

**THE MORPHOLOGICAL AND THE URBAN CHARACTERISTICS
OF THE MONUMENTAL BUILDING COMPLEXES IN
OTTOMAN CAPITALS**

**By
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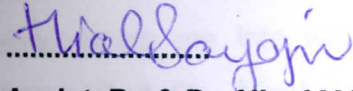
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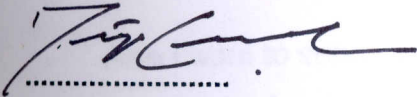
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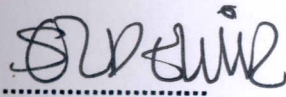
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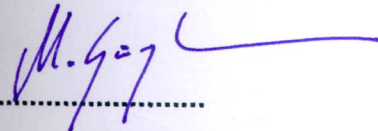
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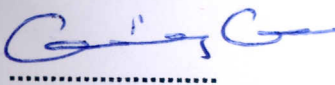
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ABSTRACT

This thesis deals with the analysis of a very important feature of the Ottoman cities, which is the Ottoman Monumental Complex. The concept of the monumental complex is defined as the core of social life in an Ottoman city.

The typical Ottoman city has the most dominant features that make the historians specify it in a specific classification, but not among other classifications. Within time it has formed its characteristic features as a result of many different influences such as religion, geographical location, the conquests and the inheritances from the previous cultures. This makes the features of the Ottoman city unique but at the same time resembling the features of other cultures.

In most of the previous studies, the Ottoman monumental complex is examined in terms of its architectural features. However it is seen that the concept has a deeper meaning when it is examined in terms of urban design and the social structure of the city. It has the significance of being shaped in accordance with Ottoman urban design pattern, has the responsibility of having a monumental value and having an important social task as a result of including a complex of different functions within itself.

The study defines Ottoman Monumental complexes in Bursa and Edirne by means of their morphological criteria, origins, location, programs, and also by means of spatial and visual characteristics.

ÖZ

Tez çalışması Osmanlı kentlerinin çok önemli özelliklerinden biri olan Osmanlı Anıtsal Yapı Kompleksleri üzerinedir. Anıtsal yapı kompleksi kavramı Osmanlı kentinde sosyal yaşamın çekirdeği olarak tanımlanmaktadır.

Tipik Osmanlı kentinin sahip olduğu özellikler onun diğer genel sınıflandırmalar içerisinde yer almasını engelleyip, başlı başına bir kategori oluşturmasına yol açmıştır. Zaman içinde din, coğrafi konumlanma, fetihler ve daha önceki kültürlerin bıraktıkları etkilerin ışığında kent kendi karakteristik özelliklerini şekillendirmiştir. Bu Osmanlı kentinin özelliklerinin, kendine özgü olmasının yanı sıra birçok farklı kültürü de anımsatıyor olması sonucunu getirmiştir.

Daha önce yapılmış olan çalışmaların çoğunda Osmanlı Anıtsal Yapı Kompleksleri mimari özellikleri üzerinden incelenmeye tabi tutulmuştur. Ancak kentsel tasarım kriterleri ve kentin sosyal yapısına bağlı olarak bir inceleme yapıldığında, komplekslerin çok daha derin anlamlara sahip oldukları görülmüştür. Kompleksler, Osmanlı kentsel tasarım dokusuna göre şekillendirilmiş olmanın özelliğini , anıtsal bir değere sahip olmanın sorumluluğunu ve farklı fonksiyonları içeriyor olmaktan doğan sosyal görevi yansıtmaktadırlar.

Çalışma, Bursa ve Edirne'deki Osmanlı Anıtsal Yapı Komplekslerini, morfolojik kriterler, kökenleri, konumlanma ve içerdiği programa göre ve aynı zamanda mekansal ve görsel özelliklerin ışığında incelemiştir.

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Chapter 1

INTRODUCTION

The Ottoman Empire is a great influence on the entire global culture as well as the Anatolian culture. They played a great big role in the world history for over six hundred years both physically and socially. The richness of the Ottoman culture is due to the mosaic, which the societies belonging to the empire, come together and form.

The topic of this study is the investigation of the morphological and the design characteristics of the monumental building complexes in Bursa and Edirne, both of which are Ottoman capitals. Ottoman monumental complexes that are better known as külliyes are the main cores of the Ottoman social life. The reason of the different naming of the commonly known külliye is to bring the subject to a more global basis. Since the term külliye is not interpretable in all languages the term monumental complex is adopted instead. The reason that lies beneath the choosing of Bursa and Edirne is their identity as a capital city. All the cities of the empire are just as important as the capital cities but the capitals are examples of a typical Ottoman city since they are also the palatial cities at which the sultan and his family live.

The main objective of the thesis is to define the undeniable feature of a typical Ottoman urban design pattern, which is inherited from the previous settlements and improved for the present use. Also it emphasizes on the importance given to the increasing of the social level.

Functions a society lack other than residential and commercial functions are found under the contents of külliye since it consists of many functions that vary in a wide range changing from religious affairs to health related and educational affairs. This feature emphasizes the position of külliye in terms of both the urban pattern and the social life. Many definitions are brought forward

concerning the monumental complex. One of the best explanations is by Akozan. According to Akozan; a külliye is a complex of buildings with usually a mosque in the nuclei. All the buildings forming the complex have different social functions. The külliye is one type of an architectural complex, which is brought together in a modern and social manner (Akozan 1964).

As it is explained in the proceeding chapter, the Ottoman külliye was an institution that housed a variety of services grouped around a mosque. Within time, the emphasis on these complexes has come to a point such that the mosque and its surrounding facilities became centers for the Muslim communities (Gencel 2000). The concept of building social complexes for the benefit of society began with the early times of Islamic evolution. In the early Islamic societies, these centers were constructed incrementally in a period of time and by different people. Gencel says that it was the Ottomans who built complete centers, composing of a number of architectural units built together as comprehensive projects (Gencel 2000).

In a typical Ottoman city, the külliye is the core of the urban life according to Cerasi. If the examples are investigated chronologically, it is seen that there is an undeniable development throughout time both in terms of physical appearance and content. (Cerasi 1999)

Throughout this study the külliye is investigated in three stages and from a deductive point of view: overall layout and organization, spatial composition and the visual experience. These stages also define the basic outline for the contents of this thesis.

The study concentrates on the monumental complexes of the early era, which are located at the capitals of the Ottoman Empire before the conquest. These capitals are namely Bursa and Edirne. If the exemplary külliyes are examined chronologically they teach a great deal about the evolution of the concept of külliye. The story of the analysis starts with the Orhan külliye, which happens to be the first külliye in the history of the Ottoman Empire, continues

with the külliyes of Hüdavendigâr, Yıldırım Beyazid, Yeşil and Muradiye in Bursa and the Muradiye and Üç Şerefeli in Edirne and the period ends with the analysis of the Beyazid the 2nd külliye in Edirne, which happens to be one of the best examples on the concept of külliye. Chronologically the analysis ends with the transition era between the early period and the classical period.

The conquest of İstanbul is a significant turning point in the world history in all aspects. Besides changing the middle age into the new age that is referred to as the classical age in terms of urban design, it also changed the Ottoman state into an empire. This change made itself visible in several issues. One of the most important issues is urban design, which also consists of both architecture and social life. The topic of this study covers the monumental complexes that were built until this change. This is the reason of excluding İstanbul and the complexes in İstanbul, from this study. İstanbul and the complexes that were built in the new age are left aside to be studied in a further research.

In other words the early period that the study covers is between the beginning of the 14th century, until the middle of the 15th century. It begins with the conquest of Bursa, which is accepted to be the beginning of the Ottoman state and ends with the conquest of İstanbul, which is accepted as the turning point of the world history. According to the information obtained from Gencel's study, Bursa which happens to be the first capital city of the state had four major külliyes, one smaller külliye and several smaller service cores whereas Edirne being the European headquarters of the Sultans had two major külliyes, one smaller külliye and a number of small service cores (Gencel 2000).

During the study, the külliyes are not investigated architecturally. They are mostly investigated from an urban design point of view and in terms of morphological criteria. The main sources for the analysis of the külliyes and the capital cities are mostly studies about the Ottoman architecture and urban history. Architectural drawings and plans are mostly based on drawings from the previous studies. The drawings are dated to the earliest possible date. At

this point it is really important to continue the study from the earliest possible dated map or plan since they transmit the forms of spaces and the relationships between masses and open spaces in their truest state. The accuracy of these drawings is doubtful since there were lots of damaging earthquakes, and lots of vital repairing in the history of these complexes. Still with an overall look they are sufficient for an urban design study. The archives of the city libraries and the municipalities were also visited and the külliyes were examined on the site. Actually on site examination does not mean very much because in most cases the original plans are not available and thus what is seen does not reflect the entire realistic picture.

The külliye itself is not only an urban design issue but also a multi – disciplinary issue such as politics, social sciences and religion. Therefore, the importance of the relationship between the political, social, and religious contexts and the form of the külliye is fully accepted. During this study a rather general approach to the concept of the Ottoman monumental complexes is adopted.

In chapter 2, the morphology of a typical Ottoman city is explained generally. It gives a brief account of the historical origins of the külliye. A study on the urban structure of the Ottoman city is carried out and based on that, the zoning of a typical city is investigated. After an understanding of the city characteristics and the importance of the külliye compared to the other parts of the city, the study is then deduced to the overall layout of the külliye in the proceeding chapter. In the proceeding stage the monumental complex is investigated by the means of its origins, its functions, its evolution and its location in the city.

The remaining of the study mainly covers the spatial composition and the visual analysis of the Ottoman monumental complex in the form of külliye. The spatial composition, which is examined all throughout chapter 3, mainly refers to the organization of the complex with relation to its environment. The spatial design criteria and the formation of space within the külliye are discussed. The

visual experience that is studied all throughout chapter 4 generally deals with the design elements and the definition of the design elements, which are common to all the külliyes chosen for the study. It is examined from the eye of the user, maybe a pedestrian and not as an urban object within the whole city this is possibly what makes this study distinguishable among the others.

Finally in the concluding chapter, the general evaluation of the comparative results is carried out with the attempt of defining these results in terms of common criteria.

Chapter 2

UNDERSTANDING OTTOMAN URBAN STRUCTURE

2.1 The Morphology of the Ottoman Cities

The morphology of the Ottoman city is under the influence of many features. Most of the Ottoman cities are formed on top of previous settlements. In the case of the capital cities the settlement is located on top of Byzantium remaining. In addition to this, there is the feature of bringing along the Islamic tradition. The main addition to this is the reality of conquest-based understanding of progression of the Ottoman Empire. As a result of this there is an unbelievably rich mix of different cultures.

The Ottoman society has an inevitable tradition of nomadic culture, and this makes the necessities and the customs differ thoroughly from the other cultures especially the settled ones. Up to the time the society started a settled life in 1299 the needs were generally taken care of temporarily. Apart from all these features it was also influenced by the urban tradition of the Selcukis.

In other words the Ottoman urban morphology is a mosaic of different traditions and cultures that enables the historians to name it with a specific name. It has a rational form, which makes it to be classified in a specific class named the Ottoman city.

Cerasi says that, it has generally been specified amongst the Islamic – Arabic cities. Even though it has most of the qualities an Islamic – Arabic city has, it is not so convenient to consider an Ottoman city amongst Islamic cities since it is not the only influence on a typical Ottoman city. The Ottoman city also has some common principles with a classic European or a Byzantine city, but when compared to each other it has a different structure (Cerasi 1999).

The interpretation of the Cerasi's explanation of the main differences an Ottoman city has when compared with a Byzantine or European city, is as below;

- Being an **open city without definite borders between the urban and the rural area** happens to be one of the most important issues in an Ottoman city. In a Byzantine city life usually takes place within the inner fortress and the area between the outer fortress and the inner fortress acts as a buffer zone with the meadows and vegetable gardens etc. An Ottoman city usually inherits the fortified walls and if it is located at an appropriate point makes it the core of the city and there is not a concept of separating the urban and the rural areas. Until the beginning of the 19th century the urban activities in the real meaning were all assembled around the central nodes or flag centers (sancak merkezi ve liva). As a result of this almost all the cities especially the ones in Anatolia have inherited an ancient core. Many Anatolian cities have evolved from either a tumulus or a Byzantine acropolis. On these occasions the inner fortress of these cities is nothing but the city itself; if the fortress is located at a very high spot it could also be abandoned as well.

Today it is still possible to see the remainders of the fortress walls in the cities, which are known to be of great importance in the Ottoman's time. Another difference of the Ottoman city from the other structures especially from the early Anatolian town before the Ottomans time is the inner fortress never being the only forwarding architectural and morphological element.

- There is absolutely **not an only central area**. Centrality is broken into pieces between many symbols and locations. The commercial center and the religious center are usually two different centers. A typical Ottoman city does not have a main core but it has lots of smaller poles. The reason for this is the lack of a function to load a main center. Generally the main center has the function of governing whereas in an Ottoman city, this function is followed in the residences of the governors.

- **The relations with the land** are concentrated towards the two directions and they are thoroughly simplified. This feature is also related with the above since it indicates to the urbanization type of an Ottoman city not being axial.
- **There are many important open areas.** The necropolis, cemeteries, multi tombs and the open spaces of the meadows and the vegetable gardens are counted among these areas. These areas are perceived as sub elements and they achieve a great role in the formation of the Ottoman cities. In the classical Byzantine and Oriental cities these areas are of secondary importance and instead they have urban parks and inner city open areas (Cerasi 1999).

In the light of the above description, it could be said that there is not a clear urbanization principle. It is not possible to talk about a decent understanding of a primary center, an organized traffic network and a hierarchy. Cerasi describes the classical Ottoman understanding of urbanization as “the tendency of organizing the functional areas according to their functions, with almost equal distance from a hypothetical center, and making it in such a way so that it is not possible to recognize it just by looking at the physical structure”(Cerasi 1999, p. 80). In other words, the approach that can also be named as polarization is not perceived physically at the very first instant.

During the discussion about the Ottoman urban morphology, it is inevitable to talk about principle of opposition. This quality is faced at almost every point of the planning and design in the urban scale. The principle of opposition refers to the ultimate conflict between the outer look of the city and the inner self that is like day and night. Cerasi explains this conflict as the opposition between the outer look that is heterogeneous, ornamented and lively and the inner look, which is simple together with the complexity created by the placement of similar houses (Cerasi 1999). One of the main reasons of this opposition is said to be the physical, functional and conceptual differences belonging to the different units, which make up the urban zones. These differences are one of the main topics to be discussed throughout this study.

However it is clearly known that one of the main influences on the Ottoman city, is the Seljuk city which both chronologically and evolutionary is placed in front of the Ottoman city. It has been observed that the urban structure, which the Ottoman city has formed and the one the Selçuklu city has formed has many differences when compared to each other.

The main difference is the preference of the different thresholds. “Selçuklu city usually prefers meadows and places with natural thresholds whereas the Ottoman city prefers mountain thresholds that are located at the point between the mountainous areas and the meadows” (Cerasi, 1999, p. 81). Cerasi indicates that every civilization forms its own urban form as a result of the mountain system, geographical features and the history it has inherited (Cerasi 1999). This quote could be interpreted as the main difference being the locational criteria. The urban form is related with the location and since the locational criteria differ from each other, it is inevitable for the urban form to be different.

“The ancient Turkish city which, has a free and an organic pattern, owns a rhythmical organization. The result obtained is nothing but the surfacing of the non-geometrical forms, which are based on the inner pattern. The forms of these old cities have evolved from the necessities of the users. It is witnessed that the human being and the nature are two factors, which affect each other in terms of shaping the urban network and the city pattern as well as the house. The climate has a very efficient role for the specification of both human and life” (Aru 1998, p. 11). As Aru indicates in the above paragraph the geographical conditions of the settled area has a great deal of importance in terms of the formation of the urban network. In addition to this quality, another criterion that should not be missed is that the Ottoman city locates itself near water and water sources.

Another important feature is the location of the greater complexes to the higher spots in order to make it possible to indicate them from far (Cerasi 1999).

This feature is especially emphasized in the urban design of the three capital cities of the Ottoman Empire.

As indicated in the beginning the main principle of the Ottoman urban morphology is the separation of the zones with different functions and the functional districts. The detailed inspection of these groups makes the Ottoman city easily readable. When the Ottoman city is the case, there are three distinguished groups. These three groups differ from each other in terms of functions as well as physical qualities. The three functional groups are residential, commercial and the religious – cultural zones (Cerasi 1999).

2.1.1 RESIDENTIAL ZONES

The residential zone does not have any economic relations except for one or two unimportant exceptions and it only has the function of lodging within the zone as Cerasi indicates (Cerasi 1999). As a result of the social life of the Ottoman tradition, the residential place in other words the house and the neighborhood is a world completely different from the market area and the economic activities that take place there. The house and the close environment in other words the neighborhood (mahalle) is the result of the social look that precedes the economic activities as men's work and the house as the natural living environment of women.

The mysterious and disorderly look of the Ottoman residential pattern hides beneath lots of structural features. Cerasi explains these features as:

- **The separation of the residential zone into independent units** within some rules. This separation is referred to with the term “mahalle” in Turkish. When the concept of mahalle in the Ottoman tradition is studied, there are some interesting results found. One of the most important results is the ethnical differentiation. Ethnical differentiation is one of the main factors that direct the formation of mahalles.
- **The special formation of the streets** that are conditioned as a result of the parceling order and the division of the urban areas... The urban

historians define the street network irregular (regellos). In fact the streets are irregular, narrow and do not reflect a pattern, which is in harmony and homogenous. The street networks do not define the urban network like in the modern day but, the urban network define the street network. The streets are opened in accordance with the needs. Another important factor is the geographical conditions, which are vital in defining the street network.

- **The width of each plot** which is formed by a garden including a house inside. This plot is formed as a result of strict typological regulations.
- **The comparative superiority of the 3-D schemes** when compared with terraced and isotopic settlement schemes.
- **The typological features of the residential buildings** that get together within schemes of independent scattering. The units of these residential buildings seem to get together accidentally whereas the plans of the rooms seem to be so rational to be formed accidentally. This mainly has to do with the family tradition of the social life. According to the Ottoman tradition, after marriage the kids continue living with the family of the male side so the house are organized so that they serve more than one family (Cerasi 1999).

“In many Ottoman cities the residential units are lined up as terraces. It is so that the cities, which are located on slopes, would have the same structure unless directed in a complex way by some other planning factors. The most important one of these factors, is the relation that is tried to be put forward between the urban street and the rest of the city” (Cerasi 1999, p. 101).

One of the most important factors that are not to be missed during the study about the Ottoman urban structure is the concept of dead-end streets and the amount of dead-end streets due to the relation Cerasi puts forward in the above paragraph. The main reason of the constant using of this element is the importance given to the privacy and the need to create a semi - private place, which puts the family life in a place of extreme importance.

” A life style, which enables an introverted style that contains a natural irregularity other than topography, is repeated constantly in ancient urban patterns. The same order is observed on flat areas as well as slopes. Aside from this the concept of dead – end streets is seen constantly in different forms. The effort to create an individual community is seen as the main idea behind the formation of every single residential units” (Aru 1998, p. 11). The dead – end Street is an extremely important issue since it is the result of a very social feature of the Ottoman tradition and it results in being an inevitable physical feature. By being so it becomes one of the main figures of the Ottoman morphology.

2.2.2 COMMERCIAL CENTERS

Commercial center is the one district that is mistaken for a city center resulting from its structural difference and its being a center of attraction. The family life in the Ottoman tradition is strictly separated from the rest of the urban functions as a result of the religion based social life. When a comparison is to be done between the public – religious based functions and economic activities, it is seen that the relation between the economic activities and the residential activities is like black and white whereas the religious - cultural activities take place closer to the residential zones and are more accepted. It can even be noted that the mosques start to determine the places of the neighborhoods at some point.

Cerasi says that even though the religious – cultural activities are inserted into the residential activities up to some extent, the economical activities do not have that freedom at all (Cerasi 1999). The economic activities kept their regional density and were able to keep out of the residential districts. He also adds that on occasions of economical districts being a central district which is acting more like a business district (mahalle). The main mosques and the baths are added to these districts in small and medium sized cities (Cerasi 1999).

It could easily be said that there is not a concept of centrality for real when an evaluation using the material in hand is done. On the contrary the location of economical activities close to each other and the massive effect they make as a result of the homogenous content together give the feeling of centrality. Together with the main mosque and the public bath this functional group, which is accepted as a commercial center is really far from being a city center.

“Even though there is a couple of speculations about this subject, in reality the main mosque and the markets (bedesten) are the traditional elements of the Ottoman urban pattern. The shops choose their places around these two elements; there is a functional relation between the mosque and the market shops for the second one provides the foundation for the maintenance of the first one. Still it is not completely correct to speak of a complete spatial integration...The structuring of the monumental religious and public complexes outside the commercial area without much speculation indicates that the integration if there is any is resulting from necessity rather than from a representative understanding of significant centrality” (Cerasi 1999, p. 103 – 104).

When the Ottoman urban pattern is inspected, it is seen that the area which is perceived as a center is not actually a center as it is supposed to be. It is noted that it is not aimed for that area to be a real center but it is perceived so because of functional differences, and the structural difference when compared with the tight residential pattern. “One of the most important evidence in order to prove this is the lack of the administrative units that are supposed to be found in a center. In terms of physical appearance, the structure of the market shops (bedesten) make the commercial center easily distinguishable” (Cerasi 1999, p.106). In Figures 2.1 and 2.2 the main commercial centers of Bursa and Edirne are seen. Being a commercial center does not mean that the district is also a city center. However with the evolution of time the roles of the commercial center somehow shifted towards being a city center.

As a result it is not true to speak of an urban center in an Ottoman city. “Just like the other areas of civilization, the architecture of the Ottoman Empire is a total of different poles and multiple functions which should be examined separately and thoroughly” (Cerasi 1999, p. 106).

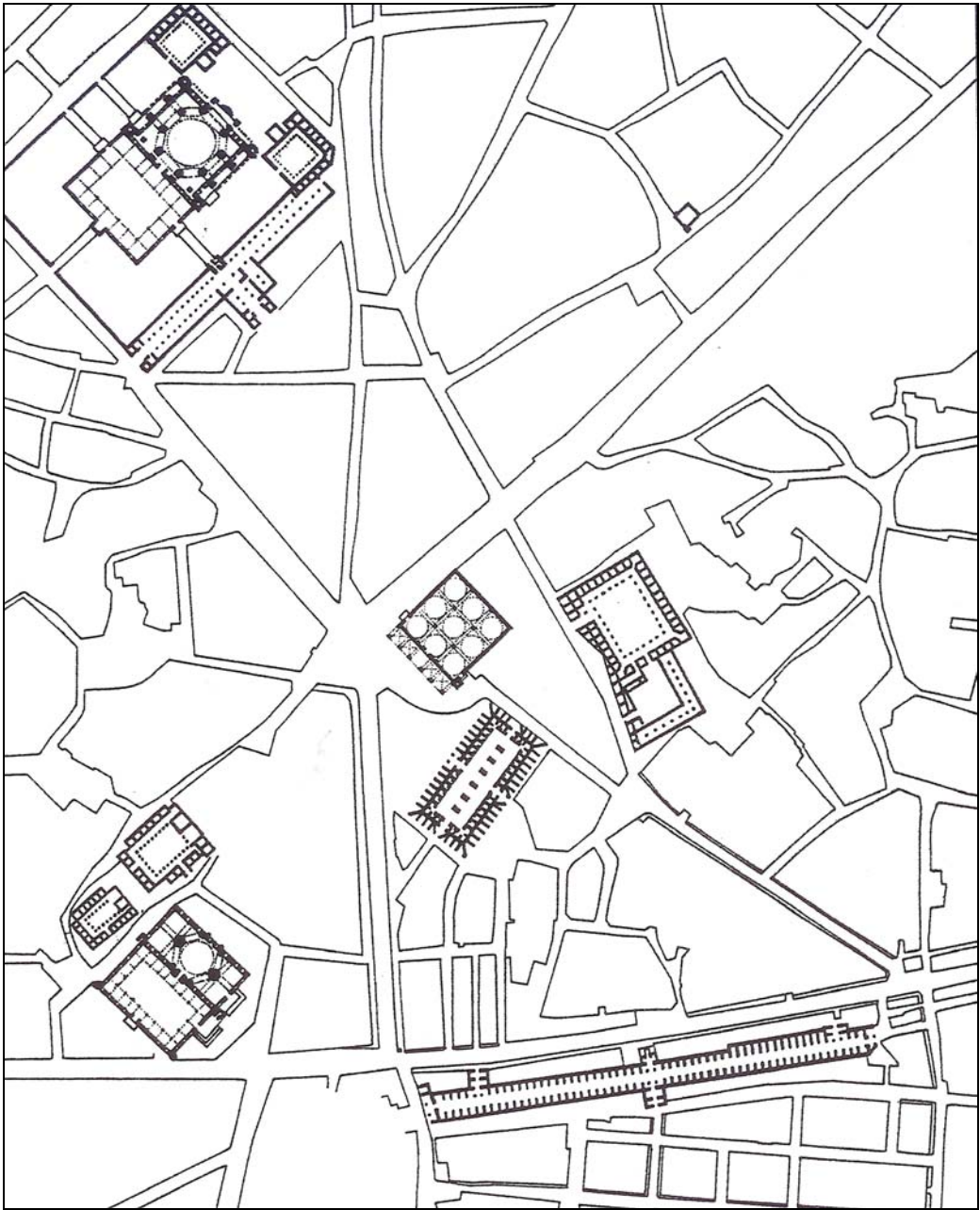


Figure 2.1 The Commercial Center of Edirne (source: Cerasi 1999, p. 110)

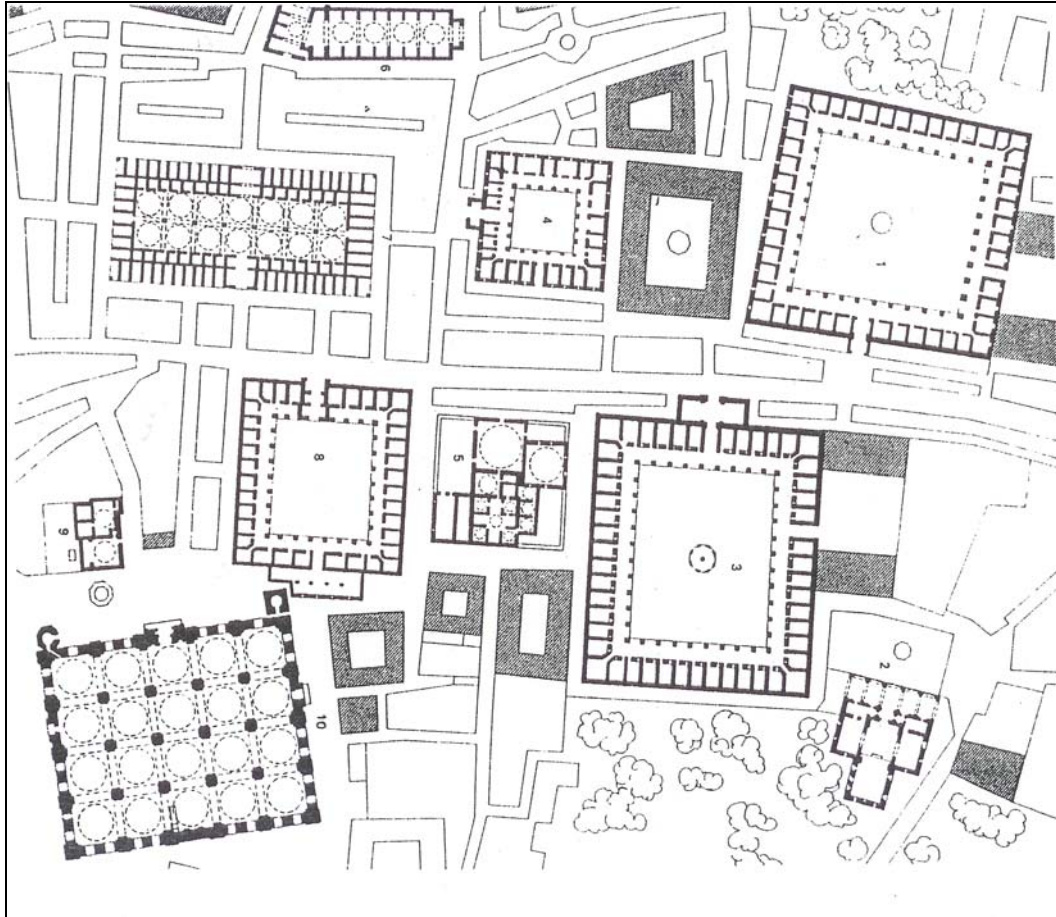


Figure 2.2 The Commercial Center of Bursa (source: Gencel 2000, p. 42)

2.1.3 RELIGIOUS – CULTURAL CENTERS

In order to explain this group of buildings in a sentence, the following comment would be appropriate; “The complex of buildings which are brought together for specific social aims” (Cerasi 1999, p. 138). These complexes are usually referred to as külliyes and have the quality of being a social center. Different units are brought together in order to meet different social needs. If these needs are to be counted in an orderly way, it is as follows: mosque, madrasa (medrese), tomb (türbe), hospital (darüşşifa), soup house (aşhane), guesthouse (Tabhane), school (mektep), library (kütüphane), market place (arasta – çarşı), khan (han), caravanserai (kervansaray), public bath (hamam),

lodgement buildings(meşruta), public toilets, fountains (sebil) and time house (muvakkithane) (Özmert 1988).

