

## METHODS OF THE FIRE MAPS FOR NINETEENTH CENTURY İSTANBUL

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### ABSTRACT

Istanbul had to combat fires ever since the Byzantine period. The city which was rebuilt in accordance with the original architectural designs in the early Ottoman period went through a structural change in the 19<sup>th</sup> century due to the adaptation of modern reconstruction implementations. It will be analysed in this text that the technic and the logic of the planning of the fire maps depicted fired places in the 19<sup>th</sup> century's İstanbul. The fire maps of this period also contain proposals that have been drawn over the places destroyed by fires. Therefore, mapping based on the measurement information on the same graphic plane was realized. These cultural accumulations which date back approximately hundred and fifty years and which have retained the seals of the idea and the seal of the cartographer are the sole witnesses of the reconstruction of Istanbul. On the other hand, traditional Ottoman cities were not set up according to any preconceived idea or executed according to plans based on such designs. Nevertheless, it cannot be claimed that Ottoman architecture was realized without drafts or designs. Hence, the application of drafts on paper in the early period requires a distinct form of reading. For example, there are some parts in miniatures depicting early period Ottoman city topography that reflect imaginary additions of the artist, which are not even remotely related to reality. In another example, with only a ground floor plan drawn on graph paper with no cross section designs, final aspect or measurements could be transformed into a bathhouse or a mausoleum under the supervision of a construction supervisor. However, the scale maps of the 19<sup>th</sup> century, which bear the seal of both the architect and the authorizing institution and which were designed for designated places, demonstrate that the modernization period architecture was produced with very different techniques and for very different purposes.

**Key word:** Early Period Ottoman Images, 19<sup>th</sup> century Istanbul, Fire Maps

### 1. INTRODUCTION

The fire maps presented in this paper were chosen to present different structural characteristics than the original fire maps found in Istanbul Atatürk Library. Alongside the fire maps that represent the 19<sup>th</sup> century reconstruction of Istanbul, examples of arrangements that connect them, in the original expression of the period "*istikamet düzenlemeleri*" will be given These

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street arrangements, independent from the fires, but indirectly connected to them, are inseparable parts that contribute to the assessment of urban reconstruction as a whole.

19<sup>th</sup> century Istanbul is the capital of the Ottoman Empire. Although the main objective of the present paper is to share the late period mapping practices and techniques hitherto unknown, the drawing language of “paintings” and manuscripts produced by the Ottomans in the early period will also be mentioned. Drawings that were initially a communication tool eventually surpassed the geography in which they thrived and acquired a universal language. Therefore, the text will begin by referring to the early period, and be followed by the physical environment concept based on measurements in the 19<sup>th</sup> century and the contribution of the use of utilitarian tools to the city reconstruction and to land value will be assessed.

## 2. OTTOMAN DRAWING PRACTICES IN THE EARLY PERIOD

### 2.1. Writing and Drawing

'*Harita*' (map) is an Arabic noun meaning: “drawings that inform the geographic state of a place”<sup>2</sup>. Ottoman geographic maps must have had enormous value for the state which was the greatest consumer of cultural properties. However, periodic cadastres, court records on land disputes, post and carrier stations on major routes are not depicted in drawings. On the other hand, it is possible to find a considerable number of drawings on military operations<sup>3</sup>. In other words, it would be correct to state that in the early period, written descriptions were preferred to drawings. City topography depictions, which were disregarded in Islamic pictorial art until the 16<sup>th</sup> century, became an inseparable part of Ottoman manuscripts<sup>4</sup>. For example, the manuscript entitled “*Beyân-ı Menâzil- i Sefer- i Irâkeyn*” drawn by Matrakçı Nasuh, one of the janissaries of Sultan Suleyman, presents an integrated structure by a series of drawings almost similar to a film strip. The artist joins the pages with connecting patterns such as “waterways, dirt paths, and geographical images”. These elements create the fundamental characteristic of the manuscript, which is “action and continuity”. These patterns, for example the routes, guide the viewer by giving the course of reading. In the manuscript which is evaluated by structural analysis, the artist, instead of reflecting reality one hundred percent, tried to remind the viewers who know the city by evoking the image in the memory, and for those who do not know the city to create an image to introduce it by using the city's “iconic signs” such as natural and artificial topography, in other words, by mixing his concepts with what he sees.<sup>5</sup>

In fact, one of the basic characteristics of cultural production in traditional societies of the pre-modern period is naturalness and the other is community.<sup>6</sup> Therefore, cultural production is done in the direction of fore-known and pre-agreed upon patterns. Under these conditions, they also meet communication requirements. The state of being close to nature changed with modernization, as a matter of fact, it turned into a conflict with nature.<sup>7</sup> In this respect, the image and text content of the manuscript represents the style of the period which embraces both nature and community.

<sup>2</sup> Ferit Devellioğlu, *Osmanlıca-Türkçe Ansiklopedik Lügat*, Ankara, 1993, p.332.

<sup>3</sup> Ahmet.T. Karamustafa, “Military, Administrative and Scholarly Maps and Plans”, *The History Of Cartography, Part One*, (ed.) J.B.Harley, David Woodward, published by the University of Chicago Press, 1987, pp. 209-227.

<sup>4</sup> J.M.Rogers, “Itineraries and Town Views in Ottoman Histories”, *The History Of Cartography, Part One*, (ed.) J.B.Harley, David Woodward, published by the University of Chicago Press, 1987, pp. 228-255.

<sup>5</sup> Uşun Tükel, “*Beyân-ı Menâzil*’ in Resim Dili: Çözümleme ve Yorum” *Sosyoloji ve Coğrafya* (Ed. E.

Eğribel/U.Özcan), *Sosyoloji Yıllığı Kitap 15*, İstanbul, 2006, pp. 563-571.

<sup>6</sup> Aykut Köksal, “Doğa-Kültür İlişkisi Üzerine”, *XXI Mimarlık Kültürü Dergisi*, No.7, Mart-Nisan 2001, pp.16-17.

<sup>7</sup> Aykut Köksal, *ibid*, p.17.

Furthermore, amongst all the documents, there are also drawings that show one single building. In addition, there are two dimensional ground floor projects with expressions like “*resim*” “*resim-i musattah*” or expressions such as “*mücessem tasvir*” that refer to the three dimensional projects of the Süleymaniye Mosque, Yeni Mosque and Nur-u Osmaniye Mosque.<sup>8</sup>

Two different hammam plans from the 16<sup>th</sup> century are examples of the drafting practices of the period. Sketches<sup>9</sup> do not have scales as in the contemporary architectural representations. However, it is possible to have some idea of the dimensions of the plans drafted on graph paper. This drawing, which is found at the Austrian National Library, (code. 8615) does not represent any of the known hammams. It is not at all difficult to achieve an architectural construction of this plan, under the control of a construction supervisor. In the early period, the height of domed buildings, which have similar standards to load bearing systems, were calculated by traditional methods based on the ground floor plans and proportions. For example, in the Karapınar Mosque, which was built by Architect Sinan for Sultan Selim II, the radius of the central dome is equal to the height of interior space.<sup>10</sup> This anonymous, hammam plan without scale has the characteristics that make topologic classification and connection possible.

Similar typification was carried out for Islamic complexes. The system that places the complex in the center was based on the construction unit called “*göz*”. The unit called göz expresses a room and a patio in front.<sup>11</sup> The structure, which is made up of connected units, is set up on a “*cetvel*” (ruler) or an alignment<sup>12</sup>, reaches a constructive reality parallel to its own interior level of balance step by step. However, the whole which is composed of “cells” added in alignment with a ruler is not in a contrast relation with the nature of the urban pattern. The city was also constructed by the organization of independent units.

The system, which focuses on unit instead of form and which is capable of being altered by the addition or subtraction of units, also presents the possibility of transforming anonymous architecture representation into real architecture, under the supervision of a central power, anywhere within the borders of the empire. It was stated that this state of affairs was favorable for the creation of an architectural style exclusive to the empire rather than variations of regional building traditions.<sup>13</sup>

The “grid system”, which constituted the basis of the drawings of this period, allowed a kind of modulation flexibility. Flexibility not only mediates the process of transformation of the design to reality, but also after reality is achieved, further mediates the transformation of the space into functionality. However, it would be erroneous to compare the early “mıstar”ed<sup>14</sup> building type with the grid system used in the 19<sup>th</sup> century, which created radical changes in the city construction. The immigrant settlements built on the grid plan on empty lands of

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<sup>8</sup> Gülrü Necipoğlu Kafadar, *Plans and Models in 15th- and 16th-Century Ottoman Architectural Practice*, Journal of the Society of Architectural Historians, Vol. 45 No. 3, 1986, pp. 224-243

<sup>9</sup> Gülrü Necipoğlu Kafadar, *ibid*, pp. 225-227.

<sup>10</sup> A.Kuran, A. Kuran, "Mimar Sinan Yapısı Karapınar II. Selim Camiinin Proporsiyon Sistemi Ozerine Bir Deneme" (An Essay on the Proporsiyon System of Selim II's Mosque in Karapınar built by Mimar Sinan), *VII. Türk Tarih Kongresi, Kongreye Sunulan Bildiriler*, Ankara, 1973, pp. 711-716.

<sup>11</sup> