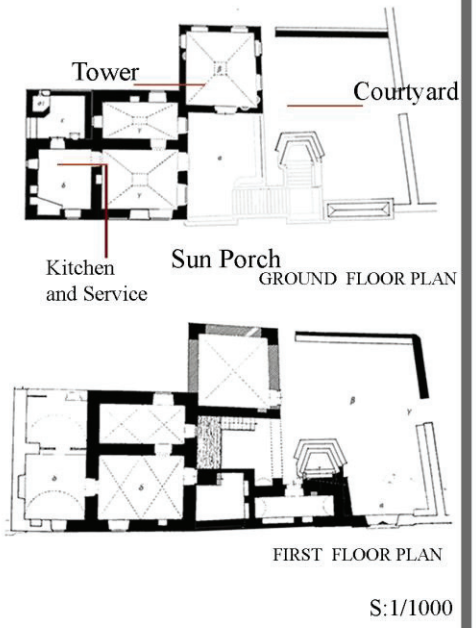
NAME OF THE BUILDING: LAMOS HOUSE	DATE:Unknown	
LOCATION & SITE PLAN	**FACADES**	**FLOOR PLANS**
		
EVALUATION	**EVALUATION**	**EVALUATION**
-Located on a Hill. - Courtyard Garden. -Agricultural Activities.	- Arched Gates to Grove. - Ornamantel Elements in Details. - Detailed Stonemasonry. - Tower Structure.	- Simple Plan Scheme. - Density of Semi-Open Spaces. - Ground Floor Designed for Agricultural Activities. - Main Rooms Located Upstairs.

Table 4.11. Lamos house

Table 4.12. Paspatis house

NAME OF THE BUILDING: PASPATIS HOUSE	DATE:Unknown		
LOCATION & SITE PLAN	**FACADES**		**FLOOR PLANS**
EVALUATION	**EVALUATION**		**EVALUATION**
-Located in Citrus Farm. - Cistern for Agricultural Activities. - Courtyard Garden.	- Simple Street Facade. - Surrounded by High Walls. - Detailed Stonemasonry. - Tower Structure.		- Simple Plan Scheme. - Separated Volumes - Ground Floor Designed for Agricultural Activities. - Main Rooms Located Upstairs.

4.2.5.4. Evaluation of Suburban Characteristic of Kampos

After analyzing the urban and architectural typologies, the suburban character of Kampos is evaluated. For this, an evaluation was made according to the criteria determined by McManus & Ethington (2007) and these characteristics were determined in the (Table 4.13). Accordingly, it would be correct to consider the settlement of Kampos as a suburb. But the suburban characteristics of Kampos is different from the examples in the 19th century and those in İzmir. It was not formed after the developments in the 19th century, it has already been there since the 14th century and shaped by agricultural activities.

Table 4.13. Evaluation of Kampos's suburban characteristics

Peripheral Location	*Located edge of the city core*
Relationship to Urban Core	*Connected to the city center for commercial activities*
Relationship to Countryside	*Agricultural activities and houses together*
Density	*Medium density*
Housing Type	*Single-family dwelling*
Social Segregation	*Upper class Genoese origin families*
Transportation	*Vehicle roads*
Cultural Formations	*Settled due to need for agricultural activities.*

In Chios, the industrialization effect of the 19th century in Chios has not been observed much. It has no connection with Europe apart from its relations in maritime

trade. The city structure of Chios has not undergone any radical changes likes İzmir, and the existing pattern has expanded where it was. However, there was a settlement dating back to the 14th century and where the upper-class lived outside the city. Kampos is referred to as suburb of Chios in the literature. As a result of the investigations and morphological analyzes, some evaluations were made about this settlement.

Although it is close to the center, it has a unique character with its houses integrated with large agricultural lands, and the streets are narrow like a maze. The gardens of the houses are surrounded by high walls and the houses are unique in character. As a result of the analyzes and field investigations, it can be said that Kampos is a unique settlement that has the effect of many cultures.

Chios, which continued to exist as a stopping point after İzmir became the primary port city of Western Anatolia, was not affected much by the conditions of the period. In fact, the loss of importance of the island is parallel to the period when industrialization affected the cities the most. There is no railway transportation on the island where the sea trade is mostly done. Rather, there is no flow of raw materials and physical elements that would require this. With the effect of being an island, Chios kept its city structure without being affected by the conditions of the period. Kampos, which is a 14th century suburb, does not fully conform to the concept of modern suburbs, but differs from the city center with its own characteristics. It is not exactly the equivalent of the 19th century suburb and it is a settlement that has been preserved from its origins until the 14th century and supports agricultural activities outside the city. It can be said that Kampos is a suburb, but it is very different from the suburban concept in the 19th century and the suburbs in Izmir.

CHAPTER 5

CONCLUSION

Within the scope of the thesis, the suburban pattern in İzmir and Chios Island in the 19th century was evaluated morphologically. For this purpose, considering the evolution of the settlements in the historical process, investigations were made by using the maps belong to different periods. The evaluation of suburban pattern was made with the findings made at the end of the tables.

The general purpose of the thesis is to examine the suburban characteristics of Buca, Bornova and Kampos in the context of the determined criteria. The evaluations about these three settlements will be explained in detail below.

5.1. Buca

Buca, which started its historical evolution as a small village outside the center, became a suburb after the middle of the 19th century. Although it is similar to the typical suburbs in Europe because of its railway connection, it differs from them with its characteristic features. In this section of the study, the maps belong to different periods were compared and morphological evaluations were made. The suburban character of Buca is examined within the eight main criteria. These are respectively;

- **Peripheral Location**

In the 19th century, commercial activities in Izmir were concentrated around ports and khans. Therefore, these regions became influenced by the spatial organizations of the whole city. Buca is located 10 km away from the city center.

- **Relationship to Urban Core**

The fact that Buca was located on the outer part of the city center did not mean that it had no relation with the city center. It was articulated to the city center by rail and strengthened its relationship. The majority of the habitants of Buca were wealthy non-Muslim groups, who had active roles in the trade and had to go the city center every day.

To facilitate this, the railway was carried out twice a day, morning and evening, and subscription cards were used. The general pattern in Buca consisted of residences and there was no specific spatial organization for commercial activities. Therefore, it was attached to the city center for commercial activities and could not be separated from it.

- **Relationship to Countryside**

Buca was chosen to settle by upper class foreign groups because of its relationship with rural life. It was very convenient to establish an isolated rural lifestyle outside the city center. This new lifestyle in Buca manifested itself in spacious and green areas. Unlike the center, the parcels in Buca were quite large and unique, and there were lots of places for recreational activities, even in the private gardens. Horse racing, animal husbandry, garden landscaping were the main activities.

Buca was also close to the villages where agricultural activities continued and habitants had the chance to reach the products easily. Buca, shaped within the framework of rural areas, and continued the relationship with that areas.

- **Density**

The majority of the urban pattern in Buca consisted of housing areas. The density of the housing was not high because the parceling was allowed for large areas. In the city center, residential areas were concentrated around commercial areas and there was an unplanned growth. There was not high density and unplanned growth in Buca, similar to the city center, because there was enough land to support a growth that developed over time.

- **Housing Type**

Investigations were made by examining three different houses selected from Buca. The dwellings here were generally built in a Western style and emphasized the income level of the owners. Typological studies have been done about Buca houses, but they were very diverse, some were exaggerated and some were plain. Plan schemes were shaped and designed according to the needs in social life. The houses here were not in the form of an ordinary dwelling, but in the form of a mansion or kiosk. In particular, Levantine residences, which were located in large plots, had been separated from the residential pattern in the city center and formed around a new style. It can be said that the houses in Buca were not ordinary styles like in the suburbs in Europe. In this respect,

Buca differs from the typical suburban concept and proves to be a different interpretation of the typical suburban pattern.

- **Social Segregation**

There was a spatial disintegration in İzmir, especially according to the ethnic groups that became more prominent after the 19th century. This disintegration was also very relevant to commercial activities and the sociocultural differences. The majority groups in Buca were Levantines and Greeks and these two groups were the leading ones in trade. Their income levels were quite high and they were also separated from the Greeks and Levantines living in the center. The inhabitants of Buca were different in sociocultural aspects from the population the city center.

- **Transportation**

Before the railway connection, it was two hours to reach Buca from the center. In addition, the number of houses was very few and the settlement was scattered. After the establishment of the railway connection in 1860, access to the center became much easier. Buca became a settlement that could be easily reached during the day.

- **Cultural Formations**

Previously, Buca was preferred for secondary housing area because of its relation with rural areas. With the development of commercial activities and transportation facilities, a new life style occurred here and houses has been converted to permanent dwellings. Buca was an isolated settlement outside the city center, but at the same time it had relation with the center. Therefore, it became more attractive over time and had a growing pattern.

- **Evaluation**

Buca complies with the general characteristics of suburban settlements examined in the scope of the thesis. As a result of the general evaluation, it was found that Buca could be called suburb. However, it is not correct to say that it matches the typical suburban pattern in Europe. Although it is obvious that it is similar to the concept in England with the existence of the railway, Buca has its own unique texture.

The fact that the residences were built in large plots like kiosks or mansions makes this place special. The living spaces were shaped with recreational activities and based on a different lifestyle from the city. The proximity to the villages where agricultural

activities continue was another feature. The Levantines in Buca had a great impact on the shaping of the settlement in every sense. As a result of the investigations, it was observed that Levantine houses in Buca have many unique characteristics. Some houses stand out with a tower structure and others are shaped around more regular volumes, while some houses have columned and flashy entrances. The main themes in the plan schemes of the mansions were shaped according to social lives of the owners.

There were not only mansions in large gardens in the settlement, but it is known that the people migrated to Buca from the city center and built small-scale houses. Some of these dwellings were built in the form of row houses, similar to those in the city center. The reason for not investigating these dwellings throughout the study is that the main structure of Buca were shaped by large mansions rather than these small scale dwellings. The users of these mansions pioneered the creation of suburban life in every context and influenced the spatial organization of the settlement and identified the train station as their focal point.

The idea of living outside the center and working in the center adopted for İzmir in the 19th century was formed with the leadership of Buca. This is the most important indicator of a new interpretation and form of European-style suburbs for İzmir.

5.2. Bornova

Bornova, like Buca, was a small village located outside the center. It started to develop after the wealthy Levantines chose it as a secondary residence. Especially after the second half of the 19th century, when the railway was connected, this development process accelerated and Bornova became a permanent residence. In the section related to Bornova, maps belong to different periods were used to observe development process and morphological evaluations. Suburban character of Bornova has been examined with eight main criteria. These are respectively;

- **Peripheral Location**

Bornova was 10 km away from the city center and access to the center became easier after the railway connection. The fact that Bornova is located on the railway line and close to the surrounding settlements brought many advantages. Senior managers living here could reach more easily to the products came from other villages. They were also shaping a lifestyle outside the city center.

- **Relationship to Urban Core**

Bornova, which has become the focal point of the Levantines, mostly in the upper income group, has never lost its connection with the center after the railway. The advantages of the railway were so apparent and Bornova line included more privileges than the line in Buca. For example, some wagons were separated only the use of senior managers live in Bornova. There was a strong relationship with the center as commercial activities were conducted in the city center.

- **Relationship to Countryside**

Bornova was a village where the agricultural product needs of the surrounding settlements were met before it developed as a secondary housing settlement. After the region became a suburb, its connection with rural life continued. There was also a rural life structure in the lands where the houses were built.

- **Density**

The plots of the houses were smaller than Buca, but were very large compared to the center. Garden landscaping and open spaces were very important because they were used for outdoor activities where the homeowners showed their social status. The density of the structure was much less than in the city center.

- **Housing Type**

There were two types of housing typology in Bornova. One of them was small-scale single row houses. It was a mixture of Western and Ottoman styles, built in a similar style to examples in the center. Other types of buildings were The Western style houses of Levantines which could be called mansions or kiosk and were built in large gardens. These dwellings constituted the prominent dwelling type of the settlement. When investigations were conducted about three different dwellings selected from Bornova, various determinations were made. Similar to Buca, the houses built in the Western style and emphasized the income level of the owners. Plan schemes were shaped and designed according to the needs in social life. Bornova differs in this respect from the typical European suburbs like Buca.

- **Social Segregation**

In addition to the Levantines, Turks, Greeks, Jews and Armenians used to live in Bornova. However, the Levantines, who had the highest income level, were located on

certain axes, mostly near the station, and other ethnic groups were located on the periphery of their areas. In other words, the social structure in Bornova was segregating in itself beside the differentiation from the city center.

- **Transportation**

Before the railway connection, there was only a rough road to reach Bornova. Also, there was also a small pier, which could be reached by boat from Alsancak. Later, a new road was opened which was in a better condition. With the establishment of the railway connection in 1865, access to the center became much easier. Senior managers who were habitants of Bornova did not have to buy ticket to use railway and they had special wagons to trip.

- **Cultural Formations**

The development in Bornova started with the construction of secondary houses. Later, with the developing commercial activities and transportation facilities, the residences became permanent houses. It grew out of time as a settlement isolated from the crowd outside the city center, which was in contact with the center at the same time.

- **Evaluation**

Bornova was examined according to all these criteria and evaluations were made. As a result of the general evaluation, it was found that Bornova can be named as suburb and there is a suburban pattern very similar to Buca. Therefore, it has similarities with the suburban pattern in Europe. The fact that the residences were built in large plots like kiosks or mansions makes this place different from European suburbs. The living spaces were shaped with recreational activities and based on a different lifestyle from the city. The proximity to the villages where agricultural activities continue and the continuation of this activity around the settlement was another feature. Bornova is a different interpretation of the 19th century suburban pattern with its unique style like Buca.

Three different houses were investigated and these were selected from Levantine dwellings near the railway. Because this axis was the most effective focus point in shaping the settlement. The regions where other ethnic and income groups lived were also located on the periphery of this axis. So, in Bornova, as in Buca, the Levantine community played the most important role in shaping the physical environment of the settlement. Therefore, these houses became one of the main actors of the suburban pattern and shaped the settlement. It is not possible to observe such a situation in European suburbs and it is not

possible to talk about the existence of a separated ethnic group. In this respect, Bornova differs from the typical suburban concept and brings a new interpretation to this concept.

As a result, a new type of suburban concept developed in Bornova, which has a structure similar to that in Buca and this concept was evolved at the focus of Levantine habitats. As a result of all the morphological evaluations, it is possible to say that Bornova had a unique suburban pattern.

5.3. Kampos

As a result of the morphological evaluations about Kampos, some determinations were made about this settlement. It is not right to compare Kampos, which has a unique housing pattern and character, with modern suburban pattern. However, this settlement, which dating back to the 14th century, continued to exist in the 19th century and beyond. Therefore, it is possible to examine Kampos according to main eight suburban criteria. These are respectively;

- **Peripheral Location**

The center of Chios was concentrated around the harbor and castle, and Kampos is located about 8 km away from the city center. The main sources of livelihood on the island were the production of mastic and citrus fruits. The villages where the mastic was produced were also located outside the center and were located around Kampos. Citrus production was also carried out in Kampos and the villages nearby. The fact that Kampos is located outside the city center provided an advantage in terms of its proximity to agricultural activities.

- **Relationship to Urban Core**

In Chios, trade relations were maintained in the harbor and its surroundings, while agricultural activities were carried out in Kampos and the surrounding villages. Agricultural products were collecting and exporting from the port to other countries. Therefore, the relationship with the center was important for commercial relations.

- **Relationship to Countryside**

Kampos had a lifestyle intertwined with rural life, and the settlement itself was the center of the countryside. The agricultural activities, which were the source of

livelihood, were combined with the houses, and Kampos was a unique settlement in this respect.

- **Density**

The majority of the residences in Kampos were located on large agricultural lands and the relationship with the outdoor space was very important. The number of residences in Kampos was not few but it has medium density compared to the center.

- **Housing Type**

In Kampos, there was a developing housing pattern shaped around agricultural activities. The most important feature of the dwellings was that it emphasized open and semi-open spaces. The architecture in Kampos is a good example of vernacular architecture. Stones were quarrying from the surrounding villages and were used as main materials. With the impact of the Genoese prototypes in the buildings, it was possible to see traces from the Ottoman and the general Mediterranean style. Kampos was a settlement under the influence of many cultures and had a unique housing type.

- **Social Segregation**

Kampos was a settlement established during the Genoese period and was heavily influenced by Genoese. After the devastating earthquake of 1881, the houses were rebuilt in the same way as their originals, and the families who moved out of Chios purchased them and continued to use them as seasonal villas. Kampos was preferred by the upper income group engaged in agriculture during its historical evolution.

- **Transportation**

There was no other transportation option in Chios besides the carriage way. Kampos was located in a plain valley and transportation was not difficult. The transportation of agricultural products from this region to the port could be done easily because there were no physical difficulties.

- **Cultural Formations**

The development of Kampos was entirely dependent on agricultural activities. The life here was not established with feelings such as the desire to live close to nature. This place has formed spontaneously in the countryside and has not lost this feature.

- **Evaluation**

As a result of the evaluations made, it can be said that Kampos may be called a suburb. However, it is different than typical European suburbs in many respect. The most important reason for this is that it is shaped by the effect of a life style that focuses on agricultural activities. Although it is located in a rural area where agricultural production is carried out, it has a unique type of housing which is far from the rural style and makes it a unique suburban area.

The multi-layered cultural structure in Kampos was reflected throughout the settlement from the housing type to the urban pattern. Although it appears to be a repetition of a typical Genoese suburb as urban pattern, it has a particular style of its own. There is no other settlement in Chios with features like Kampos. Although it is a rural settlement that survives with agricultural production, it has not been established in a simple manner. A good example is the fact that the houses were built for agricultural purposes, and built in a mixed style, with the effects of many cultures. There are aesthetic details that attract attention especially in the homes of the leading families. Although the houses are generally located in an agricultural land, they are not of a simple type and are not constructed of materials other than local materials. This gives information about the high income and socio-cultural status of the society that lived here. There are many agricultural production villages around the island, but none of them are similar to those of Kampos and have a typical rural settlement with simple patterns. Kampos is a unique suburban area, which is distinguished from all aspects of Chios and stands out. It is a settlement that has managed to isolate itself both physically and socially. As a result, Kampos has a remarkable character and suburban concept with all these features.

5.4. For Further Studies

This study, which aims to examine the 19th century suburban pattern with a holistic approach on three settlements selected from İzmir and Chios, contains some starting points for the studies about the suburbs in the Ottoman port cities in the 19th century. In addition to the architecture, the subject has been discussed in a city planning scale and has been examined from a wider perspective.

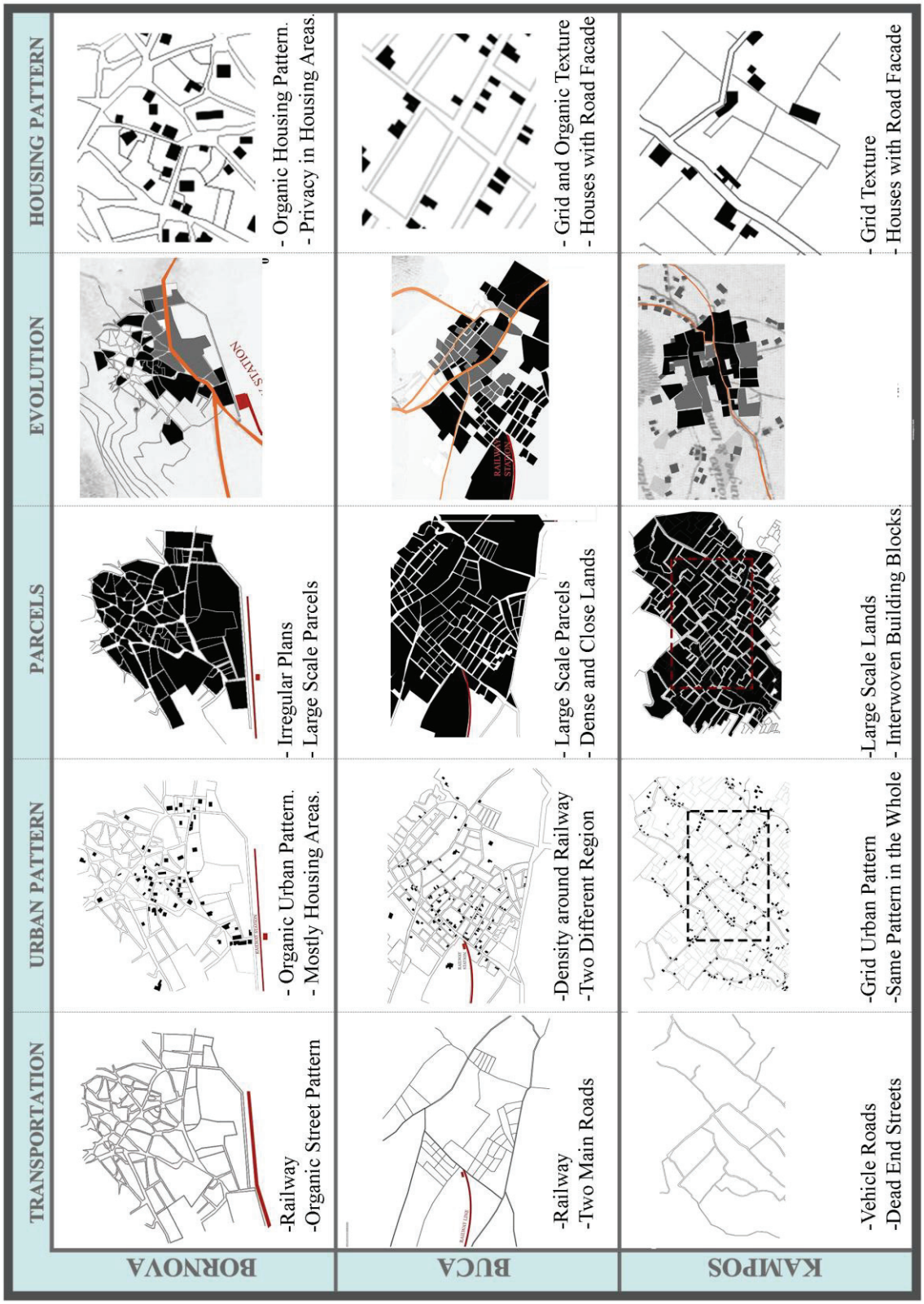
During the study, the concept of suburban was traced through the settlements chosen within the Ottoman framework. However, it was not possible to examine

settlements in other port cities because it is a very comprehensive issue. The following main questions can be used to form the basis of new studies:

- What was the situation of the suburban pattern in the leading port cities of the Ottoman Empire in the 19th century?
- Does the suburban pattern in İzmir differ from those in other port cities?
- Did the dwellings in the suburbs of the Ottoman port cities share a common style?

Comprehensive examinations can be made in the studies to be carried out by making use of the findings obtained within the scope of this study. If the suburban pattern in the port cities is taken from a wider perspective, detailed studies will emerge. In addition, this thesis can be main basis for the research about the Ottoman port cities, Izmir and Chios history, non-Western modernity and urban studies. I hope this study will be useful for the studies to be conducted in a wider perspective.

Table 5.1. Evaluation of the settlements



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