In spite of very few exceptions the mosque is generally the focal point of the complex (Özmert 1988). Up to the classical era, the complexes have formed as a result of structuring the buildings close to each other whereas starting from the classical period the units of the complexes started to be planned together and accordingly in a comprehensive design approach.

It is seen that in most of the Ottoman cities there are neighborhoods which contain a mosque or a mescit as the focus. "During a study which is searching for the remainders of the ancient neighborhoods of Bursa, it has been understood that these religious buildings are especially important in terms of making the area distinguishable. In 1530, there were 147 mahalles and three communities in Bursa where at the same time contained 148 religious buildings (130 mescit and 18 mosques)"(Baykal 1976, p. 20 - 23). This knowledge is taken into consideration especially to support the thesis. The result to be understood from this quote is that the religious and the public based activities are more into the daily life of the Ottoman people mainly because these complexes have the mosque within their contents.

"The specific segregation of the functions in the Ottoman city makes the mutual conditioning of the morphology and type unnecessary and eliminates the organic dependency between the organization of the parcels and the streets. ... The segregation of the residential and economic activities from the religious and cultural activities is less clear and this segregation is typological and not regional except for the monumental building complexes. It is related more with the structures of the buildings by themselves than the complementary features of the districts. Sometimes the mosques and the churches form the core of a district and gives life to that district. Just like that the marketplace also has its own mosque and in the case of small and medium sized cities the main mosque is located at the market place. Even though the religious buildings are never inserted in the continuing street façade like in some European cities with very compact patterns, they have a very tight urban relationship with business world and the residential units with the help of the courtyards" (Cerasi 1999, p. 84 – 86).

There is a great conflict between the isolated, simple residential typology of the Ottoman architecture and the imposing, silhouette defining structure of the monumental buildings. Especially the ones that date closer to the classical period are more imposing and contain more ornamentation as if to reflect the status of the Ottoman Empire. In addition to these, there is the locational criterion of the urban monumental complexes that prevent the complexes from being built in the crowded urban pattern.

Cerasi explains this conflict between the residential quarters and the complexes as the following; “The residential zone has an irregular shape and it is widespread, the commercial zone is dense even though it is not formed from clear and defined shapes, the religious – public buildings differentiate from all with their striking and sharp forms. The principal of the separation of functions does not include the clear differentiation of each functional group in a neighborhood” (Cerasi 1999, p. 86).

The separation of the functions contains more of a conflict and disorder and it is verified with the help of lots of typological, architectural and local features. The subject of religious – cultural will be examined in more detail in the following chapters.

2.2 Urban Monumental Complexes

The most common definition of the building group, which will be referred to as the Ottoman monumental complex all throughout the study, is the külliye. When this definition is to be explained it could be said that it is a building complex, which has the mosque as the focus and specific units with different functions surrounding the mosque. This building complex was referred to with lots of different names all throughout the history but all the different definition give the same result.

In the ancient Islamic societies almost all of the social necessities were met within the mosque. In those times the mosque was also functioning as the supplier of social needs with the evolution of time the necessary functions have started to form their own and separate architectural units and be separated from the mosque.

If the definition is to be summarized again; the külliye is an Ottoman monumental complex which is formed with the togetherness of different buildings including different functions which are equipped to meet the social needs of the society.

“The külliyes are architectural complexes which are brought together for very civic and social aims in terms of both function and construction. They are the most successful product the Turks have presented to the world” (Akozan 1969, p. 303).

The most important qualification of the Ottoman monumental complexes is the raising of the social level of the society and while doing so also improving the silhouette of the city by aesthetic means. They even stand out today as imposing figures. Among the examples, which still stand out today; Süleymaniye and Sultan Ahmet of İstanbul, Yeşil of the first capital city Bursa (Figure 2.3) and the Selimiye of Edirne could be considered.



Figure 2.3 Silhouette of the Yeşil Külliye, Bursa
(source: Kütük and Çorum 1971, p. 31)

2.2.1 ORIGINS

In all religions, the temple for prayers is also a social center, which accommodates the necessities of the social life as well as gathering the believers of that religion in one center. The mosque for the believers of Islam, just like the churches and synagogues is a social center since the beginning of the Islamic belief. In the earlier times of Islamic belief, the mosque was an element, capable of forming a social center. A benefit of being at the focus of the center is explained in terms of lodging the other facilities. After the thorough expansion of Islam, the facilities started to occupy different buildings still focusing around the mosque and forming a building complex. At this stage the architecture of the different buildings started to differentiate as well. Among the most important of these facilities, the madrasa, the tomb and the khan could be counted. It is known that as these units are differentiating, the dependency of the functions to each other has increased and the importance of the togetherness of the functions in one center in terms of forming a social core has increased.

*“The most important service rendered by the mosque, beside its role as a religious center was education. As early as the time of the Prophet, there was a roofed area to the North of his mosque that opened directly to the mosque’s court. This area was called **şuffah**, which was composed of the place for residence and the court of the mosque for classroom. Thus, the şuffah can be seen as the origin of the medrese, and can also be seen as the origin of the hospice which was generally connected to the mosque. However, it was at the time of Nizamn al-mulki, the vezier of the Seljuk Sultan Alparslan (1063 – 1072), that a more defined educational system for the idea of medrese was introduced” (Gencel 2000, p. 8).*

“When it comes to the Selcukis time, the mosque is still classifies as a structure in a role of lodging many functions within itself” (Ünsal 1973, p. 11). With the help of the factors like increasing population and increasing necessities, after some time the different functions have started to place themselves in independent architectural units. It is a known reality that these complexes are referred to as “İmaret”. The term İmaret is not accepted as a term for referring to the Ottoman monumental complexes, which the thesis studies but it is appropriate in the case of the mosque and the nearing functions in the Selcukis time. According to Akozan the evolutions dating back to the Selcukis time do not exactly classify as the külliye, because they are not very meaningful architectural compositions. They are generally buildings constructed near each other in terms of their structuring reasons (Akozan 1969).

The most common version of the grouped functions is the togetherness of the mosque and the madrasa. The units constructed this way, were referred to as multi functioned architectural units. The other functions, which have formed the present külliye, were brought together in different times and in different ways and they could even be constructed on different dates after the construction of the focus and as separate architectural units. In each case the togetherness of the different functions is rather important. The harmony of the building types with the existing pattern and the previous units is an extremely important feature. Some of the exemplary complexes remained since the Selcukis times are:

- “Huant Hatun Mosque – Kayseri - 1237: In this case the mosque, the madrasa, the tomb and the accompanying bath are designed in order to be together and constructed adjacently. The tomb is located at the meeting point of the madrasa and the mosque, which are structured independently. The bath is not connected to the other units physically but it is located near the others.
- The madrasa of Double Minarets (Çifte Minare Medresesi) – Erzurum - 1253: The complex is formed of a tomb and a madrasa in other words two different units that are physically attached to each other.
- Gök Madrasa – Amasya - 1265: The mosque and the tomb are designed as separate units but they are constructed adjacently.
- Muzaffer Bürüciye Madrasa - Sivas: The prayer room (mescit) and the tomb are placed inside the madrasa but as separate architectural units.
- Eşrefoğlu Mosque – Beyşehir – 1296: It is formed from a madrasa and a tomb which are constructed adjacently” (Gencel 2000).

During the time of the Selcukis the madrasa was almost as important as the mosque and for the first time it was supported by the government. Also at this time, the constructing of the külliyes were almost as important as constructing the other social activity buildings and it was counted among the unwritten tasks of the governors.

The term foundation (vakıf) was first found in the time of the Selcukis. The term started to be using actively after it was thoroughly improved and in the Ottomans time it has reached in its most improved and detailed state and enabled the maintaining of the social complexes. According to Gencel, it is to have a property’s benefits used for pious purposes (Gencel 2000). If the system were to be explained briefly, it would be as the following.

In the Selcukis time it was slightly different than the actual definition. It was as the enabling of all the society to use the functions, which are located in separate architectural units freely and the incomes of activities are transferred

to the necessary functions. Gencel says that the vakıf system mainly tended to supply all the necessary means to keep the religious, educational and social services in operation after they were built. It was a very detailed system and it was explained to the users with a legal document called the vakfiye (Gencel 2000). It was addressing the director of the complex and it explained every single detail from the number of the staff to what is the monthly income to get from each supporter function.

This concept is improved in the Ottomans time and adopted to all kinds of urban activities. The functions a külliye can possibly contain are classified into two groups. The first group is the one with a regular income. They are the ones like the public bath, the khan and the shops. The second group is the one, which contain the functions that use the income in order to maintain their existence like the soup house (imaret), the guest - house (tabhane) and the mosque. In the Ottomans' time the system was improved so that it enabled the maintenance of the worldwide complexes.

The construction of the public bath is exemplary for the above information. In the Ottoman's time when a külliye was to be constructed, generally the bath was built first and started running. According to the historians who are specialized in the area of the monumental complexes the main reason for this was because the function of the bath was not served for free and by doing so it earned a regular income, which was transferred immediately to the rest of the construction. Other than the public bath, the khans, the market shops and the closed bazaar (arasta) could be counted within this category.

The bases of the külliye program was found during the beginning times of the Ottoman Empire which is referred to as the early era and during the time when Bursa was accepted as the capital of the Empire. In the Ottoman's time the massive integrity belonging to the Selcukis time was broken and buildings with different functions started to exist around the mosque. In the earliest times there is not a rational geometry to the massive integrity but starting from the conquest of İstanbul in other words being an Empire a strict geometric form

started to be considered among the inevitable features of design. If the the layout of the Hüdavendigâr Complex and the layout of the Selimiye complex is compared, the difference in terms of geometry is clearly seen. (Figure 2.4 and Figure 2.5)

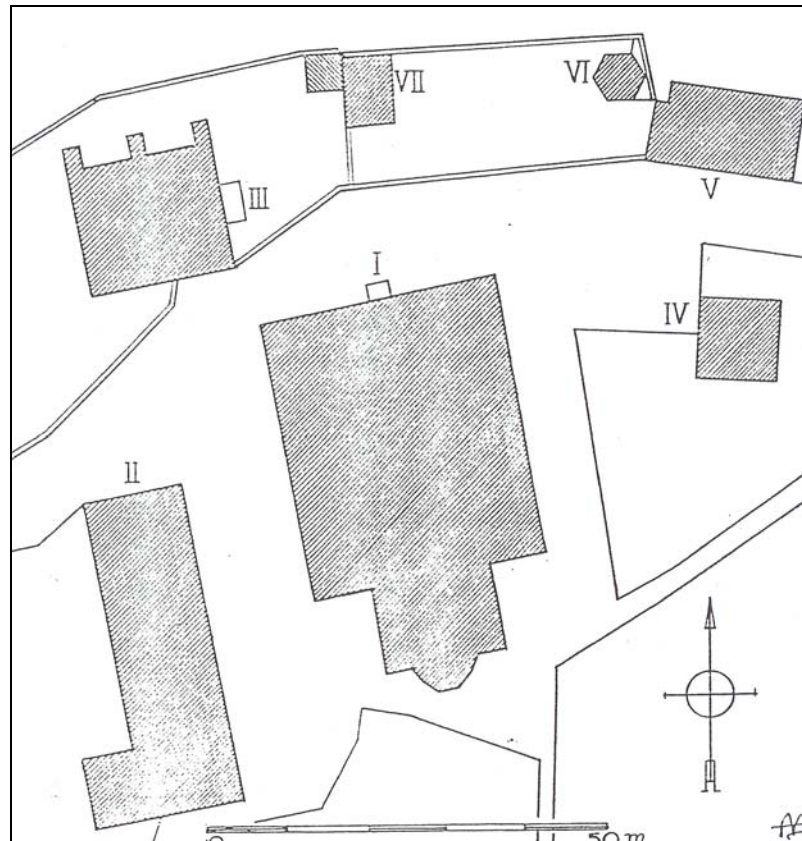


Figure 2.4 The Plan of the Hüdavendigâr Complex, Bursa
(source: Gencil 2000, p. 49)

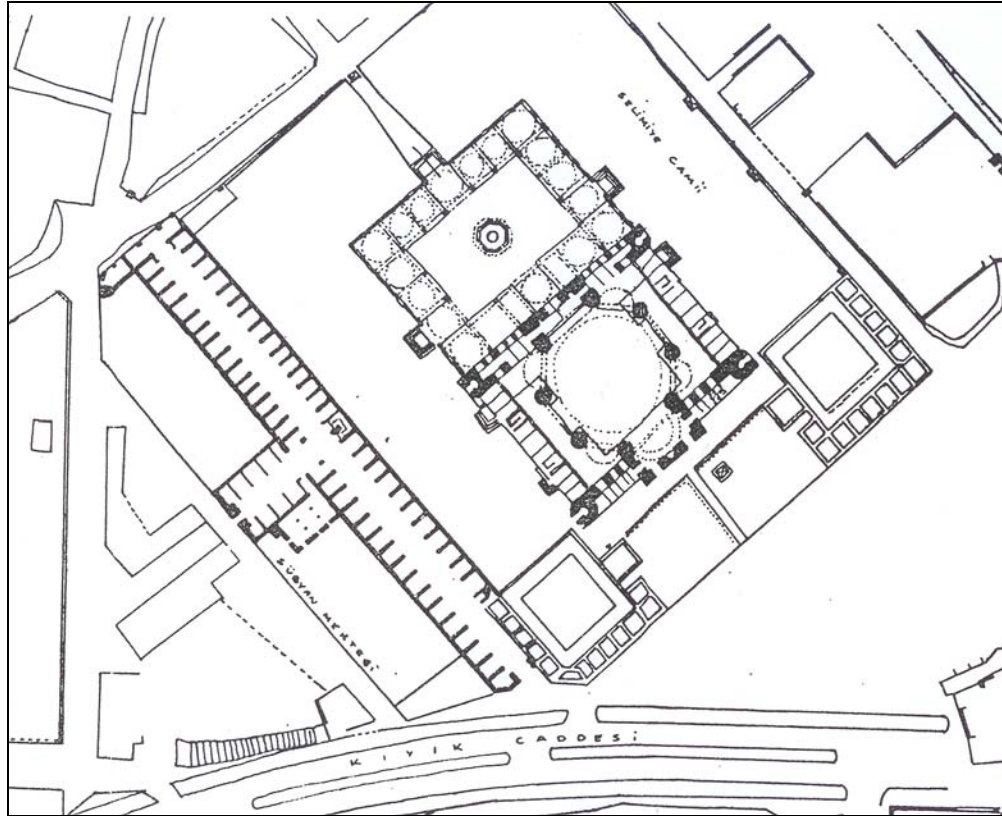


Figure 2.5 The plan of the Selimiye Complex, Edirne
(source: Özdeş 1951. p. 88)

Generally the building complexes are possibly classified in a several ways. The first classification is according to the number of functions. Gencel says that, in this case the building complexes can be classified either as a monumental complex or a small service core (Gencel 2000). The togetherness of any two functions with one generally being a masjit or a mosque is enough for naming it as a small service core. Different people usually construct these groups in different times and generally they can be found in every Ottoman city.

The togetherness of three or more functions is enough to form the urban monumental complex, which is better known as the külliye. It is generally constructed by someone for the benefit of the society. This person could either be the Sultan himself, a member of the royal family, a vizier or an important citizen. The main of the construction of the külliye is the benefit of the society, which could either be educational or commercial benefit. These building

complexes are constructed with the donations of some specific person and the government runs it. At this point the reader is introduced to another type of classification, which is based on previous examinations carried out about the complex and that is according to the founder. It is as the sultan complexes and the others. The sultan complexes are constructed by the rulers and named after him. When compared with the other group it has more functions and it is more imposing. Gencel names this specification as major külliyes and smaller külliyes (Gencel 2000).

After these explanations, the complex is classified in terms of its functions. This classification is first specified as urban, rural and mixed use. As the time passed and the evolution of the classical time occurred, this classification has lost its importance because the format of the complex has changed and most of the functions started to get together in the külliyes. The functions of the urban külliyes are usually placed around the function of education. In these building complexes, functions like madrasas, schools (sübyan mektebi) and theological universities (darülhadis) have a strong influence. The countryside complexes are usually located around commercial functions and the market. Also the khans, caravanserais and the arastas have strong influence on these complexes. The mixed use complexes became important as the time passed and they contain functions which could be classified in terms of both urban and rural complexes.

2.2.2 LOCATION IN THE CITY

Even though there is a coincidental look to the locational criteria of the urban monumental complexes, when investigated it is seen that they are located within a frame of seriously decided rules and regulations.

The first feature is the location of the külliye on a comparatively high point. The aim underneath this act is interpreted as the taking away of the user from the daily activities' earthly point of view and bringing him closer to the spiritual world. It is a common concept in all religions to separate the religious center

and the world business. Another aim of locating the külliye at a high point is to make it visible from everywhere which is especially valid for the mosque since a monumental quality is one of the important features of the mosque. Emphasizing the greatness of the founder of the külliye as well as bringing together the user and the wonderful scenery is among the invisible aims of this locational criterion. This feature is generally valid for the sultan külliyes. Elevation and slope are sub design elements by the practical means. The using of the slope enables the hiding of the secondary features and it makes the designer to gain lots of space. Almost all of the külliyes in Bursa are exemplary to this feature. Especially the külliye of Yıldırım Beyazid is one of the most concrete examples of standing at a point, which is above the whole city. (Figure 2.6)



Figure 2.6 The Complex of Yıldırım Beyazid, Bursa
(source: Kütük and Çorum 1971, p. 22)

Even though it is placed on a flat piece of land, the Selimiye in Edirne stands at a point, which overlooks the whole city. This effect has also caused

Bruno Taut to name the complex as the crown of the city (*Die Stadt Krone*) (Kuban 1998). (Figure 2.7)



Figure 2.7 The Selimiye Complex - The Crown of the City – Die Stadt Krone in Edirne

(source:www.metu.edu.tr/hoe/wwwissch/ozgurey/edirne/selimiye.htm)

If the elevation was not possible then the designer's choice would be as to place the complex by the seaside. When the concept of külliye is investigated in the light of these two features, it is seen that the külliye to have a definite role in the urban silhouette is inevitable. The complex of Beyazid the 2nd is also exemplary for this feature. (Figure 2.8) It is known that a bridge is one of the units of the complex, and people used to go to the complex by boat (Tunca 2002).

From this point of view the all three capital cities of the Ottoman Empire have different characteristics from each other. When these three capital cities (Bursa, Edirne, İstanbul) are compared with each other the evolution of these features are clearly seen. Bursa, which happens to be the first capital city of the

Empire is placed on the outskirts of Uludağ and it is a city of elevations. Edirne is placed on a flat valley, which is surrounded by the Meriç, Arda and Tuna rivers. Finally İstanbul of the seven hills, is placed by the seaside. During the adaptation of each capital city, the Ottoman architecture gains new architectural features (Gencel 2000).

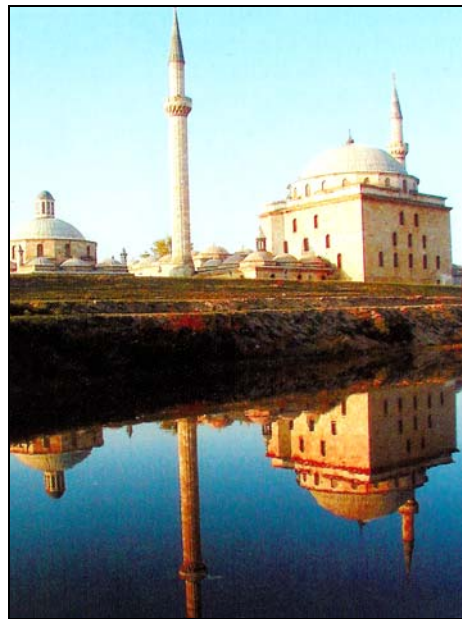


Figure 2.8 The Complex of Beyazid the 2nd by the river

(source: Tunca 2002, p. 77)

“The distance to the water source is one of the most important features of a külliye since one of the vital tasks of the complex is to provide water for the city whole” (Gencel 2000, p. 38). The water was taken from its source and brought to the complex with the help of arches and aqueducts, and then distributed to the city. The public fountain was among the inevitable units of the külliye. For example the water factor is a definite determination in the placement of the külliye of Hüdavendigâr. Neşri refers to the complex of Hüdavendigâr in one of his articles as the Kapluca İmareti, which refers to the foundation of thermal springs. Apart from this it is known that the Muradiye, Orhan Gazi and

Yeşil külliyes are located near the riverbeds. The Yıldırım complex has the mission of distributing water to the rest of the city. Even though there is no evidence of those aqueducts today, the existence of them is known for sure from the historical articles. Hoca Saadettin Efendi refers to this situation as "... The Akçağlayan water which is delicious and strong enough to run three water mills is brought from Uludağ with closed aqueducts to the complex and it is carried on arches near the soup house. After some of it is saved for the mosque, madrasa and bath, the rest is distributed to the neighborhoods, and let to flow from beautiful looking fountains. (volume 1 : 194 – 195)

One of the important parameters in the location of the complex is the capacity of the complex when compared with the needs. If the demand at a district is defined and there is already one complex on that destination which supplies the demand, than a secondary complex is built on a destination with need. An important point is the locational criteria being based on social bases but not on aesthetic bases.

Gencel indicates that the Muradiye and the Hüdavendigâr complexes in Bursa are built in the two different neighborhoods of on the west side of the city. The Çekirge district at which the Hüdavendigâr complex is built was known to be a faraway village away from the town of Bursa. On the contrary the Yıldırım and Yeşil külliyes are built at two different neighborhoods that are located at the east side of the city. The remaining of the demand is supplied by the smaller service cores. (Gencel 2000)

The two important complexes in Edirne are located in completely different directions. Also it is seen that the capacity of Selimiye is limited when compared with the magnificence of the mosque and it is interpreted with the help of this reason.

Another important factor is the distance and the connection to the different sections of the city. For example the complex was not usually located

close to the commercial zones. It was usually close to the residential zone and formed its own commercial zone if necessary. The necessary functions like the bath and the mosque of the present commercial zone were located separately.

Another opportunity different from all the other features is the tendency to locate the complex out of the city and directing the evolution of the city. This feature finds its example at the complex of Yıldırım Beyazid. It is so that for a long time the complex stood by itself and the area between the city and the complex was not filled. (Gencel 2000)

The urban evolution pattern of the Ottoman tradition is so that; instead of layering and evolving around an axis starting from the center, the city evolves around the nodes which are located especially far away from the center. It is helpful knowledge to note that the center referred to is the commercial center. These nodes are generally located around the Ottoman monumental complexes. There is constant movement and interaction from the nodes to the center and from the center to the nodes. Another important point to be investigated while selecting these nodes is the selective criteria. It is deceptive to accept these criteria as common criteria applicable for all cases.

Gencel indicates that a very important issue that is supposedly known beforehand is the landownership pattern at the area, which the complex is located on since expansion during construction is possible as much as the landownership lets it (Gencel 2000). In reference with this reason, there usually is a street crossing from the middle of the plot and it is used as a service axis and a common property. As well as connecting the different units of the complex, this street also connects the different zones of the city to the complex.

The urban demand and the capacity of the complex to meet the needs are common criteria for all the külliye designs. All the units of the complex are designed separately even though the features of enclosure to keep it apart from

the rest of the city are not designed. Even so it is seen that the complex is designed as a whole and it is different from the rest of the city.

2.2.3 THE PROGRAMS OF MONUMENTAL COMPLEXES

The programs of the building complexes are formed of different units, which maintain in separate buildings. These different functions are focused around the mosque both physically and implicitly. According to Özmert, the list of the different functions is as below;

- The mosque (cami)
- The madrasa (madrasa)
- The tomb (türbe)
- The hospital (bimarhane)
- The soup house (imaret)
- The guesthouse (tabhane)
- The school (sübyan mektebi)
- The library (kütüphane)
- The khan (han)
- The caravanserai (kervansaray)
- The bath (hamam)
- Lodgements (Meşruta binaları)
- The public toilet
- Time house (Muvakıthane)
- The fountain (sebil) (Özmert 1998)

The program including the complete list is only applicable for the most developed Ottoman monumental complexes. Eventually a program that contains only some of the functions is enough to form a külliye. At this point the reader is introduced to the separation of the concepts of the service complex and a service core. Togetherness of the any two functions is enough to name it as a service core. The togetherness of at least three functions makes it acceptable as a service center. The number of functions changes in accordance

with the social and financial position of the builder. The külliyes, which have been built by the Sultans usually, contain at least five or six functions. The importance of the functions in the külliyes for the maintenance of the social life and the bond between them will be understood better if each of these functions is explained separately and in detail.

The Mosque (Cami):

The mosque is usually located at a point, which could be defined as the heart of the plot. It could also be classified as the heart of the külliye qualitatively. Even though the mosque is perceived as a religious center for the ritual acts; in reality it is one of the inevitable functions of the social life all through the history. In his article Akozan defines the mosque as the assembly hall of the külliye. The mosque is usually perceived as a complete function whereas in reality the mosque is a complex just by being itself (fountain (şadırvan), last assembly hall (son cemaat yeri), courtyard, minarets). In the külliyes that are built during the Ottomans time, the mosques are very important functions which usually contain a single program.

The Madrasa (Medrese):

It is an educational institution, which generally claims the type of education based on scholastic and theological bases. "It is commonly known that in societies with important religious principles the education was provided by the religious staff at the religion centers until the time of the modern education system and the modern schools" (Akozan 1969, p. 304). Depending on the point of view of the monumental complex, the madrasa can also be accepted as the most important facility of the külliye. There is a very dense and clear relationship between the mosque and the madrasa. "The fundamentals of the architectural form of the madrasa were found in the time of the Selcukians and it has reached up to the modern days with the slightest changes" (Akozan 1969, p. 304). The mosque and the madrasa are located at the quietest and the most secluded from the public part of the külliye area because of their functions.

The Tombs (Türbe):

The tombs are usually units with polygonal forms that contain the grave of the sultan, sultan's wife, the founder of the külliye and the family members. Akozan says that the tombs are generally classified as tombs, graveyards or cemetery terraces (hazire) (Akozan 1969). The shape depends on the founder of the külliye. This hierarchical structure is inherited from the Selcukians. There is also a person (türbedar) responsible for dealing with the tombs among the staff of the külliye.

The Hospital (Bimarhane):

These are the units, which would be called a hospital if the construction date had belonged to the modern times. They were either built in synchrony with the other units of the külliye or built at a different time and attached to the rest of the külliye. This unit was referred to with very different names since the time of the Selcukis. "Also the name changed depending of the geographical location such as; bimaristan (Kayseri), darüssıhha (Sivas), darüşşifa (Divriği), darül'afiye (Çankırı), darüttıp (Bursa), bimaristan (Edirne), and bimarhane (Manisa)" (Akozan 1969, p. 304).

The Soup House (İmaret):

It is a unit that could be defined as a soup kitchen when investigated with modern days' norms. The dinner in these units is cooked and served twice a day. It is served to the staff of the complex, the students of the madrasa and the poor society for free. The economical maintenance of the unit is provided with the income gained from the units of the külliye such as the public bath and the khan. This cycle is provided by the foundations, which are formed during the planning stage of the complex.

The Guesthouse (Tabhane):

Akozan indicates that the guesthouse is a public house, which is open for the travelers with no place to stay and the people who are from out of town. Lodging there is free for the users (Akozan 1969).

The School (Sübyan Mektebi):

The school is an institution of education which accepts the education of successful but poor students as a principle. The level of education is the same with the primary schools of today.

The Library (Kütüphane):

In the beginning the library was a part of the madrasa that is open for everyone. In the proceeding times to come it was thought of as a different unit and designed in accordance.

The caravanserai (Kervansaray):

The caravanserai is generally a unit, which exists within the programs of the building complexes that are located near the roads. It is a unit especially for the lodging of the travelers and the resting of the animals. In terms of physical appearance the urban and the countryside külliyes differ from each other. with their differing features.

The Public Bath (Hamam):

The public bath is usually constructed as the first unit of the külliye and it usually runs during the rest of the construction process. The inevitable reason for this is the profiting structure of the bath and it being a unit for the usage of the workers of the külliye. When inspected in terms of plan and location it is generally seen that it stands separately from the rest of the külliye units and by itself. Most of the külliye buildings that have reached until today are being used for different functions whereas most of the baths are being used as baths.

The lodgements (Meşruta binaları):

Hasol explains the meaning of the meşruta buildings as a possession bestowed to a person or an institution conditioned that it will not be sold (Hasol 1995). In case of the külliyes, the term is used for the simple houses for the lodging of the staff of the külliye. These buildings are not for the appreciation of the inhabitants and they do not have any priority in terms of location as well as being the weakest when faced with the passing time.

The Public Toilet:

The toilets are service units, which are build as a result of necessity just like all the other units. These units are built separately and they are usually not counted among the program of the külliye generally.

The Time House (Muvakkithane):

It is a small building, which contains the equipment for measuring time. “The scientists of the time who were dealing the science of cosmography (ilmi rücum) were all assigned as time keepers in the muvakkithanes. The equipment such as compass, usturlap, sun clock, clock and kiblenüma, were kept in the time house” (Akozan 1969, p. 305). Since the destination of the Kiblah is extremely important in terms of locating the mosque, the proper results obtained from the time house were just as important.

The fountain (Sebil):

One of the primary functions of the külliye is the distribution of water to the rest of the city. In relation with this one of the most important design criterions for the location of the külliye is to choose a place closest to the water sources. As a result of this the fountain is one of the inevitable functions of the külliye.

2.3 Method of Working and the Case Cities

This study on the morphological examination of the urban character of the monumental complexes at the Ottoman capital cities especially emphasizes on the two capitals Bursa and Edirne. Istanbul is not within the study. The reason for this is the need to examine the different periods of the society in different studies. Istanbul and the monuments in İstanbul including the Selimiye in Edirne are a completely different story. After the conquest of Istanbul, the perception in urban design has changed a lot as well as the status of the state changing into an empire. The thesis aims to examine the monuments of the early era in a descriptive way. The comparative study of the monuments in the two consecutive periods is the possible study of another thesis.

Table 2.1 The Complexes That Are Included In The Thesis

The name of the complex	Building year	The founder	Location	Era	The # of functions
Orhan Gazi	1339	Orhan Bey	Bursa	early	6
Hüdavendigâr	1366 - 1385	1. Murat	Bursa	early	6
Yıldırım	1390 - 1395	Yıldırım Beyazıt	Bursa	early	5
Yeşil	1414	Çelebi Mehmet	Bursa	early	5
Muradiye	1426	2. Murat	Bursa	early	5
Muradiye	1426	2. Murat	Edirne	early	4
Üç Şerefeli	1442	2. Murat	Edirne	early	4
2. Beyazıt	1488	2. Beyazıt	Edirne	early	11

During the study, the monumental complexes haven't been investigated according to their architectural features. They are briefly explored in terms of their urban design qualities and their relationship within the urban pattern. The study is carried out in four stages.

1. In the first stage, the Ottoman city is studied as a whole. A study on the urban structure is carried out and the zoning of the city in terms of different functions is examined.
2. The second stage is the study of the külliye by itself in terms of its origins, evolution, and the locational criteria.

3. The third stage is the study of spatial organization. The spatial design criteria and the formation of space within the complex are investigated.
4. The study focuses on the külliye as a visual experience in the fourth chapter. It is taken as an urban monument and it is visualized not on city plan but from the vision of a single user.

The main information about the analysis of the Ottoman monumental complex is gathered from the sources on the Ottoman architecture and the urban history. The most ancient plans of the cities that exist were found and copied. These plans are especially valuable since they refer to the closest spatial relation data of the time the monuments were built. The relationship between the open space and the block is best seen in the oldest plans. The remaining information about the study is gathered with on the spot analysis and the literature survey that is carried out on written sources.

The historical evolution of the two case cities is summarized briefly in the following sections;

2.3.1 BURSA

Life in Anatolia spans back to times long before Christ. The first city formed in the district dates BC 3000 and it is named as Prussia.

The name of Bursa, which is one of the most important cities in Asia Minor is first mentioned in written sources about the Egyptian history (Baykal 1973). If the societies that have occupied Bursa since the beginning of settlements in that district are to be listed, the list is as below;

Table 2.2 The Societies Located in Bursa before the Byzantines

Date	The Society	The Evolutions
The time of the Lydians (for 200 yrs)	The Kuruses of the Akamenishes of Persia	There is nothing remaining
BC 2000	Tinis of Trakya (The Empire of Bitinia)	The first structure plan which requires settlement in elevated land – The ancient city at Hisar – They also brought the Pınarbaşı water and built two underground fountains.
AC 249	İskits	Severe damage to the remaining
AC 395	Eastern Roman Empire	Built fortified walls all around Bursa
AC 955 (for 23 yrs)	Hamdanoğulları of the Haleps	

Since the 7th century the Byzantines have settled around Bursa for a very long time. The evolution during the Roman time generally deals with the inner city. Even though there is nothing remaining today it is known that they built palaces in the city. Today it is possible to see mosaics remained from that time. Most of the remainings were severely damaged in earthquakes that took place ever since.

This domination have ended up in 1299 when the city was besieged by Osman Gazi. His son Orhan Gazi finished what Osman Gazi had started in 1326 and after its conquest, Bursa was within the borders of the state (Baykal 1976). As soon as the beylik became a state, the Bursa became the capital city and a new era for the Ottoman society has started.

All of these civilizations have brought along unbelievable cultural heritage along. Each civilization added something from its cultural richness and

eventually Bursa has reached its richness. Most of the historical richness of Bursa has to do with the Ottoman Empire. If the chronological evolution of the Ottoman city is to be explained in more detail, it is as following:

a) ORHAN GAZİ:

Apart from being the conqueror of Bursa, a very important task of Orhan Gazi was to provide the necessary improvements a settled society needs. These necessities were mostly about social issues like money, army and proper clothing.

In addition to the social improvements, the most important evolution that is also dealing with this study, is the decision of a direction of development for the new city and abandoning the present city (Hisar) as it is. One of the most consistent comments for this is making space for following Turkish beyliks from Anatolia (Baykal 1976). For this purpose the river bed of Gökdere, which at the time was a swamp and not a very safe district was chosen. Orhan Gazi ordered for a monumental complex that consisted of a mosque, a madrasa, a khan and a public bath to be structured in Gökdere, which is now considered as the city center. In Figure 2.9 the area in pink refers to the area that the Ottomans have settled first.

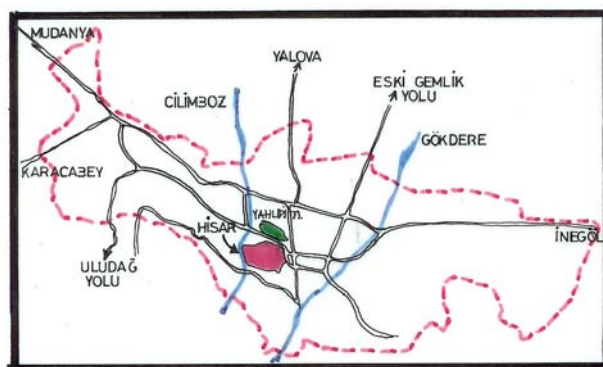


Figure 2.9 The plan of Bursa during the time of Orhan Gazi

(source: Baykal 1976, p. 26)

b) MURAT HÜDAVENDİGAR:

Undoubtedly the most important progress in Murat the Hudavendigâr's time was the conquest of Edirne that eased the conquest of the Balkan countries. Edirne is the second capital city of the Ottoman city that is also one of the case cities of this study. The conquest of Edirne also led the way to the war of Crusaders of the Christians.

During his time the construction affairs were extremely important and mosques, madrasas and soup houses were built all around Bursa. Murat the Hüdavendigâr emphasized especially on Çekirge that was a village apart from the city at that time (Baykal 1973). He constructed a monumental complex named after him, which still stands today. At this time the fame of the Empire was constantly expanding and the ratio of immigration was constantly increasing.

c) YILDIRIM BEYAZIT:

During this time most of the lands belonging to the beyliks became the property of the Ottoman state. Also Istanbul was surrounded for three times and the Hisar of Anatolia (Anadolu Hisarı) was built during this time. Many precious and still standing monuments were constructed at that time such as the Ulu Cami and the Hisar of Anatolia. In addition to these Yıldırım Beyazid also constructed a monumental complex which named a whole district and which still remains.

Unfortunately the first defeat of the state was taken at this time and Yıldırım Beyazid died as a prisoner of war. After this, started the attacks of the surrounding beyliks and the brothers of Yıldırım formed many minor Ottoman states during this time. The area in blue in Figure 2.10 refers to the expansion of the city by the time of Yıldırım Beyazid. It also indicates the location of the Yıldırım Beyazid Complex.

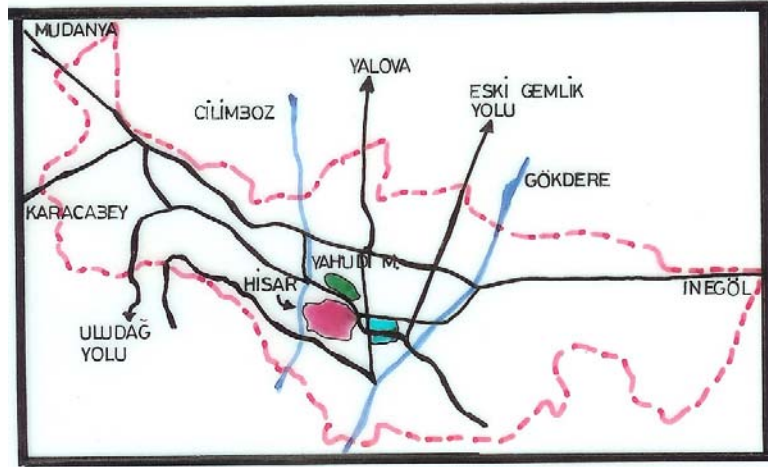


Figure 2.10 The plan of Bursa during the time of Yıldırım Beyazid

(source: Baykal 1973, p. 28)

d) ÇELEBİ MEHMET:

The most important feature of this era is its being just after a total chaos. The starting of this time is also known as the time of Fetret. The chaos had ended with Mehmet the first killing his brothers and becoming the only sultan.

Mehmet reconquered the lost land and after that he turned towards the Rumelia like his ancestors. Mehmet also emphasized on social matters and constructed a monumental complex at the district of Yeşil, which is still one of the most famous features of the Bursa silhouette.

e) 2. MURAT:

The last sultan before the conquest of İstanbul is Murat the 2nd and during his time apart from the conquest that are the inevitable sources of income for all the sultans, the progress toward Rumelia continued. The era of Murat the 2nd

had been through lots of difficulties such as the reappearing war of the Crusaders, the rebellions and at the end of all most of Rumelia was added to the land of the Ottomans.

Murat the 2nd has constructed lots of social buildings all through the Ottoman lands in order to meet the social needs of the society especially the ones in Rumelia. The urban monumental complex that is constructed by Murat the 2nd still stands exemplary among the likes. Figure 2.11 refers to the last state of Bursa before the conquest of İstanbul. The districts Çekirge (Hüdavendigâr), Muradiye (Muradiye), Yıldırım Beyazid (Yıldırım Beyazid), and Emir Sultan (Yeşil) refer to the location of the complexes studied.

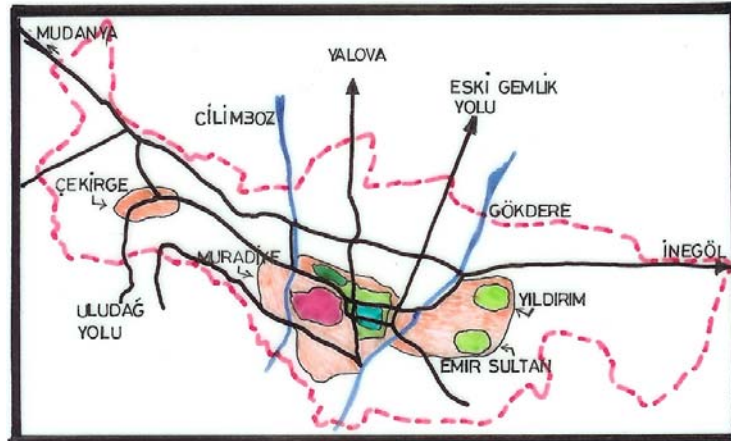


Figure 2.11 The plan of Bursa during the time of Murad the 2nd
(source: Baykal 1973, p. 30)

2.3.2 EDİRNE

Remains of settlements in Edirne date as early as the prehistoric ages that go back to almost 6000 years earlier (Tunca 2002). There are still very precious remainings and especially tumuluses in the surrounding villages. “It is accepted that there was a Trakian village (Orestia) at the district where the

present Edirne stands. The founders of Orestia are known to be the Odrisses, which are known to be the largest branch of the Trakians”(Tunca 2002, p. 5). Since than, lots of different societies have occupied the district for many reasons. If they are to be listed, the list would be as below;

Table 2.3 The Societies Located in Edirne before the Byzantines

Date	The Society
BC 1400 - 1200	Akhas
Until the middle of BC 500	Persians
BC400	Macedonians
BC 280 – BC 168	Galatians

Starting from BC 168 it went under the domination of the Romans (Tunca 2002). The Roman Empire was faced with lots of rebellions until the conquest of whole Trakia in AC 44 – 46. In AC 123 the Roman Emperor Hadrian named the village of Orestia after himself as Hadrianopolis and emphasized on the evolution of the city. Fortified walls surrounded the city and it was in the shape of a trapezoid. The walls were surrounded by a ditch. In the Edirne of today, the Kaleiçi district occupied the area. Until its conquest by the Ottomans in 1361, even though the city of Hadrianus faced lots of wars and rebellions and been through many chaotic times, it stood under the domination of the Roman who in other words are Byzantines (Tunca 2002). Figure 2.12 refers to the size of the city just before its conquest by the Ottomans. If the chronological evolution of Edirne as an Ottoman city is to be explained in more detail, it is as following;

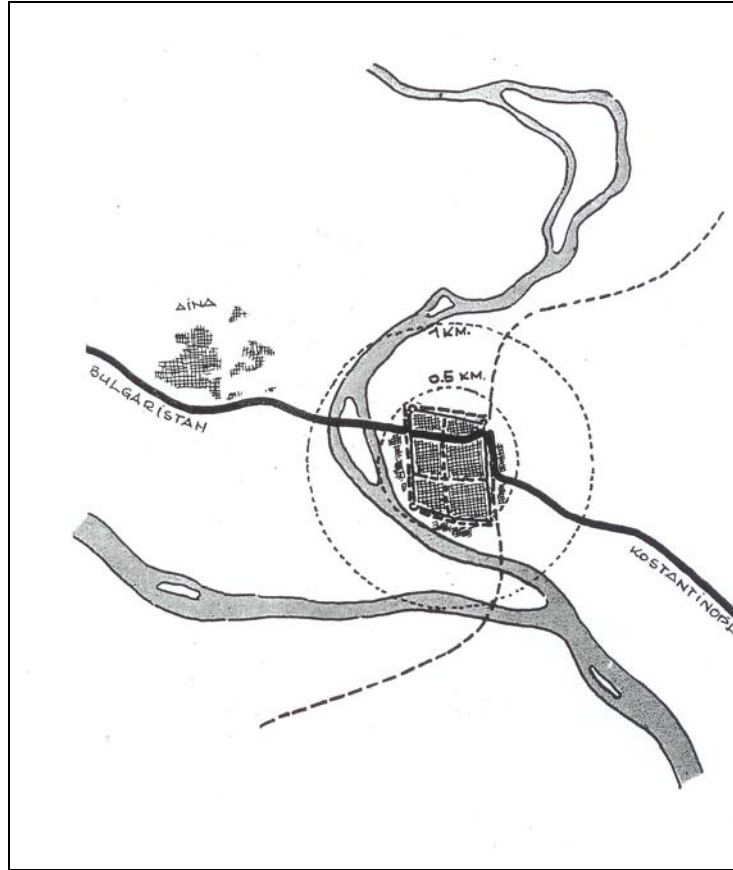


Figure 2.12 The city of Edirne in the beginning of the 14th century
 (source: Özdeş 1951, p. 27)

a) Murat the 1st

After the conquest in 1361 Edirne went through a rapid change in terms of being reshaped as an Ottoman city. The former city consisted of only the inner fortress. Eventually this small city was not enough for the new society. The main tool used in the reshaping of the city was the system of foundation (vakfiye). The neighborhoods out of the fortress were found by this way. In each one of these mahalles there was a social complex serving the district as a design principle.

The most important architectural work from that time is the palace, which was built at the point where the Selimiye stands today (Tunca 2002). Apart from that, during this time two churches were turned into mosques. (Kilise mosque –

Halebiye mosque). In order for the present society to become a proper Islamic society this change in the religious places was necessary.

b) Yıldırım Beyazid (Thunderbolt)

During the time of Yıldırım Beyazid, Edirne was being used mainly as a base for the attacks to Rumelia (Tunca 2002). Also the city expanded towards the outskirts. Until the defeat in the war of Ankara the improvement continued.

There are many important remainings left from this period such as the Yıldırım mosque and the Palatial bath.

c) Mehmet the 1st (Çelebi)

Sultan Mehmet have finished what his brothers started both in terms of governing and in terms of physical structure. The most important remaining left from that time is the Old Mosque which still serves the Edirne society. (Figure 2.13)



Figure 2.13 The Old Mosque

d) Murad the 2nd

“This period is accepted to be the brightest one in terms of physical evolution. Many important monuments such as mosques, baths, bridges and madrasas were built during this period. The second palace that is near the Tunca River started construction during this period” (Tunca 2002, p. 10). Edirne has reached its optimum standards in terms of being a global city during this time.

The Muradiye, Üç Şerefeli and the Darülhadis complexes, covered markets, baths and palaces that still remain today are from this period. One of the most famous and still functional products of that time is the Long Bridge.

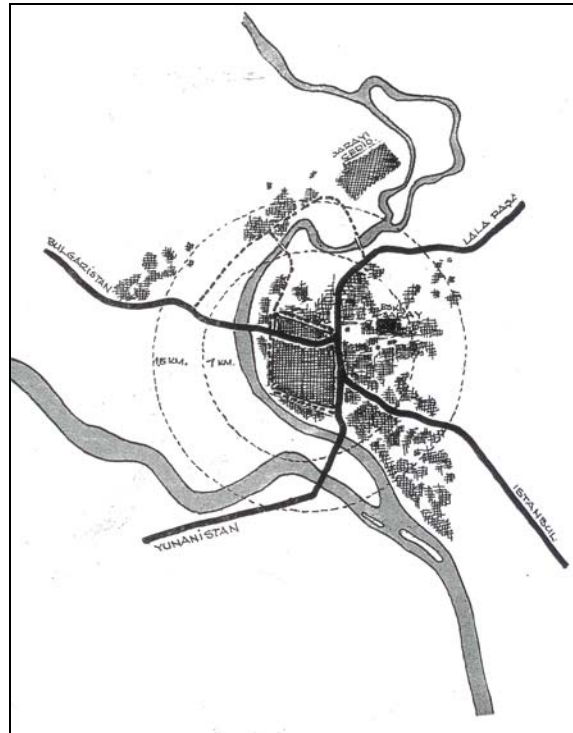


Figure 2.14 The city of Edirne in the mid 15th century
(source: Özdeş 1951, p. 28)

e) Mehmet the 2nd (Fatih – Conqueror)

The construction of the second palace was finished during this period. The conquest of İstanbul was conducted from this palace. After the conquest, even though the capital city was transferred to Istanbul, Edirne regained its value. Lots of valuable monuments were built during this time. Figure 2.14 refers to the size of the city right after the conquest of İstanbul by the Ottomans.

f) Beyazid the 2nd

During his time the famous urban monumental complex that is referred to with his name was structured. (Figure 2.15) This complex is one of the best examples of the term külliye and it still stands with most of its functional buildings.

The histories of the case cities were taken into consideration until the end of the period that the thesis covers. After the 15th century the cities continued with their precious existences but the present study deals with the early era, which is considered to be between 14th and the 15th centuries.



Figure 2.15 The Complex of Beyazid the 2nd, Edirne

Chapter 3

SPATIAL ANALYSIS OF MONUMENTAL COMPLEXES

3.1 Overall Layout and Organization

In order for a complete survey to be done concerning the case of the Ottoman monumental complexes, both the spatial and the visual survey should be completed. The spatial version of the study, which is also the theme of this chapter, is the investigation of the monumental complex as a whole, within the close environment in the city. Approaching to the külliye as a whole accommodates lots of common criteria, which applies for all objects of design.

The survey is carried out with the application of different characteristics concerning the general objectives of urban design to the complex and its nearby environment. Another method tried, is the application of the Figure – Ground theory to the complex and its close environment. Trancik's theory along with the other theories which are Place and Linkage are helpful tools in order to define an act of urban design thoroughly. The reason for the using of the Figure – Ground theory alone is the applicability to a part of the city but not the whole.

“Successful streets, spaces, villages, towns and cities tend to have characteristics in common”. (UK Office of the Deputy Prime Minister 2003, p.1) The understanding of the urban design is complementary. The same rules apply for all scales of design from a district to a simple public park. The reason for the adaptation of the UK Office of the Deputy Prime Minister for this study is because it namely covers the basic characteristics that a spatial analysis necessitates. These rules, in other words characteristics as adapted by the Office of the Deputy Prime Minister are as below:

- *“Character: A place with its own identity. The aim is to increase the character in townscape and landscape by responding to and reinforcing locally distinctive patterns of development, landscape and culture.*

- *Continuity and enclosure: A place where public and private spaces are clearly distinguished. It is to promote the continuity of street frontages and the enclosure of space by development, which clearly defines private and public areas.*
- *Quality of the public realm: A place with attractive and successful outdoor areas. It is to promote public spaces and routes that are attractive, safe, uncluttered and work effectively for all who belong in society, including disabled and elderly people.*
- *Ease of movement: A place that is easy to get to and move through. It is to promote accessibility and local permeability by making places that connect with each other and are easy to move through, putting people before traffic and integrating land uses and transport.*
- *Legibility: A place that has a clear image and is easy to understand. It is to promote legibility through development that provides recognizable routes, intersections and landmarks to help people find their way around.*
- *Adaptability: A place that can change easily. It is to promote adaptability through development that can respond to changing social, technological and economic conditions.*
- *Diversity: A place with variety and choice. It is to promote diversity and choice through a mix of compatible developments and uses that work together to create viable places that respond to local needs” (UK Office of the Deputy Prime Minister 2003, p. 1).*

These qualifications are the ones, which are correct for the urban pattern of the modern day. In order to use these qualities within this study, in other words with the traditional experience some adaptations are needed to be done either in terms of time gap and technology or in terms of life style. If the features were to be discussed in the light of this detail the qualification would be as below:

- **Character:** The divine culture of the Ottoman Empire hides specific clues about the social, daily and the imperial life in its urban pattern. As it is discussed in the previous chapter it is not a completely true approach to classify the Ottoman urban pattern among the classical Islamic – Arabic pattern since it has a lot more to it than to be classified within a specific pattern. The Orhan Mosque has a plan with the slightest changes from a Selcukis madrasa whereas the Hüdavendigâr Mosque resembles a Byzantine church. Figure 3.1 is a plan of the Bursa city indicating the location of the complexes. It is clear that each complex follows different locational criteria.



Figure 3.1 The Plan of Bursa in the Salname of Hüdavendigâr. From left to right the pink areas indicate to Hüdavendigâr, Muradiye, Orhan, Yeşil and Yıldırım Beyazid Complexes (Source: Yazma Eserler Müzesi Bursa)

- Continuity and enclosure:** This rule is commonly applicable for the urban area in general. The residential units in the Ottoman housing tradition do not tell a lot about themselves because of the strict rules of the religion effecting on private life. All the housing structures look the same not giving any hint about the life going on inside. In other words this feature could be described as a term of continuity since the similar looking facades follow each other like the continuity is supposed to be. At

the same time the public buildings differ from these building structures by all means.

Enclosure, which can basically be described as a distinct area that is separated from the surroundings by means of a built boundary as Trancik explains is a very important issue in explaining the spatial character of the district (Trancik 1986). Enclosure is an issue, which could be investigated both by means of spatial survey and visual survey. The visual part will be explained in detail in the proceeding chapter. The spatial part of the theme has to do with the distinguishing of the private and the public areas. In Figure 3.2, which indicates to the latest complex in Bursa, it is seen that the concept of enclosure have evolved thoroughly in a period of hundred years.

Even though it is not rather possible to speak of continuity and enclosure in the modern meaning, there is still an interpretation to be done. Continuity and enclosure are searched for in terms of building types and location but not in terms of edge continuity. It is seen that the axis passing through the residential areas are lodged into the area at which the külliye buildings are located. Though there is generally not an enclosed territory within this area a difference is still noted especially towards the classical era.

In the Ottoman tradition, the distinguishing of the private and the public sections were not obtained with clear boundaries. In fact, in the earlier times it was not even possible to talk about a distinguishing between the two sections. Towards the classical era the conditions started to change on behalf of the creation of enclosure.



Figure 3.2 The Figure - Ground Layout of the Muradiye Complex in Bursa

(source: Plan of Suphi Bey 1862)

- **Quality of the public realm:** The only public areas and the social gathering places in the Ottoman city are the Ottoman monumental complexes and the market places (bazaars) in the Ottoman city and in the overall approach they are thoroughly living and thoughtful designs. In the Ottoman tradition the outdoor life is not promoted and the daily life is lived behind the walls. Urban parks and wandering routes are not the common features of Ottoman urban pattern. The strict rules of the religion effecting on public life influence both the social life pattern and the design of the social areas. A Muslim person's understanding of recreation does not include collaboration with the public.
- **Urban transportation network:** This feature is not easily applicable for a traditional Ottoman city. It most probably refers to the qualifications of a modern urban life. Another version of this feature may be in terms of the transportation network. The extreme organic networks of the Ottoman

streets do not actually show a pattern which is designed for ease. On the contrary the difficulty of adjusting to the network is created purposefully in order to keep the strangers of the residential areas.

Figure 3.3 refers to a part of the organic transportation network of the Ottoman urban pattern of Bursa. It is clearly seen that it is introverted and not open to the strangers' gaze.



Figure 3.3 Urban Transportation Network of Bursa on the Plan of Hüdavendigâr Salname (source: Yazma Eserler Müzesi Bursa)

- **Legibility:** Legibility is the quality, which makes a place graspable. People can take advantage of a choice they make only if they can grasp a place's layout, and what goes on there. In the Ottoman city the aesthetic appearance of buildings with different functions differ from each other by all means. The residential buildings are really simple and not so different from each other whereas the mosques and other functional buildings are larger than the need and so imposing. The mosques are taller than all the other buildings around. By these means the pattern of the city is graspable it could be said.
- **Adaptability:** The interpretation of this quality is the capability to answer the changing needs of the society within changing time. A successful placement and design enables the The Turkish public witnesses the extreme adaptability of the Ottoman monumental complexes. The buildings that date as early as the beginning of the 14th century still serve as functional buildings with the addition of the slightest adaptations necessary. Another term for this feature could also be transformation. Many functional buildings, which date as early as the 14th century, still serve as functional buildings. This happens by two methods. It is either by the technological adaptation of the existing function to the improving technical or social conditions and time, or by changing the function according to the modern day needs. Even though the case seems as if it has no direct relations with the külliye and its close environment, there is an undeniable relationship. Since the külliye serves its close environment in terms of needs and the term adaptation refers to the changing needs.

During the analysis stage, it is noted that mostly the mosques and the madrasas have gone through technological improvement. Among these improvements, the addition of heating, electrical and audio appliances, changing some parts of the mosques into classrooms for the course of Koran and areas for women can be counted. Also among the ones which have changed the function completely;

Yeşil Madrasa became The Turkish – Islamic Arts Museum

Orhan Bath became a shop belonging to private property

The madrasa of Murad 2nd became a dispensary for tuberculosis

The soup house of Murad the 2nd (imaret) became a Restaurant (Figure 3.4 and Figure 3.5)

The soup house of Hüdavendigâr (imaret) became the central office of the tourism affairs

The madrasa of Yıldırım Beyazıt became a dispensary for tuberculosis

The Madrasa of Beyazid the 2nd became The museum for arts and sculpture

The hospital of Beyazid the 2nd (darüşşifa) became The Museum for the psychiatric evolution

The Medrese of 3 Şerefeli became The Archeological house (Figure 3.6)

The khan of 3 Şerefeli (han) became a hotel



Figure 3.4 The Restaurant at the Place of the SoupHouse of the Muradiye Complex in Bursa (source: İşcanlı 2003)



Figure 3.5 The "Darüzziyafe" Restaurant, Muradiye Complex, Bursa (source: İşcanlı 2003)



Figure 3.6 The Archeological House Occupying the Madrasa of the Üç Şerefeli Complex, Edirne (source: İşcanlı 2003)

- **Diversity:** The külliye is also exemplary to this quality. The Ottoman külliye accommodates many different buildings which are loaded with many different functions such as madrasas, hospitals (darüşşifa), soup houses (imaret) and many more. The diversion of the functions is especially important by the means of close environment since the needs of a society vary towards all branches.

Figure 3.7 below is the earliest possible photograph of the Complex of Beyazid the 2nd in Edirne. By including eleven different functions in its program, it is one of the most important examples of diversity. The photo shows most of the functions together.

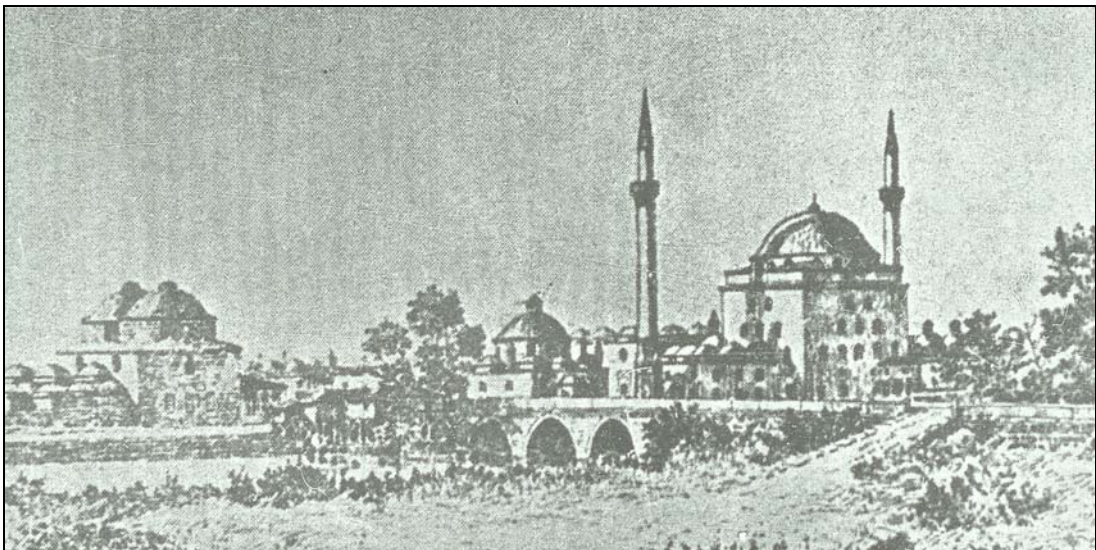


Figure 3.7 The photo of the Complex of Beyazid the 2nd that date the earliest
(Source: Kazancıgil 1997)

There is not a common design criterion, which is applicable to all monuments belonging to the early stages. The construction of these social buildings has started out of a social need as mentioned in the previous

chapters. It is not until almost the classical era that the aesthetical concerns were added to the design stage of these buildings.

The application of the common characteristics is followed by the application of the theory mentioned in the beginning. According to Trancik the explanation of the Figure - Ground theory that is used during this study is as follows:

“Figure – Ground theory is found on the study of the relative land coverage of buildings as solid mass to open voids. Each urban environment has an existing pattern of solids and voids, and the figure ground approach to spatial design is an attempt to manipulate these relationships by adding to, subtracting from, or changing the physical geometry of the pattern” (Trancik 1986, p. 97). In other words figure refer to the solid parts of the plan, which are namely buildings. The word ground refers to the empty parts and voids, which are namely streets and open spaces.

This theory basically studies the relationship between the open space and the built environment. It is a study of the city in terms of two dimensions. The relationship could either be organic or geometric. In the modern concept of space, open spaces are designed with a beginning and an end. In the traditional city, the urban space is considered as a whole with the axis and the nodes and with the levels of privacy. The general leveling of urban space is indicated as private, semiprivate and public.

“Certain definite types of positive voids should be created within the building mass of the city. Public spaces give symbolic content and meanings to the city by providing gathering places, paths, transitions between public and private domains, and arenas for discourse and interaction” (Trancik 1986, p. 100).

According to Trancik space is the medium of the urban experience, providing the sequence between public, semipublic, and private domains, which

is an explanation, referring to the importance of the urban voids. It is the flow between the different layers of urban space which in fact creates a sequential experience (Trancik 1986).

The spatial orientation is created mainly with the formation of axes and that is obtained with the configuration of the urban block and the other possible edge defining buildings. The human scale is another very important parameter in this session of orientation because if the pedestrian can not perceive where he/she is or where he/she is heading to without a plan to look at, this means he/she is lost and the spatial orientation could not be created. According to Trancik spatial orientation is defined by the configuration of urban blocks that collectively form districts and neighborhoods (Trancik 1986).

“The nature of the urban void depends on the disposition of solids at its perimeter (buildings, groups of buildings, and/or urban blocks), on the scale of these elements, and on the horizontal dimension of the opening or ground surface between vertical components. Larger composite patterns of street space form districts, where the ensemble of spaces creates an urban character that dominates and unites individual, isolated spaces. Figure – ground studies reveal the collective urban form as a combination of patterns of solids and voids that can take on many configurations, such as the orthogonal/diagonal overlay (the modified grid), the random organic (generated by terrain and natural features), and the nodal concentric (linear and wrap around forms with activity centers), to name just three. Most cities are built from combinations and permutations of these patterns as well as through the juxtaposition of larger and smaller patterns” (Trancik 1986, p. 100 - 101).

This summary on the characteristics of different types of voids reveals the basic features that should supposedly be within the void parts of the city. In addition to this, the different types of solids also have different characteristics just like the voids, as it will be explained in more detail in the proceeding section of the study.

“Urban solid types include public monuments or dominant institutional buildings, the field of urban blocks, and directional or edge – defining buildings; urban – void types include entry foyers, inner – block voids, networks of streets and squares, parks and gardens, and linear open – space systems” (Trancik

1986, p. 101 - 103) The collaboration of the different kinds of solids and voids create lots of different interpretations of the urban pattern like it is specified in Figure 3.8.

One of the initial types of voids in the Ottoman tradition is the inner void, which is commonly known as the courtyard (avlu). It is taken into consideration that not all the courtyards in every single residential building is possibly indicated in the figure ground plan of an urban area but the ones which are important in terms of urban pattern are taken into consideration. Since the privacy of the family is extremely important, the limits of decoding the urban life extends up to the beginning of the family life. The reason for this is mainly because the courtyards in a house do not play an important role in sculpturing the public life.

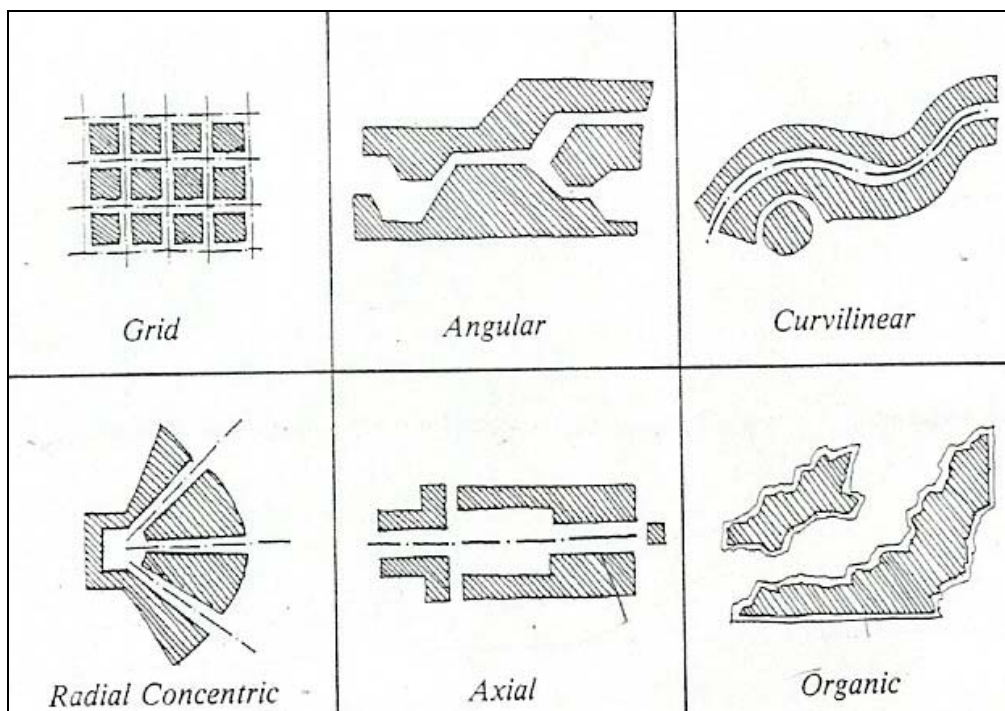


Figure 3.8 Different interpretations of the urban pattern

(source: Trancik 1986, p. 101)

The life in the house is a secret and private life and it has no relations with the urban network whereas the oasis in a khan could have much more of an importance. Also within the voids of importance, the open space of the Ottoman monumental complexes and the dead end streets in the neighborhoods could be considered.

According to Trancik if a typological characterization is to be made it is most probably as below:

Types of urban solids:

1. Public monuments or institutions, which serve as centerpieces in the city fabric.
2. The predominant field of urban blocks
3. Directional and edge defining buildings that generally have nonrepetitive specialized forms, which are often linear in configuration.

Types of urban voids:

1. Entry foyer space that establishes the important transition, or passage, from personal domain to common territory.
2. Inner void, which can be described as a semiprivate residential space for leisure or utility or a mid block shopping oasis for circulation or rest.
3. The third type of void is the primary network of streets and squares, a category that corresponds to the predominant field of blocks and that contains the active public life of the city. Historically, the streets and squares were the unifying structures of the city.
4. Public parks and gardens are the fourth type of larger voids that contrast with architectural urban forms (Trancik 1986).

If these definitions are to be adapted to the Ottoman urban pattern, the typological appearance is as below:

Types of urban solids:

- Public monuments or institutions: The mosques, madrasas, public baths (hamam), the soup houses (imaret), and the fountains (sebil) are exemplary to this type in terms of the Ottoman city. Actually these buildings are mostly structured as the part of an urban monumental complex as well as independently. These buildings also reflect the monumental and the artistic capability of the empire.
- Field of urban blocks: The residential units of the Ottoman city could be exemplary to urban blocks. Since there is no chance of examining them in detail because of their closed physical and social features, the residential units will be taken into consideration as blocks.
- Directional or edge defining buildings: An example to this could possibly be the fortress walls which is a very common feature in the traditional cities. Another very important example is the walls surrounding the private property. Since they do not differ a great deal from each other, they are the definitive elements of the streets and the directions.

Types of urban voids:

- Entry foyer space: In the traditional city that is shaped according to the Ottoman Islam understanding, the house is sacred. Also a very important and a common feature of the Ottoman urban design is the dead-end-street (cul-de-sac). It is a transition between the personal domain and the common territory. The dead-end street is frequently used in the residential zones and is accepted as a semi-private area.
- Inner void: In a traditional Ottoman city a courtyard is one of the inevitable features of the urban design. The courtyard is the traditional reflection of the concept of oasis. The courtyard is a figure which is used a lot in the design of the residential units as well as the public institutions especially khans. The mosques also

have their own open areas which have to do with the religious tradition.



Figure 3.9 The Courtyard of The Yeşil Madrasa, Bursa

(source: Kütük and Çorum 1971, p. 57)

- The primary network of streets and squares: In most of the Ottoman cities it is almost impossible to figure out a recognizable street network because of the life style and ownership basis. Also one of the tasks of the street network is to make it possible to indicate strangers. In addition to this, in the Ottoman network there was not a public square without a primary function. All the squares are either bazaar areas or belong to the mosque or the palace.
- Public parks and gardens: In the Ottoman understanding of urban life there is no room for public parks and gardens within the city. These kinds of activities were generally placed on the outskirts of the city just like the Kırkpınar in Edirne and the Uludağ in Bursa or at the vineyards or vegetable gardens. The market places (bazaar) are also exemplary for this type even though they do not cover the topic in full meaning.

The two remaining theories other than the figure – ground theory are linkage theory and place theory. If the two theories are to be explained briefly, it is as follows:

Linkage Theory as Trancik explains, involves the organization of lines that connect the parts of the city and the design of a spatial datum from these lines, which relate the buildings to spaces. The spatial datum referred to could be a site line, directional flow of movement, an organizational axis, or a building edge (Trancik 1986). Linkage in other words is the so called flow between the city parts.

The third one which is the Place theory is best explained with a quote from Trancik; “The essence of place theory in spatial design lies in understanding the cultural and human characteristics of physical space. If in abstract, physical terms, space is a bounded or purposeful void with the potential of physically linking things, it only becomes place when it is given a contextual meaning derived from cultural or regional content” (Trancik 1986, p. 112). In other words it adds the elements of different human needs in cultural, historical and natural context. In place theory social and cultural values, visual perceptions, which belong to the users control over the immediate public environment.

These three theories all deal with the city as a whole. Unfortunately the place and the linkage theories deal with the city whole. Only the figure – ground theory is applicable to city parts. During this study, the only theory applied to the Ottoman monumental complexes is the figure – ground theory because of this reason.

The three theories of urban design are not sufficient by themselves for a complete perception but they are really helpful. Spatial qualities are mostly dealt with a large scaled perception. Up to this point of the study the monumental complex, which is better known as the külliye is studied within the city as a city

part. From this point onwards in the following chapter the külliye will be studied by itself as a core as Gencel puts it (Gencel 2000).

3.2 Spatial Composition and Open Space System

The location of a külliye within the city is a part of the topic whereas the other part is the organization of the different units within the külliye itself. A very important unit of the complex is the open space, which looks as if it is there by coincidence but in fact it is the result of a conscious design concern.

The location of the külliye within a city depends on some qualifications. The qualifications are not commonly applicable to all examples but together they make up the spatial composition criteria of the urban monumental complexes in a traditional Ottoman city.

According to Gencel these qualifications could be listed as the following; sensitivity to the site and the existing urban fabric, the geographical location of the külliye and the status of the builder, the existing topography and the conditions of the site (Gencel 2000).

Also the organization of the külliye within itself depends on some qualifications as well. Gencel describes some of these qualities as the lack of the geometrical order in the early period where on the contrary, in the classical period the design of the külliyes followed a clear geometry as well as one of the main characteristics of the külliyes both in the early and the classical period being the open space around the core of the külliye, which is most commonly the mosque (Gencel 2000).

Obviously these qualifications are not the only ones necessary to decode the spatial composition of the Ottoman monumental complex. Most of the features are based on natural qualifications. Natural qualifications are extremely important since it is the only area where manipulation is possible. Also it is the only design utility in hand by then since there is no technology and not a commonly accepted urban pattern. Important information to be added for these is the fact that any kind of classification was enabled when the dates

came closer to the classical period. In the earlier times it was not very possible to talk about a definable design concern for public buildings.

“One of the two elements which affect the city silhouette is the natural features especially topographical condition whereas the other is the building heights. Undoubtedly the natural features are related with the environment the city is located in, and they bring a color to the urban silhouette. The other significant features of the silhouette are public buildings, which are reflectors of the era they are built, religious buildings, prestigious buildings, and the high office buildings of the century we are in. The perceptual success of the silhouette leads to the ease of urban orientation, identifiable urban environment, and gives an experience to the users as well as increasing the urban quality” (Türkoğlu 197, p. 47).

The spatial composition of the monumental complexes is an act, which should be done really carefully and properly since the harmony with the rest of the urban pattern should be emphasized. At the same time the architecture of the complex should be significant when compared with the rest of the city. In the earlier times the architecture was modest and more like the rest of the city. With the evolution of time, the magnificence of the building as well as the height has increased and the külliye buildings became the significant features of the urban silhouette. The urban orientation is provided in the vertical context instead of the horizontal context. In other words the architecture and urban design tradition have evolved in a parallel state with the evolution of time. In Figure 3.10 the silhouette of the city with the addition of the complexes is seen clearly. The presence of the complexes makes the user to find his/her way more easily.

Also Gencel indicates that; the külliyes built in the early periods were more sensitive to the site and the existing urban fabric and those erected in the late periods were mostly based on the geometric relationships (Gencel 2000). Unfortunately specific design criteria bring along the adaptation to the natural environment. In the beginning, all kinds of design was influenced from the natural environment, whereas as time passed geometry was added to the design and the role of the natural environment decreased in terms of design when compared with the past.



Figure 3.10 The Effect of the Yeşil Complex to the silhouette of Bursa

If the plan of the Orhan külliye (Figure 3.11), which is the first complex in the history of the Ottoman monumental complexes is inspected, it is seen that there is no sign of totality and a complementary design. There are no walls or a geometrical order followed that gives hints about the starting point. On the contrary, if the layout of the Beyazıt the 2nd Complex in Edirne (Figure 3.12) is inspected which is the last example of the era studied; it is seen that a great improvement in the design ideas has occurred. The geometrical approach and the outer walls which do not exist in the beginning have become the natural features of the külliye design.

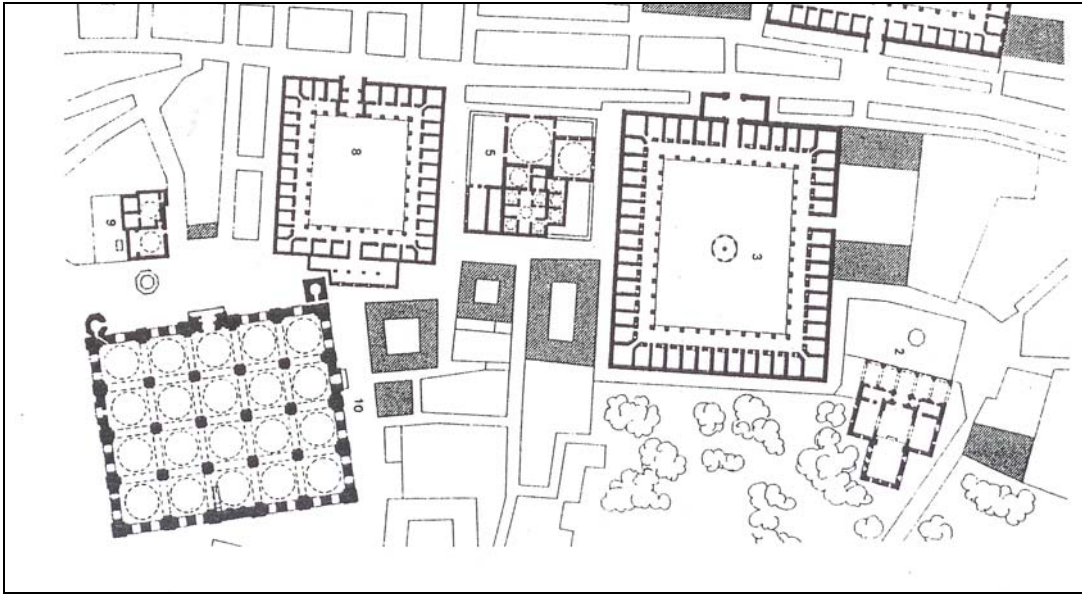


Figure 3.11 The Layout of the Orhan Gazi complex, Bursa. 2 – Mosque,
3 – Koza Khan, 5 – Public Bath, 8 – Emir Khan
(source: Gencel 2000, p. 42)

“The overall design of these külliyes follows a clear geometry. In such külliyes, buildings are aligned, centrality is observed, and open spaces have a particular geometrical shape such as square or rectangular” (Gencel 2000, p. 91)

The improvement in the plan and the overall appearance of the complex is parallel to the improvement in the state of the empire. These complexes, especially the ones built by the sultan, are the reflection of the power of the empire and the sultan. Also the content of the külliye had additional functions within time such as additional madrasas and muvakkithanes.

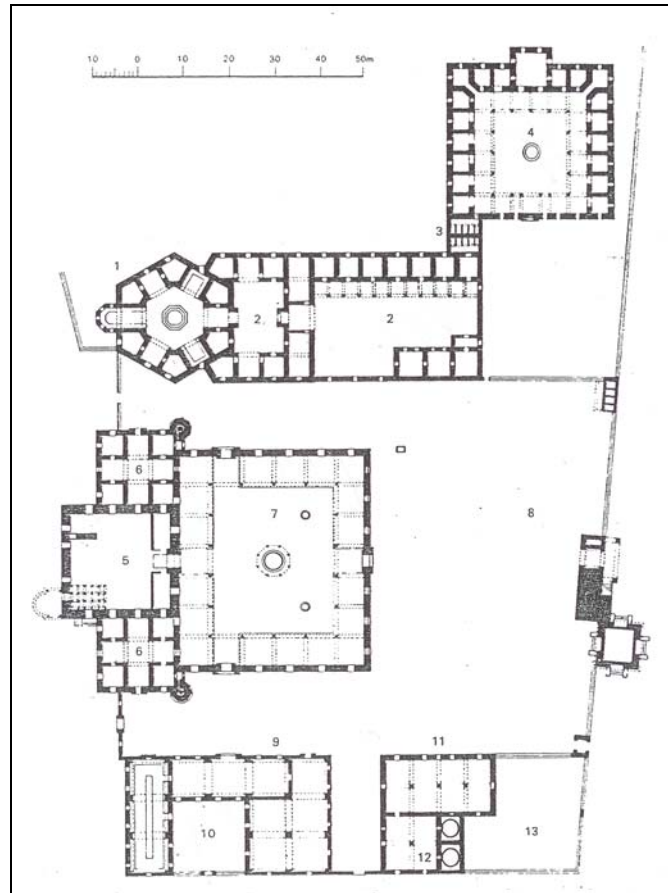


Figure 3.12 The Layout of the Complex of Beyazid the 2nd, Edirne. 1 – Darüştifa, 2 – Hospital, 3 – Depots, 4 – Madrasa, 5 – Mosque, 6 – Guesthouses, 7 – Courtyard of the Mosque, 8 – The Open Area of the Mosque, 9 – Souphouse, 11, 12 – Kitchen (source: Özmert 1988, p. 33)

According to Gencel the grouping of facilities, in the design of some külliyes, seems to be without a clear geometrical order, and in that of the others some kind of geometry can be observed (Gencel 2000).

The ones where a clear geometry can be observed are simply the ones, which are built in later times. As emphasized above the grouping of the facilities has gained some differences in terms of geometry within time. Another very important factor, which influence the spatial composition is the geographical condition of the area.

“There were some other factors which influenced the overall design of the külliyes along with the factor of time, such as the geographical location of the külliye and the status of the builder” (Gencel 2000, 89).

The külliye could either be placed near a water source or at a higher point than the rest of the urban belongings. Also the status of the builder was so important that it was enough to change the status of the külliye. The külliyes were classified according to their builders and this classification could be distinguished physically as well. According to a brief classification as Gencel puts it the külliyes with up to three functions are **the smaller service cores** which were build by viziers and the sultan’s wives. The ones that include more functions were called **major külliyes** and these were often built by the sultans (Gencel 2000).

“The overall layout of these külliyes is more influenced with the existing topography and conditions of the site than by a geometrical order. Structures are then grouped around the mosque with respect to the existing urban fabric and topography. The different facilities are part of the surrounding fabric and weaved within it. The fact that, in the early periods, the geometrical design ideas was not yet introduced to the overall planning of the complex” (Gencel 2000, p. 89)

In the earlier periods the main design idea was to shape the product around what is in hand. In other words, a design in respect with the surrounding environment was in lead. However this approach has evolved in a different manner towards the classical period and even more after that. Within time this understanding has changed into the design of the magnificence. The Selimiye, which is the most imposing one of these, could be exemplary.

“The introverted life style which is limited with the essentials of social life and as a result of the interpretation of Islam and religious understanding brings a specific limit to the usage of public facilities such as the open areas. The inner and the outer courtyard formed at the entrance of the mosque as a social center

or the külliye; is an urban open area for public use. The commercial function, which takes place near this open space, is a demand of the users of the mosque five times a day at namaz times” (Suher 1997, p. 97 – 100).

The daily and the family life of the Ottoman inhabitant is not open to the strangers' gaze. There is a couple of reasons for this. The main reason is the sanctions of religion. According to the religious rules, which at that time applied as the constitution, the women did not have a life outside their houses, which is a limit to begin with. The allowed outside life is religion-based.

Also in an Ottoman city, the land use does not vary a great deal. A typical land use pattern is as follows: residential units, commercial units, market place (bazaar area), cemetery, monumental complex which includes the mosque, madrasa, public bath (hamam), soup house (imaret), hospital (darüşşifa) and tombs. The only change would be in the scale of the complex. The size varies from a major külliye to small service cores, which differ in size and the number of the functions it contains. In a typical land use there is no room for public parks or public squares.

In the early periods the külliyes were structured as the products of an incremental design approach. According to this approach the design is not thought completely beforehand. The design is a process where there is not a specific end. In most of the exemplary experiences the units were built without following an order and were not built together. Usually the public bath (hamam) was built in the first place. The main reason for this was the bath's being a function with a regular income. It started to pay its expenses as soon as it started functioning. It was also a necessity for the workers of the site. Also the building of the khan (han) ranked in the first places.

In other words the units, which belonged to functions with a possible income, were built in the first place. The other units were built as these were functioning. This is also the early version of fund raising. The plans of the earlier külliyes are a clear evidence for this. In these plans the bath and the

khan are usually somewhere different than the rest of the units. Also the architecture of these units are much more simpler when compared with the other units such as the madrasa, the tomb (türbe), hospital (darüşşifa) and especially the mosque. The mosque is the main unit revealing the magnificence of the empire and the builder.

The social life is shaped around the religious activities, which are almost the only type of activity to be performed in public after commercial activities. As a result the open space of the külliye has a very important role in the social life of the Ottoman urban pattern. “The basic and the most important facility in any külliye was the mosque, for it played the key role in the life of the külliye” (Gencel 2000, p. 88). As important as religion is in the life of a Muslim the mosque has the same kind of importance in the urban pattern of an Ottoman city.

“The relationship between other facilities and the mosque, and amongst each other, was directly influenced by the open space around the core of the külliye. As it was mentioned previously, the main quality of the külliye built in the early periods is, in general, the lack of a clearly defined space for the mosque” (Gencel 2000, p. 89).

The evolution of the open space is also within time. In the earlier periods, the open space looks as if it has been left there by coincidence. With time it was perceived as the open space being an item to be designed just like the other units. Gencel says that the most important character of the major külliyes built in the late periods is the existence of either a courtyard attached to the mosque or a space surrounding it (Gencel 2000).

3.3 Comparative Findings

In this section of spatial comparative findings, the examples are inspected in the light of spatial qualities and figure ground basis in order to emphasize some common criteria by trying them on the exemplary complexes. The identifications of the complexes are indicated with the list below. In order to limit the area of the study, only the major külliyes are taken into consideration.

Table 3.1 The List of the Complexes Studied

Name of the complex	The year it was built	The founder	Location	Era	The number of functions
Orhan Gazi	1339	Orhan Bey	Bursa	Early	6
Hüdavendigâr	1366 – 1385	Murat the 1 st	Bursa	Early	6
Yıldırım	1390 – 1395	Yıldırım Beyazid	Bursa	Early	5
Yeşil	1414	Mehmet the 1 st (Çelebi)	Bursa	Early	5
Muradiye	1426	Murat the 2 nd	Bursa	Early	5
Muradiye	1426	Murat the 2 nd	Edirne	Early	4
Üç Şerefeli	1442	Murat the 2 nd	Edirne	Early	4
Beyazid the 2 nd	1488	Beyazid the 2 nd	Edirne	Early	11

In the table above, the complexes that are inspected are listed in accordance with their location and era whereas the table below specifies the kinds of functions. All of the exemplary külliyes contain more than three functions since they are all Sultan külliyes.

Table 3.2 The List of the Functions that the Complexes contain

The name of the complex	Era	The number of functions	The classification of the functions
Orhan Gazi	Early	6	Mosque, school, bath, khan, soup house (imaret), guest house (tabhane), zaviya
Hüdavendigâr	Early	6	Mosque, school, bath, tomb, soup house (imaret), guest house (tabhane)
Yıldırım	Early	5	Mosque, school, tomb, soup house (imaret), hospital (darüşşifa)
Yeşil	Early	5	Mosque, school, bath, soup house (imaret), tomb
Muradiye	Early	5	Mosque, school, bath, soup house (imaret), the tombs
Muradiye	Early	4	Mosque, the soup house (imaret), the cemetery (hazire), the rite house (semahane), the primary school
Üç Şerefeli	Early	4	Mosque, two schools, tomb
Beyazid the 2 nd	Early	11	Mosque, 2 guest houses (tabhane), school of medicine, soup hose (imaret), bridge, bath, mill, primary school, school of music (mehterhane), time house (muvakkithane), water depots

It is seen from the tables above that the mosque and the school (medrese) are the main and inevitable functions the külliye has. The main function of the complex is to serve religious needs as well as social needs. After the accomplishment of these necessities, the other needs were brought

forward. The level of education was especially important. In the case of the Beyazid the 2nd Complex the schools were qualifying as modern day universities. One of these schools was specialized in medicine (Figure 3.13) and the other was a conservatoire raising musicians for the Mehteran Group, which refers to today's army chorus band. Also the madrasa of the Yeşil külliye have raised lots of famous scientists of the time. (Figure 3.14)



Figure 3.13 The madrasa of the Külliye of Beyazid the 2nd in Edirne, which is specialised in medicine (source: İşcanlı 2003)

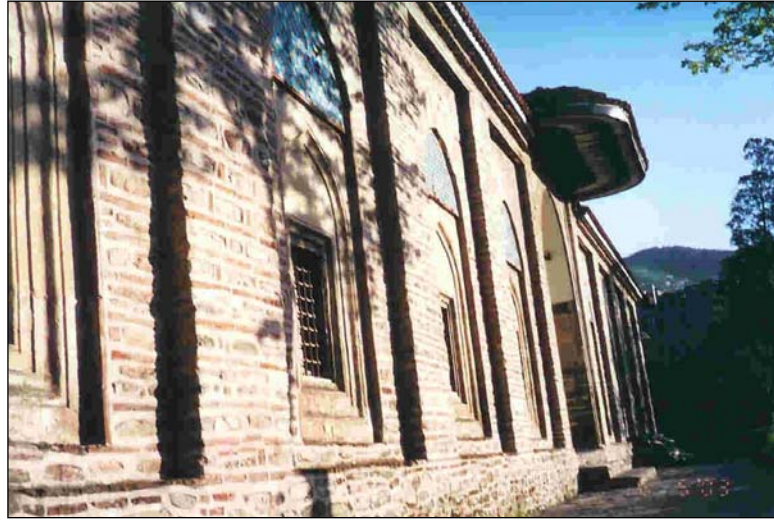


Figure 3.14 The madrasa of Yeşil Complex (source: İşcanlı 2003)

The comparison of the complexes is carried out in terms of the features described in section 3 – 1. The study of the following section is carried out in two stages. The first stage is about the spatial characteristics and the second stage is about the concept of open space.

3.3.1 SPATIAL CHARACTERISTICS

The characteristics of the spatial analysis are clearly distinguishable in terms of two cities since all the qualities were interpreted in a way that is specific for a case.

- CHARACTER

As it is explained all through the chapter, the Ottoman urban pattern is not a type to be classified as Islamic or Arabic. This feature is viewed on all exemplary complexes. They have clues of many different cultures. The mosque of Hüdavendigâr is said to be reflecting a Byzantine character in terms of having the mosque and the school in one building whereas Muradiye in Edirne (Figure

3.15) is known to be build as a mevlevihane in the first place and later on diverted into a complex. All the külliyes seem to be reflecting a different aspect of the social and urban character of the Ottoman tradition.



Figure 3.15 The Muradiye Complex in Edirne

- CONTINUITY AND ENCLOSURE

Continuity and enclosure are two features, which are better explained with the help of a theory. The figure ground theory is the best explanation in order to explain a city district.

In figures 3.16 and 3.17 different districts of Bursa are studied. It is seen that the housing layout around the complex of Yıldırım Beyazıt (Figure 3.16) is rare and there is no evidence of enclosure. However, it is interesting to note that the complex has enclosed its property as a result of its nature since it was constructed on the outskirts of the city.

The Yeşil Külliye in Figure 3.17, it is seen that the different units of the complex have formed their own open space around even though there is not a complementary enclosed space. One of the main reasons for this is the in-city location of the complex. As mentioned in the previous chapter, the location of the complexes depends mainly on the landownership pattern of the city and the scattered look is a result of this manner.



Figure 3.16 The figure - ground layout of the Complex of Yıldırım Beyazid
(source: Plan of Suphi Bey 1862)

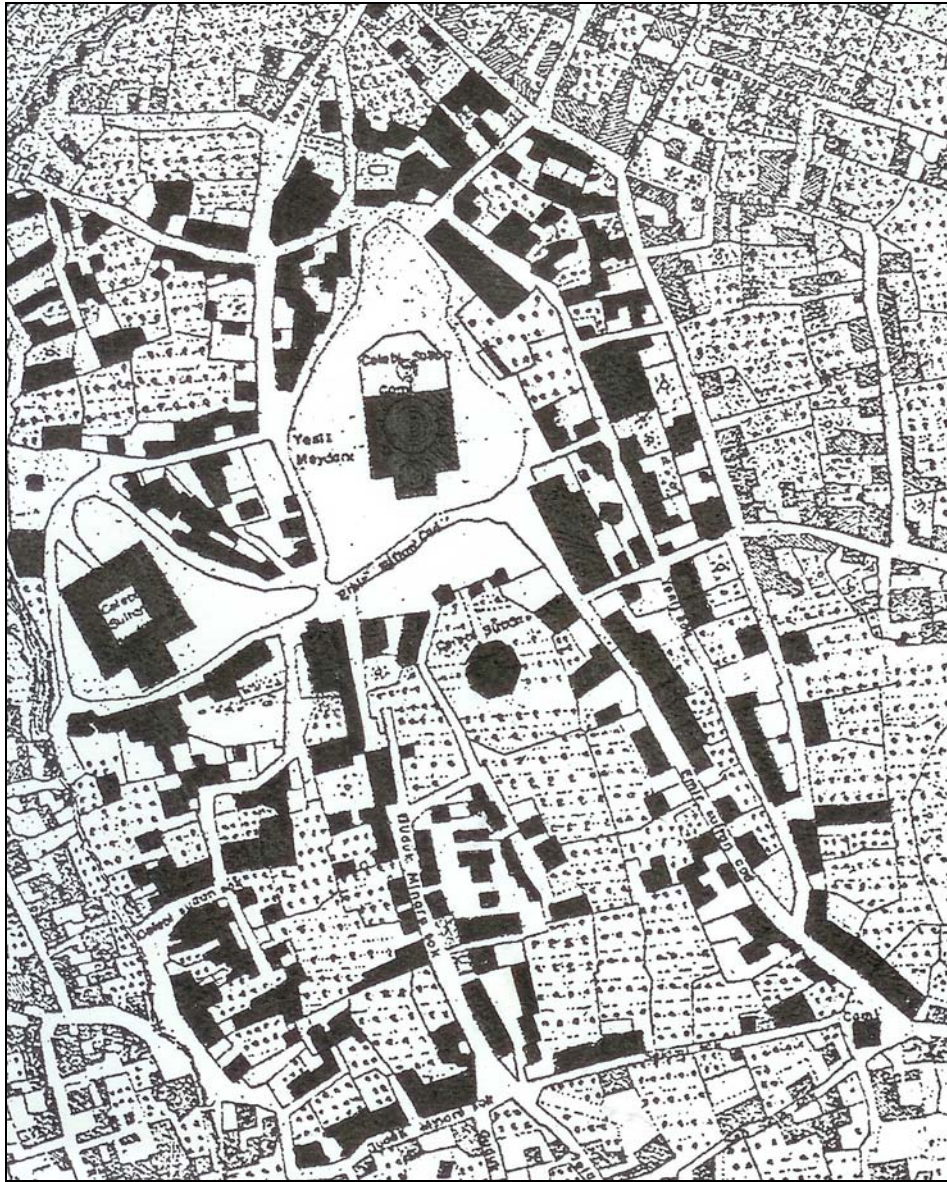


Figure 3.17 The Figure - Ground layout of The Yeşil Külliye
(source: Plan of Suphi Bey 1862)

The Figure – Ground layout of Edirne (Figure 3.18) is not clearly interpretable and does not give clear results. The main reason for this has to do with the plan in hand.

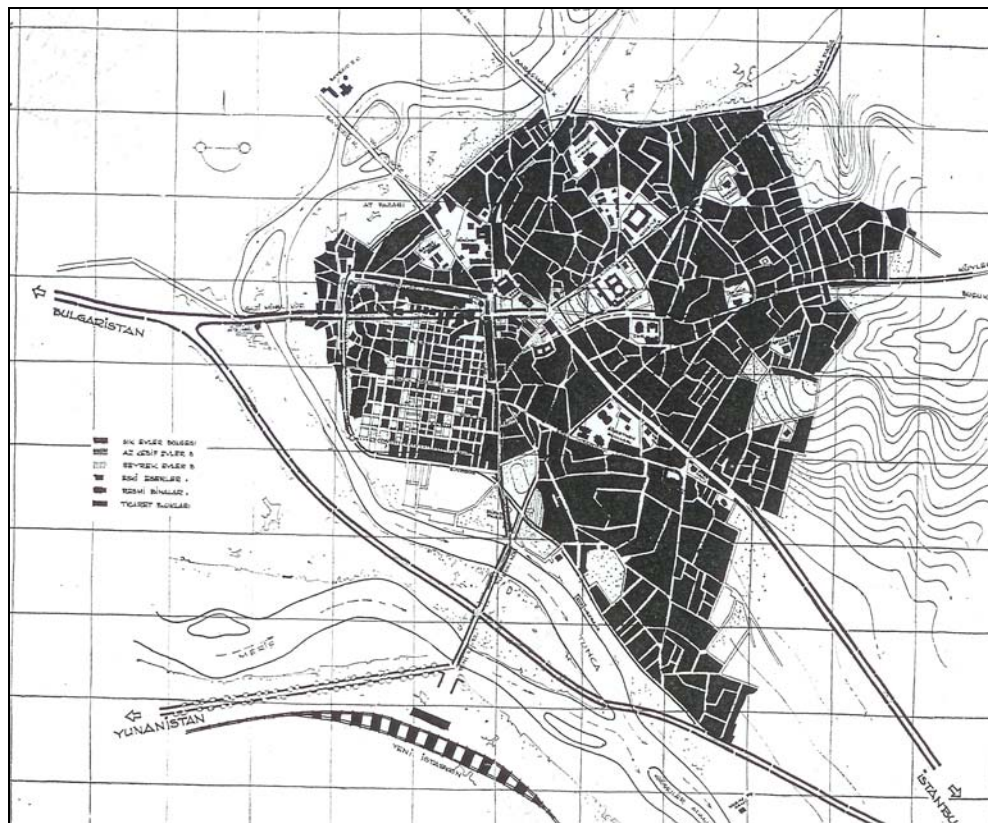


Figure 3.18 The Figure - Ground Layout of Edirne (1939) (source: Özdeş, 1951)

- QUALITY OF PUBLIC REALM

Social gathering is not amongst the inevitable items of the Ottoman urban design since there is the common tradition of being out of doors as less as necessary. The gathering that is lived outside is not within the city. Like the Kırkpınar of Edirne and the outskirts of Uludağ of Bursa, there are places out of the city for this.

The Ottoman monumental complexes are considered as elements of design since they are the only elements within the city, which allow the users to get together. Also some of the külliyes especially depending on their Location, aim socialization by being built away from the city like the Yıldırım Beyazid of Bursa and The Muradiye of Edirne (Figure 3.19).



Figure 3.19 The Muradiye Complex in Edirne
(source: İşcanlı 2003)

- LEGIBILITY

In the early times this feature comes out to be handier since walls do not enclose the complexes and they are scattered in a district like the Orhan Gazi and Yeşil of Bursa. The other six exemplary complexes are not considered among the explanation of legibility. Even though they differ from the rest of the pattern with their size and imposing architecture, they are not enclosed in an area. The functional buildings that stand-alone do not make the building mass readable from far apart as a monumental complex.

- ADAPTABILITY

Possibly the best examples of this feature are among the public buildings of the Ottoman tradition. With the necessary technical changes most of the buildings are still being used. Most of these buildings, which are adapted, are the ones whose function has expired today such as the madrasas which are replaced with the modern schools of today.

The conversion is extremely successful in the Complex of Beyazid the 2nd (Figures 3.20, 3.21, 3.22) since the buildings were not rebuilt like the soup house of the Muradiye külliye in Bursa. All through history, the buildings have gone through lots of changes and most of them were rebuilt in order to endure their life until today. Only some of the buildings mentioned in the list above have survived in their original structure with only the addition of technical system.



Figure 3.20 The Museum of Psychiatric Evolution in Edirne
(source: İşcanlı 2003)

Table 3.3 The Adapted Functions of the Complexes

The name of the complex	The actual function	The present function
Orhan Gazi	Public bath	Shop in private property
Hüdavendigâr	The soup house (imaret)	The central office of the tourism affairs
Yıldırım	Madrasa	Dispensary for tuberculosis
Yeşil	Madrasa	Turkish – Islamic arts museum
Muradiye	Madrasa	Dispensary for tuberculosis
	The soup house (imaret)	Restaurant
Üç Şerefeli	Madrasa	Archeological house
	Khan	Hotel
Beyazid the 2 nd	Madrasa	The museum for arts and sculpture
	The hospital (darüşşifa)	The museum for psychiatric evolution



Figure 3.21 The Inner Look of the Museum (source: İşcanlı 2003)



Figure 3.22 The Inner Look Reanimated with the use of Mannequins
(source: İşcanlı 2003)

- DIVERSITY

The Ottoman külliye is one of the best examples to this quality with the main functions being the mosque and the school (madrasa). Other than these two, there are lots of different activities, which vary in accordance with the need. It could either be a soup house (imaret), a hospital (darüşşifa), a bath (hamam), or even a mill.

The külliye of Beyazid the 2nd is the only example of the early period with so many functions. It has a total of eleven functions. The functions are the mosque, the hospital and the rehabilitation center (darüşşifa), two madrasas specialized in medical sciences and music, the soup house (imaret), two guesthouses (tabhane), the public bath (hamam), mills, the bridge, an elementary school (sibyan mektebi) and the depots.

When an overall evaluation is carried out it is seen that the külliyes are very hard to be classified within some common criteria. Each one is branded with different characteristics and has its own qualities within those characteristics.

3.3.2 OPEN SPACE

Another very important aspect to be covered in terms of spatial survey is the issue of open space. In the earliest examples like Orhan Gazi and Hüdavendigâr, the concept of open space is not used consciously. In these examples it is usually the axis cutting through the complex that is considered as the open space.

As time evolved, the concept of open space proceeded a great deal. The open space in the complex of Beyazid the 2nd (Figure 3.23) is the last stage of the concept during the early period. It has a clear geometry and it is within the enclosed space of the complex.

Table 3.4 The Features of The Concept of Open Space in terms of Bursa and Edirne

BURSA	EDİRNE
There is not a courtyard attached to the mosque to be considered as the semi private open area.	There is a courtyard to the mosque to be considered as the semi private open area in most of the examples.
The parts to be considered as the open space look rather coincidental.	There is a more deliberate look to the open areas, which make them look preplanned.
The different functions are separated with an axis passing through and it is considered as the open space.	In the examples examined, it is seen that there is not an axis crossing through the area anymore.



Figure 3.23 The open Space of the Mosque of Beyazid the 2nd
(source: İşcanlı 2003)

The figures below indicate the evolution of the open space throughout the period of study. In the Orhan Gazi Complex (Figure 3.24), there is not a clear concept of enclosed space and the units are not designed with a comprehensive design approach. It is so that, a hundred years after the complex was structured, Yıldırım Beyazid constructed the Koza Han in the middle of the plot and the little effort of enclosure was gone with that act. In the case of the Hüdavendigâr Complex, the Yıldırım Beyazid Complex and the Yeşil Complex (Figures 3.25, 3.26, 3.27) it is seen that the pedestrian axis that crosses the complex is considered to be the open space. In addition to this, there is a rather interesting situation in the case of the Yeşil Complex and that has to do with the placement of the mosque. The entrance of the mosque is not directly from the pedestrian axis so it creates a semi - public area in front of its entrance.

The first example of an enclosed complex is the Muradiye Complex in Bursa (Figure 3.28) with its surrounding walls and the open space with the quality of a garden. The most sophisticated example of the studied era is the Complex of Beyazid the 2nd (Figure 3.29). There is a clear enclosure created with walls and geometry.

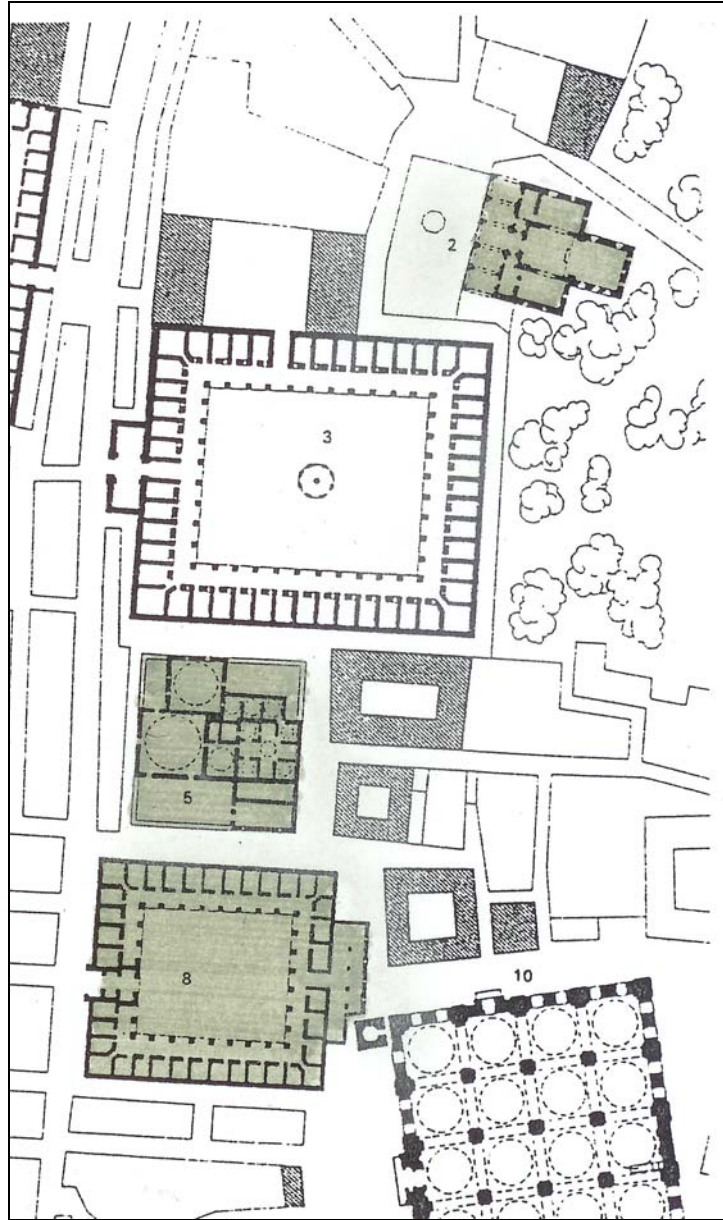


Figure 3.24 The Open Space system of the Orhan Gazi complex.
2 – Mosque, 5 – Public bath, 8 – Khan (source: Gencel 2000, p. 42)

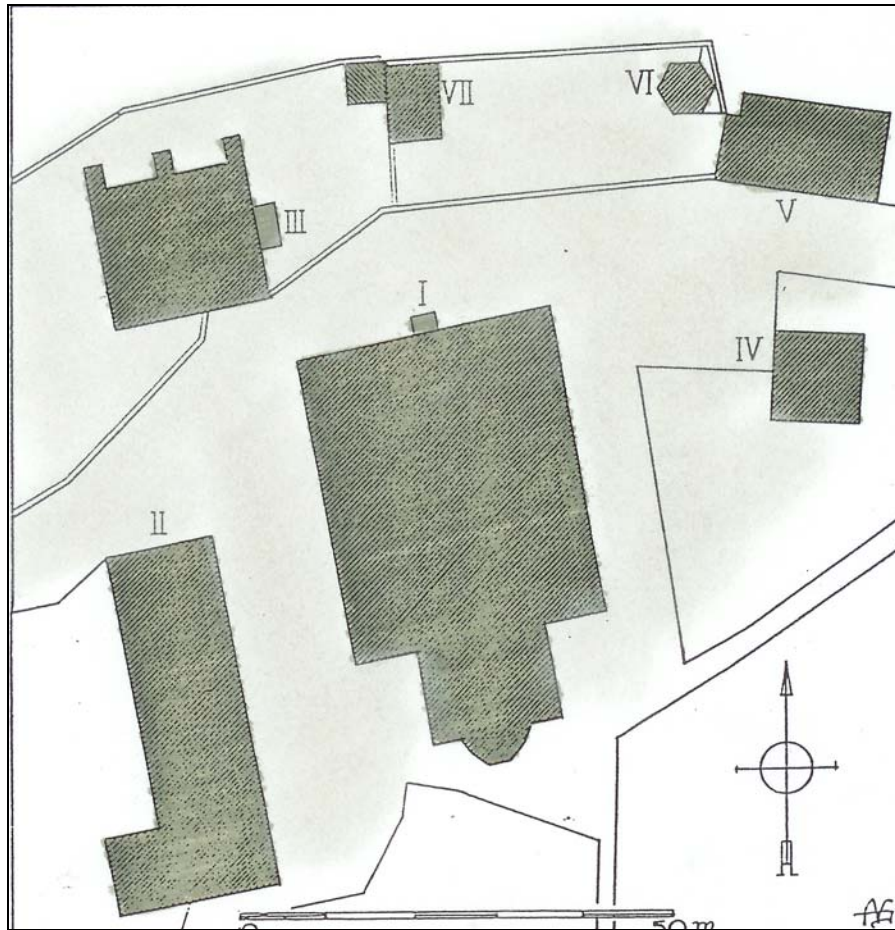


Figure 3.25 The Open Space System of the Hüdavendigar Complex, Bursa. 1 – Mosque, 2 – The Soup House, 3 – Tomb, 4 – Toilet, 5 – School, 6 – Kiosk, 7 – Fountain. (source: Gencil 2000, p. 49)

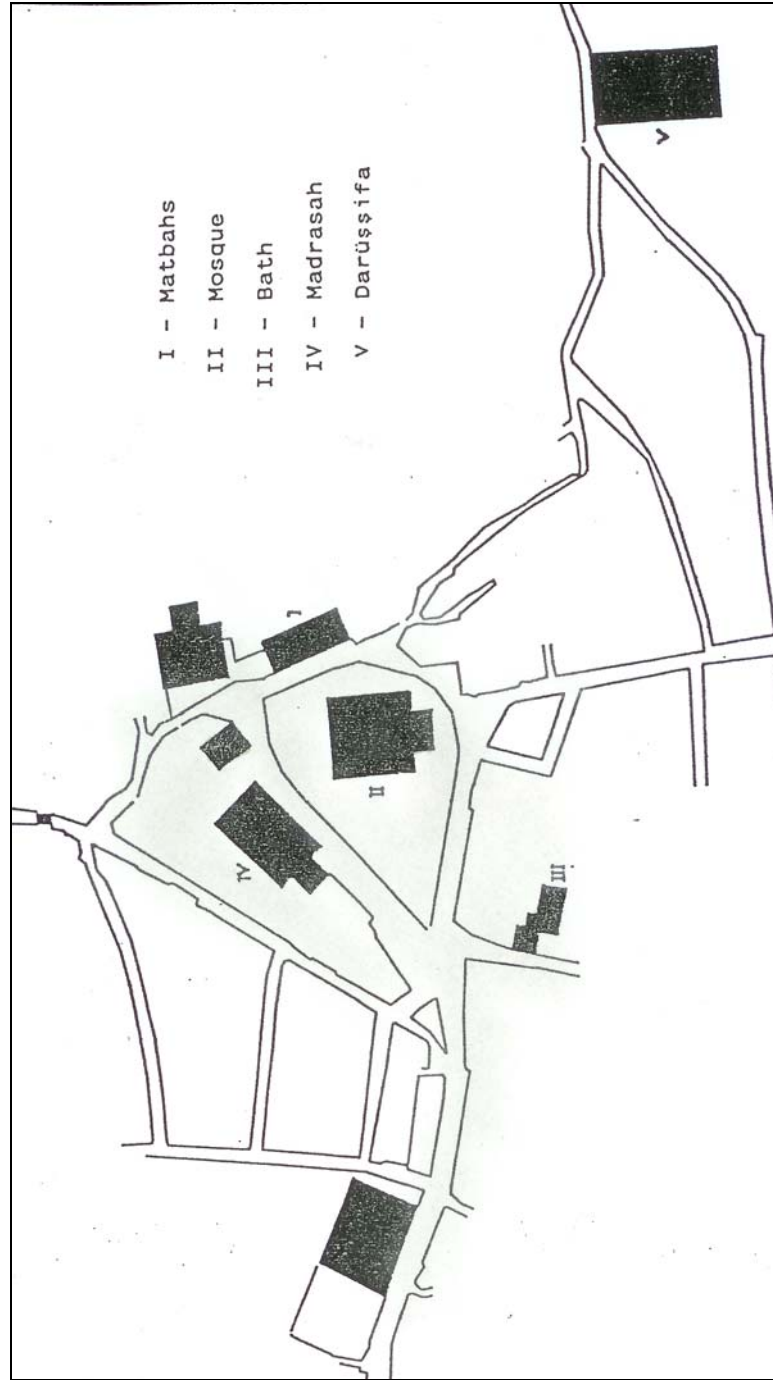


Figure 3.26 The Open Space System of the Yıldırım Beyazid Complex.

1 - Tomb, 2 - Mosque, 3 - Bath, 4 - Madrasa,
5 – Hospital (source: Özmert 1988, 27)



Figure 3.27 The open space system of the Complex of Yeşil.

1 - Madrasa, 2 – Mosque, 3 – The place of the Khan,

4 – The place of the bath, 5 – The Tomb

(source: Özmert 1988, p.29)



Figure 3.28 The Open Space System of the Muradiye Complex.

(source: Ayverdi 1972, p. 305)

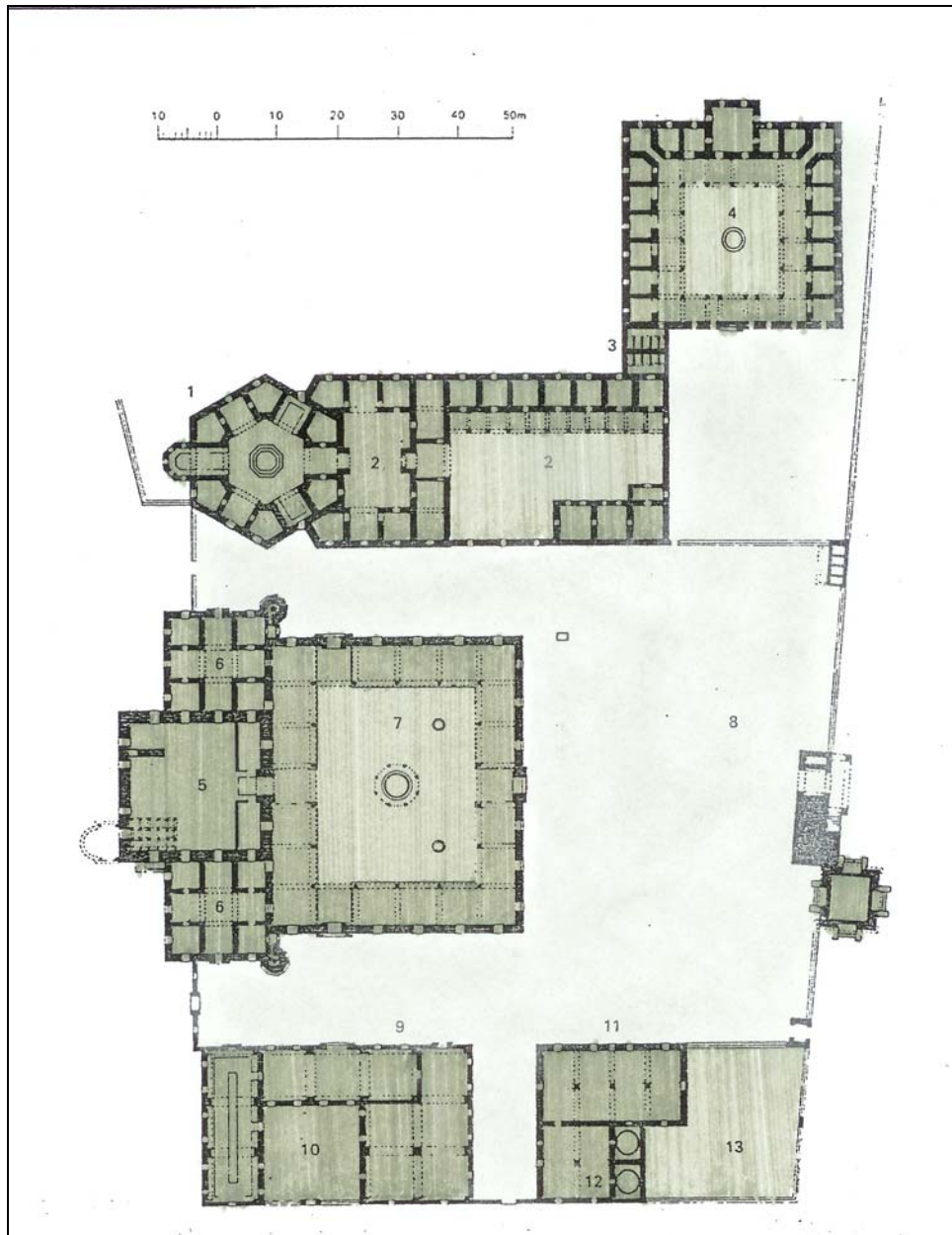


Figure 3.29 The Open Space System of the Complex of Beyazid the 2nd, Edirne. 1 & 2 - Hospital, 3 - Depots, 4 - Madrasa, 5 - Mosque, 6 - Guest House, 7 - Mosque Courtyard, 8 - Precinct, 9 - Soup House, 10 - Courtyard, 11 - Store, 12 – Bakery
(source: Özmert 1988, p. 33)

Chapter 4

DESIGN PRINCIPLES IN MONUMENTAL COMPLEXES

4.1 Creating the Visual Experience

Visual survey is the part of this study where the külliye will be examined as a group of structures. Since the previous chapter is taken as the examination of the külliye within the city, this chapter does the examination from a different scale. It is the examination of the külliye within itself, which includes architectural features, aesthetical features and the psychological responses it gets from the users.

“Architectural design begins with the preparation of a building program and site analysis... A visual survey in urban design is an examination of the form, appearance, and composition of a city – an evaluation of its assets and liabilities.

...

A visual survey can be made of any city or town, regardless of size. It can also be made at different scales such as a neighborhood, the center, a suburban area, or a small group of buildings...” (Spreiregen 1965, p. 49).

The elements of visual survey are applicable at any scale from a district or a neighborhood in the city to a small group of buildings. These elements are classified as the basic elements and the detailing elements surrounding these bases.

The response a design gets from the users has to do with perception. The meaning of perception is the ability to understand things. The success of the design is measured with the comparison of the message perceived and the message the designer wants to give. According to Gordon Cullen’s “The Concise Townscape”, perception is emphasized around four main concepts (Cullen 1990). These four concepts together make up the total of what is expected from a successful piece of design. The design should touch the sight

of the one who looks at it, be remarkable in terms of location and content, also the function it contains should be spotted visually.

1. Optic
2. Place
3. Content
4. The Functional Tradition

In order to understand this emotional response our brain gives to the environment, this topic is studied under four different titles. Cullen's "Concise Townscape" describes these four titles by explaining the concepts which can be examined under this topic. In other words these concepts can be perceived as topics supporting the main concept in terms of meaning. Cullen's topics are;

In terms of optic; serial vision

In terms of place; possession, occupied territory, possession in movement, advantage, viscosity, enclaves, enclosure, focal point, precincts, indoor landscape and outdoor room, the outdoor room and enclosure, multiple enclosures, block house, insubstantial space, defining space, looking out of enclosure, Thereeness, here and there, looking into enclosure, pinpointing, truncation, change of level, netting, silhouette, grandiose vista, division of space, screened vista, handsome gesture, closed vista, deflection, projection and recession, incident, punctuation, narrows, fluctuation, undulation, closure, recession, anticipation, infinity, mystery, the maw, linking and joining (the floor), pedestrian ways, continuity, hazards.

In terms of content; juxtaposition, immediacy, thisness, seeing in detail, secret town, urbanity, intricacy, propriety, bluntness and vigour, entanglement, nostalgia, the white peacock, exposure, intimacy, illusion, metaphor, the tell-tale, animism, noticeable absence, significant objects, building as sculpture, geometry, multiple uses, foils, relationship, scale, scale on plan, distortion, trees incorporated, calligraphy, publicity, taming with tact.

In terms of functional tradition; structures, railings, fences, steps, black and white, texture, lettering, trim, the road

Obviously all of these topics are not applicable to the case of Ottoman monumental complexes in the Ottoman city. Since Cullen's study is a general collection of all topics supporting these themes it is necessary to eliminate them to some extent in order to meet the data in hand. This elimination was made possible with on – the – spot analysis by investigating the target by all means. After the results were obtained for all cases then the new list was made clear. For example since the life in the Ottoman city is not so open to the gazer's eye there is almost no evidence of the inner life/domestic life to the outside. Also there is not so much of a public gathering area outside. Based on this information, it can be said that there is no sign of advantage and handsome gesture, nostalgia or exposure. In terms of this thesis, these topics are eliminated to the amount, which contains the ones that are related with the külliyes. This elimination is done with the on-the-spot observation and in the light of historical evidences. The selected topics with their explanations are listed as below:

4.1.1 IN TERMS OF OPTIC

The one and only topic under the theme of optic is the serial vision. Since it covers a very general explanation there is no need for supporting topics to fit. It is explained from the eye of a pedestrian as he/she walks through the street at a uniform speed. During this walk the scenes around him usually change in series. Even though there is nothing new around and he is just getting closer to an entrance the scene change can happen due to a change in the angle. This is what is called *serial vision*.

“Although from a scientific or commercial point of view the town may be a unity, from our optical viewpoint we have split it into two elements: the existing view and the emerging view” (Cullen 1990, p. 9).

Serial vision is in other words sequential experience. Sequential experience is the series of visions following each other in the user's perception. These sequences of experiences are both monotonous and boring or they are attractive and awaking interest in the user's mind. One of the most important needs of a dynamic environment is its capability to offer a possibility to experience an active and a dynamic experience. In Figures 4.2, 4.3 and 4.4, the experience while approaching to the Tomb of Hüdavendigâr is examined. Even though the photos are taken as the user is following an axis, the perception changes completely as he/she approaches closer.

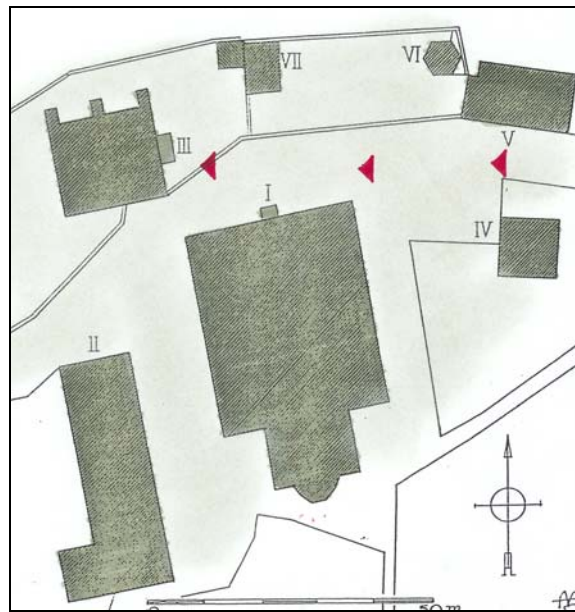


Figure 4.1 The Serial Vision created in the case of The Hudavendigâr complex



Figure 4.2 As approaching to The Tomb of Hüdavendigâr (source: İşcanlı 2003)



Figure 4.3 Approaching closer to the Tomb of Hüdavendigâr, Bursa
(source: İşcanlı 2003)



Figure 4.4 The Entrance of The Tomb of Hüdavendigâr, Bursa
(source: İşcanlı 2003)

The even progress of travel is illuminated by a series of sudden contrasts and so an impact is made on the eye, bringing the plan to life. Cullen says that a pedestrian faces completely different views with the slightest change in his or her angle. These different views are all emerging from the same view. Also Cullen introduces the reader to two new concepts which the sequential experience consist. One of these concepts is the existing view. The existing view can possibly be defined as the view which the viewer is in and at that instant. The other one is obviously the emerging view. The emerging view is already there and it is about to emerge as the pedestrian is leaving the view at that instant. The content of the view depends on the route the pedestrian draws to him/herself (Cullen 1990). The sequential experience could also be created as the user is entering a place as it is seen in Figures 4.6, 4.7, 4.8 and 4.9.

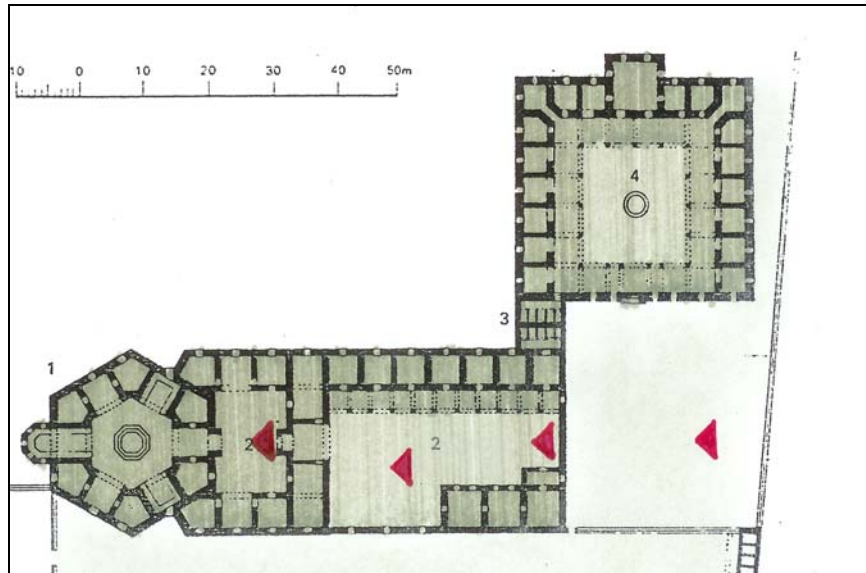


Figure 4.5 The Serial Vision created as entering the Hospital of The Beyazid the 2nd Complex, Edirne



Figure 4.6 As Approaching to The Hospital of Beyazid the 2nd Complex, Edirne
(source: İşcanlı 2003)



Figure 4.7 The Courtyard of The Hospital (source: İşcanlı 2003)



Figure 4.8 As approaching to the inner courtyard of the hospital
(source. İşcanlı 2003)



Figure 4.9 The inner courtyard of The Hospital. (source: İşcanlı 2003)

The designer plays an important role in the obtaining of these views. A foreseen lead together with helping design items, change a standard route into an enjoyable experiment. The processions and recessions at a typical Ottoman city create the most wanted sequential experience. Just like the sequences concerning the whole of the city, the sequences within some part of the city are just as important. If the külliye area is taken for instance, the consecutive views taken from the entrance to the open space, at the open space, the entrance to the courtyard and finally within, which the court yard might possibly be the entrance to a completely new sequential adventure.

4.1.2 IN TERMS OF PLACE

This concept deals with the reactions to the position of our body in its environment. The term place implies all the topics, which reinforce this reaction such as being outside the place, inside the place or even being in the middle of the place. In other words the theme of place has a lot to do with the definition of place. One of the most important topics in terms of defining a place is **enclosure**. It is a supporting topic as well as a very dangerous one since a weak enclosure could hide lots of other existing features and make the object of design less definitive and even less desired.

“If we design our towns from the point of view of the moving person it is easy to see how the whole city becomes a plastic experience, a journey through pressures and vacuums, a sequence of exposures and enclosures, of constraint and relief” (Cullen 1990, p. 10).

It is the inevitable need of the human nature to adapt itself to the environment it belongs to at that instant. This feeling can be achieved either by letting the user place a possession on the environment or by placing something familiar to the user in the environment. The topics related to this theme, which are also related with the Ottoman külliye are grouped under various titles such as possession, vista, the feelings created in a user and about the general

placement of the külliye. The topics that are to be examined under the concept of place are generally the total of the feelings evoked in a human being by the physical appearances and the environment around him/her. If these concepts are to be grouped separately; these groups would be like the following:

The ones related with possession:

- Possession: When there are very rigid limitations it can easily be said that the roads are for movement and the buildings are for the other social needs. When it is not so rigid then the people do whatever they like wherever they like to do it and yet it is seen that the outdoors is possessed for different purposes.
- Occupied territory: When a place is occupied by the furniture of possession, that place is given an image and some kind of a character. “The furniture of possession includes floorscape, posts, canopies, enclaves, focal points and enclosures. The amount of possession may be small yet its perpetuation in the furniture gives the town humanity and intricacy in just the same way that louvers on windows give texture and scale to a building even when the sun is not shining” (Cullen 1990, p. 23).
- Viscosity: The Oxford School dictionary defines viscosity as thick and gluey and not easily pouring.” According to Cullen, another definition of viscosity is found in the mixture of static possession and the possession in movement (Cullen 1990, p. 24). In the Ottoman külliye viscosity is achieved by the mixture of the static posture of the külliye buildings and the movement of the users and use of running water. As emphasized in the previous chapters the water has a very important role in the design of külliye both in terms of location and in terms of design. The movement in running water is a frequently repeated figure since it has a an important meaning also in terms of religion and social life. Being clean in terms of hygiene is one of the first rules of Islam. Also bringing water to the city is one of the main roles of the külliye and this is the main reason the locating by the water sources. The importance of water finds body with the design of fountains (şadirvan and çeşme), small pools and even aqueducts. Some examples to the fountains are seen in Figures 4.10, 4.11, 4.12, 4.13 below.



Figure 4.10 The Fountain of the Yeşil Külliye, Bursa. (source: İşcanlı 2003)



Figure 4.11 The Fountain of the Orhan Gazi Complex, Bursa. (source: İşcanlı 2003)



Figure 4.12 The Fountain of the Muradiye Complex in Bursa. (source: İşcanlı 2003)



Figure 4.13 The Fountain of The Muradiye Madrasa in Bursa. (source: İşcanlı 2003)

- Enclaves: “ The enclave or interior open to the exterior and having free and direct access from one to the other is seen here as an accessible place or

room out of the main directional stream, an eddy in which footsteps echo and the light is lessened in intensity” (Cullen 1990, p. 25). It is the access from the inside to the outside or vice versa. It has the safety of the inside and the sound of the outside. If this item was to be observed in the case of the mosques than the courtyards of the mosques would be exemplary. They have the safety of the inside and the sound and the life of the outside. These courtyards can also be defined as semi-public areas. They have direct access with the inside as well as the outside.

In Figure 4.14 is the courtyard of the Mosque of Beyazid the 2nd complex. The usage of the courtyards in mosques have evolved and reached its standards by the end of the early period, and it has become the inevitable features of the mosque.



Figure 4.14 The Courtyard of the Mosque of Beyazid the 2nd Complex, Edirne. (source: İşcanlı 2003)

- Enclosure: “It is the basic unit of the precinct pattern; outside, the noise and speed of impersonal communication which comes and goes but is not of any place” (Cullen 1990, p. 25). In basic words it can be explained as the openness

and closeness of a space. Once again the courtyards of the mosques are exemplary to this quality. These courtyards are part of the outside where the user feels as if he/she is outside whereas she is not completely separated from the inside. Also towards the classical era the open space around the mosque and the külliye earned more of a character with the quality of enclosure due to the increase in the power and the increased magnificence of the külliye.

Enclosure is one of the most important issues that give a meaning to the open space and define the open space. While helping to define the borders of spaces it also helps to create healthy relations between different spaces. An enclosed space with its edges defined has a different quality even though it is a public space. Since the user feels more secure from then on, it achieves the quality of being a more private space (maybe it could be classified as a semi-public space) According to Trancik enclosure is one of the best elements to give the feeling of being at the place desired. It could also be named as the feeling of hereness. In the traditional city, the orientation is obtained by the placement of the blocks and the axially, whereas in the modern city the problem of disorientation is faced because of the scattered location of the blocks. According to the principle of enclosure, the buildings shape the space and create squares (Trancik 1986).

The importance of enclosure lies in its undeniable role in the creation of the feeling of being belonged. This feature makes the topic important both in the design stage and afterwards.

There are also topics of secondary importance which are to be investigated under the topic of enclosure. Looking out of enclosure for instance is looking to the outer world, which is somewhere other than the place where the user is surrounded by. Having a screened vista of the outside supposedly emphasizes the safe and the surrounding feeling of the inside. The külliyes are very different from the rest of the city in terms of social meanings and architecture. The feeling of oneself somewhere other than the rest of the city is a positive quality to be felt.

- Multiple enclosures: It is a step further from the simple enclosure. It is mostly seen in sacred places like churches and mosques. The different sized domes (kubbe) and the columns holding them are the helpful elements in order to create this effect in külliyes.
- Defining space: Sometimes enclosure can be really fragile. It may be difficult for a passerby to understand where exactly he or she is. It all has to do with the definition of space. If the feeling of enclosure is not created by all means then the place is not defined properly. In the earlier külliyes it is rather difficult to speak of a defined space since the facilities were built on pieces of land where the ownership have allowed. Towards the classical period this kind of design has left its place to clearly defined geometric shaped areas.

All of the above definitions are various forms of possession as Cullen puts it (Cullen 1990). In the Ottoman külliye and even in the open areas, a dense feeling of possession can be felt. These areas are to be possessed by the users of the Ottoman monumental complex.

The ones related with the concept of vista:

- Change of level: One's emotional responses change according to the position. It can be described as descending to the known and ascending to the unknown. "Below level produces intimacy, inferiority, enclosure and claustrophobia, above level gives exhilaration, command, superiority, exposure and vertigo... There is a strange correspondence of similar levels across a deep gap, near but remote, or the functional use of levels to join or separate the activities of various road users" (Cullen 1990, p. 138). In the Ottoman tradition the change in levels is used frequently in order to express authority and power. The most basic example is about the placement of the mosques. In a complex the mosques are generally placed at the highest spot of the area. Sometimes when the külliye is to be placed on a flat land, the mosque is built on a platform, which is put there artificially. It is to emphasize the power of religion and the power of the sultan who ordered for the mosque. The only possible example to the contrary is the Yeşil Türbe, which is placed at a higher point than the mosque. Other than that the mosque is at the highest spot both

as a design rule as well as a social rule. (Figure 4.15)

In Figure 4.16 the difference in the leveling of the different units of the Yıldırım Beyazid Complex is clearly seen between the mosque in the middle and the tomb at the left side.



Figure 4.15 The Effect of The Yeşil Külliye on the Bursa silhouette.

(source: Kütük and Çorum 1971, p. 31)



Figure 4.16 The Complex of Yıldırım Beyazid, Bursa.

(source: Kütük and Çorum 1971, p. 22)

- Silhouette: Silhouette is one of the most important factors of the city image. The building blocks of today form the worst kind of integration between the sky and the earth bound buildings whereas some examples from the past draw that line much more delicately and artistically. The monumental buildings of the Ottoman tradition are the worldwide famous examples of the delicately drawn silhouette lines. Towards the classical era the concerns about the aesthetic appearance have become to a point such that silhouette was one of the primary concerns in the design process of a monumental building.

The design stage of the Selimiye is one of the brief examples of this concern. During the design of Selimiye, one of Mimar Sinan's main concerns was the view of the city while approaching. He placed the mosques and the minarets so well that even today they are seen as the silhouette defining features from far away. In Figures 4.17 and 4.18, the silhouette of Edirne as approaching to the city from two different directions is seen. The minarets of The Selimiye Complex and the Üç Şerefeli Complex form the delicately drawn silhouette whereas the recently formed district of Edirne (Figure 4.19) shows no sign of artistic concern.



Figure 4.17 The Silhouette of Edirne as approaching. (source: İşcanlı 2003)



Figure 4.18 The Silhouette of Edirne as approaching from the other side. (source: İşcanlı 2003)



Figure 4.19 The Silhouette of the newly formed district of Edirne. (source: İşcanlı 2003)

- Creation of vistas: It is also another important issue. There is a literary importance to the monumental complexes as well as the technical importance. According to the rules of Islam, ornamentation by painting and sculpture is forbidden, so the need of ornamentation is achieved by the help of nature. There are different kinds of vistas according to Cullen's perception such as grandiose vista, screened vista and closed vista (Cullen 1990). The screened vista is used frequently, particularly with the generous use of the columns. Screened Vista is an act to increase the sense of hereness. Screening the scene makes the outside world from where we stand, a bit far from us and that makes the sense of being here stronger. The entrance to the Complex of Beyazid the 2nd is an example to the concept of screened vista. (Figure 4.20)



Figure 4.20 The gate of the Complex of Beyazid the 2nd, Edirne. (source: İşcanlı 2003)

Cullen's explanation of the closed vista is another explanation to this argument. He says that the easiest way of making the people admire you is to place your work somewhere to take their eye. Hiding the art in the vision and then letting the eyes to find it makes it more admirable. The closed vista is as it means closing someone's vision by placing a piece of art in the middle (Figure 4.21 and Figure 4.22) (Trancik 1990).



Figure 4.21 Emerging to the Tomb of Çelebi Mehmet (Yeşil Külliye), Bursa. (source: İşcanlı 2003)



Figure 4.22 Emerging to the Tombs at the Muradiye Complex, Bursa.
(source: İşcanlı 2003)

In the case of külliyes the types of vistas are used frequently since nature it is the main item of ornamentation.

- Focal point: In an enclosed space a vertical item can be considered as the focus of that environment. It indicates the spot the people are, from far away. It is also a symbol of possession. The minarets of the mosques are mere examples for the focal points since they are the highest spot of the mosque and also the city. Actually one of the main aims of the minarets being higher than the rest of the mosque is because of a social purpose as well as a religious one. They were built in order to have a place that enables the officers to see the rest of the city in case of emergency such as a fire and etc. In terms of religion; the minaret is the place where the call for namaz is done. Since namaz is an act of prayer for God and he is on top of everything, the placement of the minaret and elevation of it is a metaphor referring to this knowledge. In Figure 4.23 is the view of the Üç Şerefeli Mosque, which is famous for its minaret, in other words focal point.



Figure 4.23 The Mosque and the minarets of the 3 Şerefeli Complex; Edirne

- Projection and recession: Variation is always better. Instead of a straight street with exactly the same and in-line facades, facades which vary in terms of placement, make the mind and the imagination work harder. The districts of the city which include monumental complexes are usually inserted at some existing city part. This is the reason for the commonly inspected process of projection and recession.
- Incident: “The value of incident in a street – tower, belfry, silhouette feature, and vivid color and so on – is to entrap the eye so that it does not slide out into the beyond with resulting boredom. The skillful disposition of incident gives point to the basic shapes of the street or place; it is a nudge. The pattern is there but in the preoccupation of life of our attention must be drawn to it” (Cullen 1990, p. 44). The values mentioned here can be counted as works of art and it is basically how much a little effort can add to the imagination instead of ultimate boredom. The külliye buildings by themselves entrap the eye in a way that it is almost impossible to lose them from sight because of their magnificent posture. In the ordinary look of the typical Ottoman neighborhood the magnificent buildings of the külliye stick out like diamonds on a ring.

The ones related with the feelings of the user:

- Infinity: It is something differing from the sky. The sky is what is seen from the rooftops. To turn the sky into infinity is something different and takes some effort

(Cullen 1990). In the Ottoman külliye one of the main aims of the religious environment is to make the user aware of the spiritual life waiting ahead of time. This feeling is created with the creation of the correct indoor ambience and the correct complementation of the skyline and the building. In the case of külliyes the continuation of the domed rooftops towards the sky point to the feeling of infinity.

- **Mystery:** One of the most important parameters in a succeeded design is the amount of emotion it arouses in the users minds. Mystery and infinity for instance are two of them to exercise the imagination. Nobody knows anything about the spiritual world. All that is known is a result of imagination. So there is always unknown in the design of the holy places like mosques and churches. This feeling is what creates mystery.
- **Pedestrian ways:** The pedestrian axes complete the urban network in a way that it connects the whole city. The pedestrian network creates the human town. The human town is the part of the town, which is addressing the users in other words inhabitants. These parts are also referring to the human scale, as it will be explained in more detail in the following section. Since the pedestrian axis is the main type of the Ottoman urban transportation network, it is the spinal built up of the Ottoman cities as well. The pedestrian ways lead the people to the desired places. If the Ottoman city is to be examined, the supposedly most desired place to be at is the Ottoman monumental complex. So it is not by chance to have at least one main pedestrian axis crossing through the area.

All these grouped topics do not form the whole contents for the concept of place. The ones which are suitable for the case of the Ottoman cities are chosen after an on-the-spot analysis at Bursa and Edirne.

4.1.3 IN TERMS OF CONTENT

According to Cullen this topic examines the fabric of towns in terms of color, texture, scale, style, character, personality and uniqueness; in other words, in terms of physical appearances (Cullen 1990). In this topic there is a very thin boundary between boring and according to the design rules. The key word is

conformity. Conformity is the commonly accepted rules and customs. If the designer goes by the rules all around in order to have the perfect symmetry and balance, he/she could indeed have the most boring plan.

In other words content is the total of the artificial additions done by the designer to create a perception and a feeling.

- Seeing in detail: If the eye is trained to see the details, than the whole world goes through a rapid change. There are more to see, examine etc. Very little details seem to change the sight completely. This feature is more evident in the monumental buildings since there are more hidden messages in the design. If the design of the külliye is taken for instance; the placement of the different buildings and the variation in the size of the buildings according to functions is a form of detailing. The public bath (hamam), the soup house (imaret) and the market place (arasta) are generally placed closer to the rest of the city. The school (medrese), the hospital (darüşşifa), and the mosque are generally screened from the pedestrian axis. The mosque is always different than the rest in terms of ornamentation and size since it is the House of God. The tomb (türbe) is generally modest in terms of size and ornamentation addressing the common belief
- Bluntness and vigor: In Cullen's book it is explained as the force bursting through the built item for stylistic incompatibility (Cullen 1990). In other words with his style being incomparable with the others. It is the same in the monumental complexes. Even though each one resembles the other one, there is still a difference and style to each one.
- The tell-tale: "Certain objects possess the quality of being evocative and absolutely unmistakable" (Cullen 1990, p. 72). These objects indicate that the user is at the right place. In the case of the Ottoman külliyes, the architecture of the several buildings by themselves make the district the user is in, unmistakable.
- Noticeable absence: According to Cullen it is the deliberate omitting

of some elements in the overall design. It could be either to heighten its significance or because something else can take over its function (Cullen 1990). A supposedly good example to this topic from the Ottoman architecture could be the functional buildings of the urban monumental complex. If the public bath is taken for instance; they do not have a sign indicating the function but everyone is able to indicate the building instinctively because of its physical appearance. Its multi - domed appearance with chimneys sticking out tells a lot more than a sign.

- Building as sculpture: “From time to time buildings emerge as another art, and to the extent that they do this they achieve a fresh significance due to the different standards to be applied”(Cullen 1990, p.74). In addition to Cullen’s explanation it can be said that this feature is especially observed in the buildings with historical qualities. The possible reason for this could be the lack of freedom in expressing emotions and the importance given to the handcrafts in the ancient architecture. This possibility finds a body especially in architecture of the Islamic cultures. Since the expressing of self ideas and thoughts have been forbidden for many centuries people expressed themselves in the items they produced like carpets, wooden spoons, stone works etc.

The monumental complexes are not so many, they are aimed to be used for many centuries and they contain lots of messages within. This is the reason the architecture of the monumental complexes are so special and different than the rest of the city.

- Geometry: Rigid geometry can take away and give a lot of things to an ordinary vision. Since pen drawn geometry is not found in nature, it forms an artistic conflict with the nature. There are two kinds of geometry seen in the case of külliyes. One is dealing with the geometry of the buildings within themselves whereas the other kind deals with the geometry of the whole complex. The complexes belonging to the earlier periods lack this concern for geometry a great deal, whereas the ones belonging to the later periods are

designed under the strict rules of geometry.

- Multiple uses: Zoning and the principle of segregation is an important issue if and only if it is by the balance. The more it is exaggerated, the harder it will get to form a community. Different uses placed close to each other even bring dynamism to the viewpoint of the users. A mosque following the residential units breaks the monotonous look of the neighborhood. Even though the urban monumental complexes form themselves a district the instant they are built, still they are not so much separated from the rest of the neighborhood.
- Relationship: It is the flowing rhythm between the different elements of the city. It is also the immense bond which could be created between the buildings, the stairway and the planting etc. (Cullen 1990). This feature is strongly applied between the different buildings of the Ottoman monumental complex, whereas it is not seen between the külliye itself and the rest of the neighborhood in terms of physical appearance. The term physical appearance is emphasized especially since in other aspects there is a strong bond with the rest of the city.

The relationship between the buildings is supported just as well with Trancik's concept of the integrated bridging. Trancik explains this by the physical bridging between the buildings. It is meant to close the gaps between the buildings and erase the sharp transition between functions (Trancik 1986).

In the case of the Ottoman monumental complex, the perception of this topic is slightly different than the rest. This topic is perceived as forming a relationship in order not to create a sharp transition between different functions. Even though the physical bridging between the buildings is commonly seen in the form of common doors and passage ways this physical relationship is only viewed between the different buildings of the külliye. The physical bond between the guest house and the Mosque of the Beyazid the 2nd Complex is clearly seen

in Figure 4.24. There is a common door inside, which links the units together. There is not a possibility of speaking about a bridging between the külliye as a unit and the rest of the city. The relation is created either by the use of similar material or similar technique.



Figure 4.24 The Guest House and The Mosque of The Beyazid the 2nd Complex in Edirne, which are physically linked to each other from the interior. (source: İşcanlı 2003)

- Scale: “Scale is not the size, it is the inherent claim to size that the construction makes to the eye” (Cullen 1990, p. 79). The important point is not the numeric value of the scale but the coordination of the effect it gives with the scale itself. The Ottoman külliye for instance is supposed to be large and imposing. Its scale is different than all of the buildings other than the külliye building. This is mostly seen in the scale of the mosques. The house of God should be at no stage comparable with the house of man.
- Distortion: It is the exaggerated presentation of figures. Cullen refers

to this topic with the statues as examples (Cullen 1990). In the Islamic culture distortion is a commonly faced feature especially in the displaying of doors and dooms. A possible explanation to this could be such that in order to make these buildings different from the rest of the town since they are referred to as the house of God.

- Trees incorporated: The conception that trees are structures just the same way as buildings lead to an architectural layout of planting. “For just as trees have different characteristics, fastigiated or drooping, geometric or fluffy, polished or velvet, so these qualities may be used in dramatic conjunction with buildings, either to extend the conception or to offset it as a foil” (Cullen 1990, p. 82). The placement and the species of trees have an important role in the urban design of the Ottoman cities as well. Historical plane trees (tarihi çınar) for instance have a great deal of importance in terms of incidents such as indicating the city centers. The trees and the natural scene is taken into consideration during the design stage of the complexes with just as much importance as the location and the size. In Figure 4.25, two of these famous historical trees are seen.



Figure 4.25a and Figure 4.25b The Historical Plane Trees in Selimiye Garden, Edirne. (source: Tunca 2002, p. 18)

- Calligraphy: The ironwork on the balconies and the fences have the calligraphic affect on the white walls when united with the sun shine. According to the law of Islam ornamentation by painting or sculpture is forbidden and because of this reason the ornamentation needed to reinforce the magnificence of the buildings is created either by ironworks or the art of putting together the bricks (Figure 4.26) and marbles (Figure 4.27).

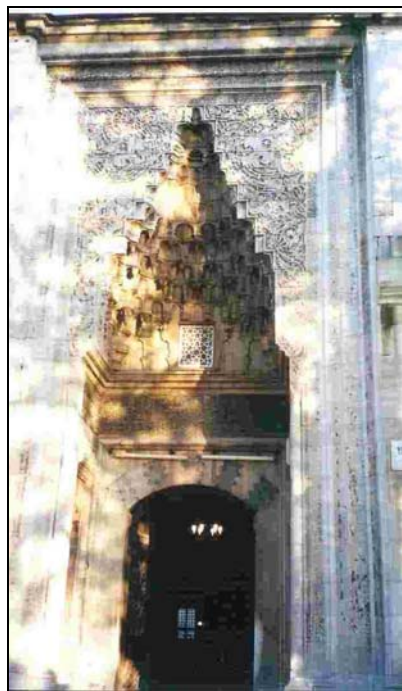


Figure 4.26 The Entrance to the Yeşil Mosque, Bursa. (source: İşcanlı 2003)



Figure 4.27 The Brickworks of the Muradiye Madrasa in Bursa.
(source: İşcanlı 2003)

4.1.4 THE FUNCTIONAL TRADITION

The topics concerning the functional tradition are simply dealing with the quality of the details, which contain messages within. There are different categories to the functional tradition.

Among the details with messages; structures, railings, using of black and white and fences could be considered. The main function of the fence is to enclose the property. There never is a written explanation for this feature. It explains this message just by being itself. In the earlier külliyes there is not a specific concern about enclosing the property since there are no proper borders for the area but approaching to the classical period the concept have been modified and enclosing the property earned more of an importance. According to Cullen the other features in this category are as below:

- Steps: Changing levels have an undeniable affect both in terms of serial vision and penetrating isolation. Layering and stepping are features, which are used very much in terms of Ottoman urban design. It is used either to reinforce the symbol in charge, which is religion and the mosque, or to create open space for the users. In most of the Ottoman külliyes advantages of elevation and layering have been used thoroughly.
- Texture: The different examples of texture are accepted as a stimulation to be found in a usual scene. Texture mostly deals with the sense of feeling. Since perception is a total of what the five senses can achieve it is easy to estimate the importance of texture. The most basic implication of this feature to the Ottoman külliye is the changing arrangement of the bricks. (Figure 4.27)
- Lettering: Since the invention of the alphabet and writing, putting signs to indicate what is where has become the easiest known way in order to guide the inhabitants. Another effective way of using lettering is by ornamentation. Especially in the Islamic architecture there is the tradition of using quotes from Koran and the different names of God on the walls. It is also a way to inform the users in terms of religion. The size of the lettering changes accordingly. Also the use of lettering is used in the other buildings of the complex in order to inform the users about the function. In Figures 4.28 and 4.29 two famous examples to the concept of lettering are seen.

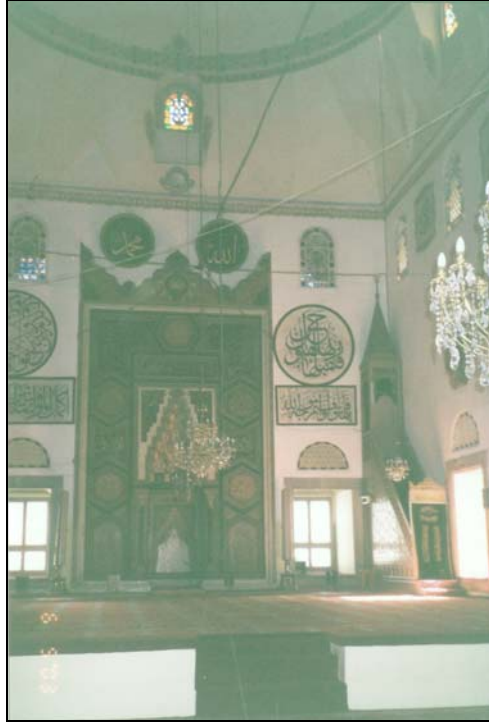


Figure 4.28 The Quotes on the walls of Yıldırım Beyazid Mosque, Bursa.
(source: İşcanlı 2003)

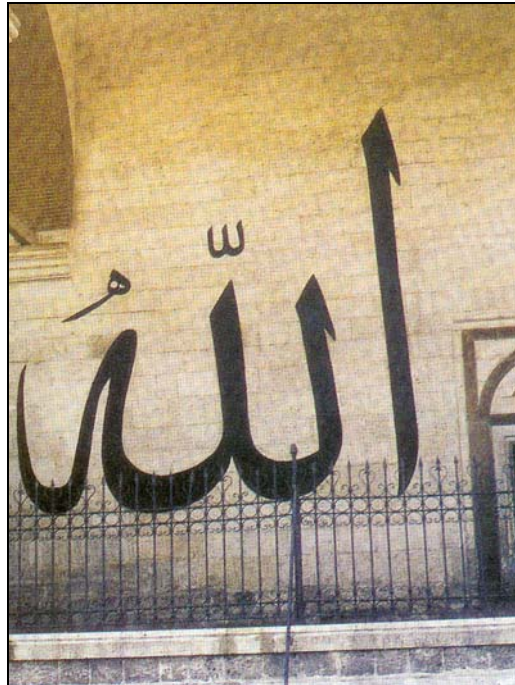


Figure 4.29 The Famous Writings on the walls of the Old Mosque,
Edirne. (source: Tunca 2002, p. 43)

The topics examined in this section are all related with the human being, the stimulus created for the users and the responses they get. Even though most are physical features related with emotional responses, they are still to be investigated under the topic of visual appearance.

4.2 Providing A Human Scale

Creation of the human scale brings along the feeling of belonging, familiarity and empathy. These feelings are important since the success of a design is directly proportional with the amount of feelings it evokes in the users. In short, in order for a place to be familiar and accepted, the place needs to tingle some parts of the brain by evoking some senses and ideas such as horror, peace, mystery, infinity and etc.

People usually have the tendency to prefer familiar places. The term familiar refers to the places, which are able to qualify as having a successful relationship with the users. When a person is able to form the relationship of this kind with a place, than that place is perceived as a successful place in terms of relations. It is afterwards referred to as a familiar and known place.

Since the user's gaze is extremely important in the case of visual experience, it is said to be very important to create a human scale. The concept of human scale is mainly based on the comparison of the size of an average human being and the items of the surrounding environment.

Lodging is one of the primary needs of the human being ever since the history of settlements began. As soon as lodging was provided, the process of evolution began. Shelter is the first step of evolution. The concept of shelter began with huts and the primitive form of housing. After a while came the need of socialization. Only after the handling of the primary needs is handled, comes the handling of secondary needs. Among these secondary needs, the need for beauty in other words aesthetic features could be considered. The same situation could also be applied to the architectural approach. This theory also applies for the case of the Ottoman cities. When the progression of the Ottoman cities is inspected starting from the time of beyliks, it is seen that the sizes have changed a lot until the time of the empire.

It is evident that the deviations in the concept of human scale are directly proportional with the wealth of the government. The better the economic situation got, the more it reflected as size and ornamentation. It is directly related with the social needs being classified as primary and secondary needs. When the architectural history of many countries and cultures is examined, this theory is thoroughly proven.

The buildings, which date as old as the beginning times of the Ottoman Empire, and the buildings which were built during the classical period and even in the beginning of the classical period, differ both in style and size. It is related with the priority of the needs as well as the need to impose self.

In the case of the Ottoman urban monumental complex the situation of the progress is as below:

- In the beginning the need was to increase the general level of health, socialization and especially the level of education. It was commonly accepted as the task of the governor to meet the social needs. The first examples of the külliyes were built for this purpose.
- Then came the wealth as a result of the endless conquests, which also broadened the imagination of the designers as a result of collaboration with different cultures.
- Towards the second half of the 15th century the külliyes began to be perceived as the signature of the sultans who ordered them. So the sultans began to order for the better, bigger, and also the finer details etc.
- Until the conquest of İstanbul in 1453 the tradition of külliyes showed progress in a continuously improving state. After the conquest, the design of the külliye has reached its standards at its most imposing stage.
- The urban layouts of the three capital cities of the Ottoman Empire, which are chronologically Bursa, Edirne and İstanbul, are exemplary to the progress of the Ottoman tradition. In Bursa there is the beginning of the tradition, which is easily read from the layout of the külliyes. In Edirne

the progress is seen and with the külliye of Beyazit the 2nd, the concept reaches its standards. In İstanbul, which is a possible theme for another study, the examples are never modest. They reflect the power of the Empire thoroughly.

The details, which reference for the concept of human scale vary such as the size of the different parts of the külliye buildings. There happens to be several exemplary evidences about this topic most of which are collected during the on-the-spot analysis. Among these evidences;

- The size the building occupies on a plan,
- The size of the different parts of the buildings such as doors, windows, the domes etc.,
- The size of the open spaces,
- The size and the literacy of the ornamentations could be considered.

An important notice at this point is that; this study is done on the urban monumental complexes of the Ottoman city so this analysis of the theory only applies for those parts of the Ottoman city. If these evidences are to be inspected separately;

- The size that the complex occupies on a plan: if the mosque of the Orhan külliye and the mosque of the Beyazit the 2nd külliye are to be compared, it is observed that there is a great difference in size. A reason for this could be because the logic, which the architecture is based on, has gone through lots of changes. In the beginning there was not any sign of collective architecture. The expansion of the külliye was as much as the ownership limitations let the builders.
- The size of the different parts of the buildings such as doors, windows, the domes etc.: In some examples it is seen that there are windows for only possible decorative purposes since they are not appropriate for lighting or even fresh air. The elements which do not meet the practical needs create the effect of overpower.

Also especially in the case of doors there is the conscious design concern of overwhelming the user. In Figure 4.30 the comparison of the size of the inhabitant to the size of the entrance gives a clue about the limits of exaggeration.



Figure 4.30 The Entrance to the Mosque of Yıldırım Beyazid, Bursa.

(source: İşcanlı 2003)

- The size of the open spaces: As mentioned in the previous chapters, the concept of open space was not there in the first place mainly because the designers could not comprehend the need for a social gathering area which is preferably an open area or maybe it was not a need by then. Actually in the base of the Islamic tradition there is not a need for social gathering since the gathering needed was provided with purposeful events such as market place and religious places. After a while, with the public adapting to the settled lifestyle, the need was possibly constituted.
- The size and the literacy of the ornamentations: There are times when the scale do not look so modest even though the sizes are not enormous and there is something in the building which make it look larger than it is.

That is ornamentation. In the case of the külliyes the size of the details and the ornamentations are the ultimate tools of the message aimed.

There is also one more important feature, which catches the eye and that is the proportional relation between the function of the building and its size. The mosque for instance is always greater than the rest of the buildings of the complex whereas the other buildings such as the madrasa and the public bath (hamam) are closer to the scale, which the user can easily perceive. This most possibly has to do with the religious meaning of the mosque, which is accepted as *The house of God*.

Also it has been observed that the tombs have a very interesting approach to the concept of scale. In contrast with the magnificence of the mosques, the tombs are generally modest in terms of size and ornamentation. The only possible exception might be the Green tomb (Yeşil Türbe), which belongs to Mehmet the 1st (Çelebi). The tomb of Yeşil is especially famous for its tiles and ornamentations. Other than that the tombs symbolize the common religious belief which is quoted as the following;

“Everyone is equal in the gaze of God whether he is a Sultan or a homeless. The life led is not important. The important thing is the period of after life when supposedly everyone will be equal.”

The architecture of the tombs usually symbolizes that in a very simple manner. In other words the different buildings of the külliye, which include different functions, have different structural features which are related with the concept of scale. These features either have to do with the size or with the location or ornamentation.

4.3 Comparative Findings

In this section of comparative findings the examples are mainly dealing with visual qualities. All of these qualities result from the investigation of the külliye within itself. These qualities are classified in terms of optic, place, content and functional tradition and human scale. This chapter aims to go into details of design by exploring the visual details. As mentioned in the previous sections the four topics other than the human scale are based on Cullen's study of "The Concise Townscape". These four topics are supported with lots of concepts but the ones related with the Ottoman Urban Külliye are used in this study.

4.3.1 OPTIC

Under this topic, there is only the concept of serial vision, which can basically explained with the use of visual material. Sequential experience, which is trying to be created by the usage of optics.

In külliyes which are built closer to the classical age it is especially observed that the axes are directed so that a sequential experience is inevitable as the user wanders amongst the buildings of the külliye. The külliye of Yıldırım Beyazid and Muradiye in Bursa and Beyazid the 2nd in Edirne are exemplary to this option.

Also in the case of the mosques, creating a sequential experience is a conscious design trick, which is used constantly. The views that the users perceive while emerging to the mosque as well as receding from the mosque are pictures of conscious choice and they basically turn a simple route to an enjoyable experience. The entrance of the mosque and the entrance of the courtyard present views of conscious choice while emerging to and exiting from the place. This is a possible way of ornamentation as well as creating an authority of the users.

4.3.2 PLACE

This concept is mainly interested with the reactions to the position of the user in the environment emphasized on. The concepts supporting the concept of place are grouped under three topics, which are possession, vista and the feelings of the user. Almost all of the features exist in the exemplary külliyes but only the most significant ones are referred to specifically.

Table 4.1 The concept of Place in terms of Possession

THE FEATURES	Orhan Gazi	Hüdavendigâr	Yıldırım Beyazid	Yeşil	Muradiye (Bursa)	Muradiye (Edirne)	Üç Şerefeli	Beyazid the 2nd
Possession	–	–	present	–	Present	present	present	present
Occupied Territory	–	–	present	–	Present	present	present	present
Viscosity	–	–	present	present	present	–	–	–
Enclaves	–	–	–	–	–	–	present	present
Enclosure	–	–	–	–	–	–	–	present
Multiple Enclosures	–	–	–	–	–	–	present	present
Defining Space	–	–	present	–	present	present	present	present

The existence of water is a very important design issue in the designing of külliyes because of its importance in terms of religion and sanitation. The fountains and the aqueducts are helpful design items in order to create viscosity. The aqueducts of the Yıldırım Beyazid Külliye and the fountains (şadırvan) of the Yeşil Külliye and Muradiye Külliye in Bursa are exemplary to this.

Also the courtyards of the mosques are examples the subject of enclaves. The courtyard of the mosque of Üç Şerefeli, the mosque of Beyazid

the 2nd are exemplary. It is also needed to point out that this understanding finds itself a constant place towards the classical era since it is observed that none of the mosques in Bursa have applied this feature.

There is one important finding that is obtained from the examination of the table above and that is the position of the Yıldırım Beyazid Complex. Most of the features, which seem to be present, are there because of the location of the complex. Being located at an empty area far from the rest of the city in terms of directing the axis of evolution caused the complex to be aware of itself by the means of definition and enclosure.

Table 4.2 The Concept of Place in terms of Vista

The Feature	Orhan Gazi	Hüdavendigâr	Yıldırım Beyazid	Yeşil	Muradiye (Bursa)	Muradiye (Edirne)	Üç Serefeli	Beyazid the 2nd
Change of Level	–	present	present	present	present	present	present	–
Silhouette	–	–	present	present	present	present	present	present
Creation of Vistas	present	present	present	present	present	present	present	present
Focal Point	present	present	present	present	present	present	present	present
Projection and Recession	–	present	present	present	present	–	–	–
Incident	present	present	present	present	present	present	present	present

The change of levels is observed significantly in the case of the Yıldırım Beyazid Külliye in Bursa. The concern of placing the mosque at the highest spot and having all the other functions at other levels is evident. The using of this feature is also effective in terms of creating an imposing silhouette just like the case of Yeşil Külliye in Bursa.

Table 4.3 The Concept of Place in Terms of the Feelings of the User

The Feature	Orhan Gazi	Hüdavendigâr	Yıldırım Beyazid	Yeşil	Muradiye (Bursa)	Muradiye (Edirne)	Üç Serefeli	Beyazid the 2nd
Infinity	present	present	present	present	present	present	present	present
Mystery	present	present	present	present	present	present	present	present
Pedestrian Ways	–	present	present	present	present	–	–	–

These are all very humanly features and are possibly inspected in all sorts of design. In all the külliyes, especially in the mosques of the külliyes the feeling of infinity and mystery have been created consciously.

4.3.3 CONTENT

The topic of content simply deals with the fabric of towns in terms of physical appearances. Among these physical appearances; color, texture, scale, style, character, personality and uniqueness could be counted. In other words it is the total of the artificial additions done in order to create a perception.

Table 4.4 The Concept of Content in Terms of the Subtitle

<u>The feature</u>	<u>Orhan Gazi</u>	<u>Hüdavendigâr</u>	<u>Yıldırım Beyazid</u>	<u>Yeşil</u>	<u>Muradiye (Bursa)</u>	<u>Muradiye (Edirne)</u>	<u>Üç Şerefeli</u>	<u>Beyazid the 2nd</u>
Seeing in Detail	present	present	present	present	present	present	present	present
Bluntness and Vigor	present	present	present	present	present	present	present	present
The tell -tale	present	present	present	present	present	present	present	present
Noticeable absence	present	present	present	present	present	present	present	present
Building as Sculpture	–	present	present	present	–	–	present	present
Geometry	–	–	–	–	–	–	–	present
Multiple Uses	present	present	–	present	present	–	present	–
Relationship	present	present	–	present	–	–	–	–
Scale	present	present	present	present	present	present	present	present
Distortion	present	present	present	present	present	present	present	present
Trees Incorporated	–	–	present	–	present	present	–	present
Calligraphy	present	present	present	present	present	present	present	present

The architecture of the monumental complexes all differ from each other both in terms of architecture and planning. The layout and the façade of the Hüdavendigâr in Bursa (Figure 4.30) and Beyazid the 2nd in Edirne (4.31) are different from each other. All of the complexes that are taken into consideration result in a different style even though they achieve a similar architectural emphasis.



Figure 4.31 The Front Facade of the Mosque of Hüdavendigâr, Bursa.
(source: İşcanlı 2003)



Figure 4.32 The Layout of the Complex of Beyazid the 2nd, Edirne

Almost all of the külliyes have took its share from items such as building as sculpture or tell – tale. It is only that maybe the külliye of Yeşil differ from the others a bit in terms of sculpturous built. As mentioned in the previous sections, fine arts and architecture are the only ways of expressing the feelings and

emotions of the Ottoman people. The Hüdavendigâr, Yıldırım Beyazid, Yeşil, Üç Şerefeli, and Beyazid the 2nd are the most successful examples of the sculpturous buildings. In none of the examples, the complexes are labeled to specify their contents but they all indicate themselves with the slightest hints. The domes and the chimneys of the baths, the minarets of the mosques, and the inner courtyards of the madrasas make the buildings rather distinctive.

There is a different kind of relationship between the külliye and the rest of the city. As a result of the multiple using of the functions, the units are physically separated from each other whereas above physically they have really tight bonds with the rest of the city. It is especially so in the case of the earliest complexes like Orhan Gazi and Hüdavendigâr in Bursa. The multiple using of the functions and the integration of the different zones within the city emphasize the relationship of the complexes with the rest of the city as well as within itself.

Geometry is a feature, which is not so obvious in the earliest complexes. Among the exemplary complexes, only Beyazid the 2nd complex has a clear and apparent geometry. The geometry of the others has the air of being coincidental since they do not result in an overall approach.

Another very important issue is the scale of the complexes and the distortion of some elements in terms of exaggerating the design. Distortion is usually applied to the mosques in order to emphasize the religious meaning of it (House of God). The mosque of Üç Şerefeli is even famous for its main entrance, which is carved in a single piece from marble.

Trees are very important all over the city and historical trees are still present today. The trees, which are aging a possible 600 or 700 years of age are supposedly planted as result of a conscious design concern. The best examples of this occasion are viewed in the garden of the Muradiye külliye in Bursa.

The last item to be examined under the topic of content is calligraphy, which surfaces in the form of ironworks, organization of the marbles and the bricks. This feature is apparent in all examples since it is the quality that adds a building an artistic quality.

4.3.4 FUNCTIONAL TRADITION

These contents are simply dealing with the quality of details, which are not simply ornamentation but they carry out a message within. The messages are not given with specific explanations but they carry the message in the design.

The steps for instance are helpful tools in creating the sequential experience and the feeling of isolation. The tomb of the Külliye of Yeşil and the whole of the külliye of Yıldırım Beyazid are exemplary to this feature.

In terms of texture and the changes in texture many examples can be shown among the chosen külliyes. The changes in texture are mostly created with the organization of bricks or the tiles like the ones in The Muradiye Madrasa and The Hüdavendigâr Mosque in Bursa.

One last feature belonging to the concept of functional tradition is the item of lettering. The usage of quotes from Koran on the inner walls is a very popular act in terms of design. This application is possibly seen in all mosques either inscribed on the walls or written on a tabloid and hung on the walls. An example other than the mosque is the soup house of the Muradiye complex in Bursa. Above the fountain there is an inscription in Ottoman saying that *“Water is life and everything have evolved from water”* (Figure 4.32).



Figure 4.33 The remains of the fountain in the Souphouse in the Muradiye Complex with the writing saying that "Water is Life and everything has evolved from water", Edirne. (source: İşcanlı 2003)

All of these features are resulting from the investigation of the külliye within itself. This chapter from the beginning aims to go into details of the design by exploring the visual details of the design.

4.3.5. HUMAN SCALE

It is seen that the concept of human scale has played an important role in the formation of the urban monumental complexes since it has the inevitable function of the mosque within its program and the mosque is considered to be the *House of God*.

The other functions are comparatively modest in size but still with an overall look, the complex is way above human scale when compared with the rest of the city.

Chapter 5

CONCLUSION

The thesis morphologically examines the urban character of the Ottoman monumental complex (külliye), which is accepted as the core of the social life in the ottoman culture. The history of the Ottoman urban design originates back to the beginning of the 14th century, which is also the beginning of their settled life in Asia Minor. Since 1299 and until today, the urban design history of Ottoman cities has been classified in terms of chronological appearance.

The Ottoman monumental complex (külliye) is generally examined in two periods, which are classified as early and late. The early period, which is also the age that the thesis covers, is considered to be between the beginning of the 14th century and the first half of the 15th century. The Ottoman monumental complex is the core of the present research. The research basically covers the urban character of the Ottoman monumental complex with reference to the morphological character of the Ottoman capital city. In other words the urban role of the Ottoman monumental complex (külliye) is examined thoroughly in the light of the morphological features of the typical city.

The first part of the thesis deals with the general features resulting from the morphological analysis of a typical Ottoman city. It is then deduced to the level of the Ottoman monumental complex. The origins, the locational criteria, the definitions and the facilities are investigated thoroughly. Next, the complex is investigated within itself in two stages. In the first stage, the complex is examined within the city in terms of its spatial characteristics focusing on the issue of open space. In the second stage, it is examined within itself in terms of its visual characteristics and it focuses on the human scale impact reflected on the products of urban design.

The Ottoman culture is shaped under many different influences. The first one is the remains of Byzantine cities that the Ottoman cities are located on. Life in Asia Minor dates back to the earliest ages of civilization. It is even said that life on land has started from Asia Minor. Based on that, it is logical to say that none of the cities in Anatolia have founded on an empty land. Since the last civilization before the Ottomans is the Byzantine Empire, the strongest influence in terms of physical appearance is inherited from the Byzantines.

Another influence is the Islamic tradition that actually makes the core of social life. The necessities of Islamic life integrated with the traditions that are inherited from the Selcukis made up the social life of the Ottoman culture. Another important addition to these parameters is the life style of the society that comes from a nomadic culture.

All these parameters come together to form the Ottoman city with a character that is not so easily definable yet so rich in terms of urban design. The Ottoman monumental complex is probably the most important issue of the Ottoman city since it is the cultural core of social life. The concept of külliye is inherited from the Selcukis' tradition and improved accordingly.

Külliye is basically a building complex, which usually has the mosque as the core and the mosque is surrounded by many buildings with different functions. Among these functions; educational, health related, social and up to some extent commercial activities can be listed. The complete list of the functions is as follows; The mosque (cami), the madrasa (madrasa), the tomb (türbe), the hospital (bimarhane), the soup house (imaret), the guesthouse (tabhane), the school (sübyan mektebi), the library (kütüphane), the khan (han), the caravanserai (kervansaray), the bath (hamam), lodgements (Meşruta binaları), public toilet, time house (Muvakkithane), the foundation (sebil). All of these functions are not necessarily found in a complex together. The diversity of the functions a complex contains depends on the builder of the complex, the necessities and the era it is built in. In the classical period the complexes were

being designed with a much more comprehensive program and as a result of this the complexes contained a richer program.

Bursa and Edirne are comparatively the most important cities in the history of the Ottoman society and the study emphasizes on these early capital cities. Just like most of the other Ottoman cities, these two cities are also the outputs of an extremely rich cultural mosaic. As explained above the mosaic results from the geographical location the city is settled on, the Islamic tradition and the life style of the nomadic culture.

The morphology of the Ottoman monumental complex (külliye) is preferably examined at two levels in order to complete a thorough examination. The first level is the spatial level, which is carried out at a comparatively larger scale. The spatial level necessitates an examination of the monumental complex within the city. In this case the complex is the unit of focus and it is investigated by comparing with the other units of the city. There are three main zones in a typical Ottoman city and one of these zones is the religious – cultural zone which consists of the Ottoman monumental complex. As time evolved, the religious – cultural zone have gained its full definition as the monumental complex. Within time, the complex has also reached its well – defined enclosed space. The examination is carried out with the application of some qualifications. The qualifications mentioned, necessitate being modified with relation to the technology of the time involved in order to be applicable to an historic city. Another main tool used in the spatial analysis is the figure - ground theory. The theory briefly indicates to the relationship between the solid and the void parts of the city. The theory is also very helpful in defining the open space network and that takes the study to another aspect. The location of the first complex and the last one are thoroughly different from each other by means of spatial enclosure.

It is seen that the Ottoman tradition have evolved a great deal since the beginning of its history. In the beginning the idea of the complex that was adopted from the Selcukis' tradition was much different from that of the later

times. Within time, the features of the monumental complex were all improved and modified.

As a result of the examination in accordance with character, some improvements in relation with time are seen. One of the most important results has to do with the concept of enclosure. In the beginning it is so that the concept was not taken into consideration and it started to be noted within time. The enclosing of an area with walls, in other words a well defined open area is visible towards the end of the era that is examined.

It is also noted that the qualifications of an Ottoman monumental complex are directly related with its geographical location. In the cases where it is located on the outskirts of the city, it is more likely to include within itself the role of gathering the inhabitants, in other words it provides a space for the act of recreation.

The open space understanding of the Ottoman tradition is not very similar with that of the Europeans'. The main difference results from the way the social and cultural life is lived. In the Islamic tradition there is no room for socialization and daily life out of the house implies only for men. In general, life takes place in the house. As a result of this especially in the earlier times the concept of open space is not clear. The clear definition of the open space can not be seen until the classical period. Before that the appearance of the open space is interpreted as coincidental.

The second level of the analysis is the visual level and it is carried out at a very different scale. In this kind of analysis the examination is carried out within the complex and the different features of the complex are examined with comparison to each other. These features are classified under main concepts that are namely optic, place, concept and functional tradition and these concepts are defined in the light of many different definitive terms. The concepts and the definitive terms are adopted from Gordon Cullen's *The Concise Townscape*.

It is seen that the optic perception of the Ottoman monumental complex has evolved towards a professional sight with time. Since the beginning, towards the end of the early period the sequential experience improved to be created professionally. Sequential experience is integrated with the concept of vista and together they support the concept of ornamentation. Since otherwise is forbidden, the imposing and the magnificent look is created with the ornamentation of nature. At this point it is observed that the usage of specified vista have evolved a great deal within time.

It is also noticed that the concept of geometry and symmetry are not seen until the very end of the early period. This has to do with the design of the complex. In the beginning the understanding of design was somewhat incremental and different units were added to the complex within time. Approaching to the classical period the understanding has changed towards a complete design from the beginning.

All the terms referred to have to do with the perception of the user and that is either in terms of feelings or in terms of little details. In order to espouse a building or a detail in terms of urban design, it is necessary for him/her to perceive the design at an appropriate level.

This level is called the human scale. The human scale does not have a mathematical formula or limits; it is the scale at which the user is able to adapt him/her. The mosques for instance are usually above the human scale and it is done so on purpose in order to create an authority on user since it is accepted as "*The House of God*". The creation of superiority is either done by the distortion of some details, the creation of some feelings, or deliberately missing some design items. In other words the features mentioned in order to do the visual analysis are also valid for this issue.

Urban design is an interactive discipline that adopts itself to all kinds of changes and diversions in the society. Throughout the years the change in terms of the monumental complexes, has been perpetual. The concept of the

Ottoman monumental complex is a term that was found long before the Ottoman Empire and it was modified by the Ottoman Empire in order to meet the needs of the society and find the form that is examined during the thesis. The physical form has also been through a constant change depending on the geographical conditions, the present culture and the necessities.

It is seen that the Orhan Complex, which was built in the beginning of the period that was examined is missing most of the features which are valid for a proper design. The buildings are reflecting the Selcukian examples with the addition of the slightest necessities. After that and until the last example, which is the Complex of Beyazid the 2nd, the improvement is prolonged. The complex of Beyazid the 2nd is the most developed example of the studied period. It can also be said that it is one of the most developed and fully programmed examples of the Ottoman monumental complexes of all times.

Unfortunately since the examination is mainly carried out with literature written on the Ottoman architecture and design and most of what is read is not present today, the study is as accurate as possible. Still what are in hand is enough for the reader to reach some conclusions. It can definitely be said that the concept have reached its optimum standards in a period of about 180 years that begins with the construction of the orhan Gazi Complex and ends with the construction of the Beyazid the 2nd Complex. The Sultan külliyes in Bursa that are Orhan Gazi, Hüdavendigâr, Yıldırım Beyazid, Yeşil and Muradiye are preparations for the world wide known concept of the Ottoman monumental Complex whereas the Muradiye, Üç Şerefeli and Beyazid the 2nd Complexes in Edirne are more developed and include more of the necessary features.

There is not a common locational and design criterion valid for all cases. The only common criterion is the benefit of the society and to increase the educational level of the inhabitants. The visual features of the complex vary according to the geographical location and the influences on the complex.

However some authorities insist that the physical existence of the Ottoman monumental complex continues to some extent as the university campus of the present day. This resemblance most probably results from the educational, cultural character and the social role of the modern day campus. Even though it resembles the structuring of the külliye there is no strong physical evidence about the hypothesis, which could be the possible topic of another study.

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Appendix A

ANALYTICAL SURVEY IN TERMS OF "CONCISE TOWNSCAPE"

NAME OF THE COMPLEX:	
# OF THE FUNCTIONS:	

OPTIC

Serial vision:	
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PLACE

Possession:	
occupied territory	
possession in movement	
advantage	
viscosity	
enclaves	
enclosure	
focal point	
precincts	
indoor landscape and outdoor room	
the outdoor room and enclosure	
multiple enclosure	
block house	
insubstantial space	
defining space	
looking out of enclosure	
thereness	
here and there	
looking into enclosure	
pinpointing	
truncation	
change of level	
netting	
silhouette	

grandiose vista	
division of space	
screened vista	
handsome gesture	
closed vista	
deflection	
projection and recession	
incident	
punctuation	
narrows	
fluctuation	
undulation	
closure	
recession	
anticipation	
infinity	
mystery	
the maw	
linking and joining	
pedestrian ways	
continuity	
hazards	

CONTENT

juxtaposition	
immediacy	
thisness	
seeing in detail	
secret town	
urbanity	
intricacy	
propriety	
bluntness and vigour	
entanglement	
nostalgia	
the white peacock	
exposure	
intimacy	
illusion	
metaphor	
the tell - tale	
animism	

noticeable absence	
significant objects	
building as sculpture	
geometry	
multiple uses	
foils	
relationship	
scale	
scale on plan	
distortion	
trees incorporated	
calligraphy	
publicity	
taming with tact	

THE FUNCTIONAL TRADITION

Structures	
railings	
fences	
steps	
black and white	
texture	
lettering	
trim	
the road	

Appendix B

ANALYTICAL SURVEY IN TERMS OF PHYSICAL APPEARANCE

NAME OF THE COMPLEX: _____

OF THE FUNCTIONS: _____

THE YEAR OF CONSTRUCTION: _____

THE FUNCTIONS INCLUDED: _____

CAMI:	
# of floors:	
entrance:	
MEDRESE:	
# of floors:	
entrance:	
İMARET:	
# of floors:	
entrance:	
SEBİL:	
# of floors:	
entrance:	
TÜRBE:	
# of floors:	
entrance:	
HAMAM:	
# of floors:	
entrance:	
HAN:	
# of floors:	
entrance:	
TABHANE:	
# of floors:	
entrance:	
DARÜLHADİS:	
# of floors:	
entrance:	
KERVANSARAY & AHIRLAR:	
# of floors:	
entrance:	

DARÜŞŞİFA:	
# of floors:	
entrance:	
ARASTA & ÇARŞILAR	
# of floors:	
entrance:	
GENERAL NOTES:	

Appendix C

ANALYTICAL SURVEY IN TERMS "SPACE CREATING ISSUES"

NAME OF THE COMPLEX:

visual survey

creation of enclosure:	
linking sequential movement:	
transparency:	
axis and perspective:	
framed & directed views:	
edge continuity:	

ARCHITECTURAL ELEMENTS USED

spatial survey

Elevation:	
monumentality:	
integrated bridging:	
centrality:	
layering:	

stepping:	
axiality:	
perception from a distance:	
massive expression:	
topography:	
destination of Kiblah:	
distance to a water source:	
distance to the main axis:	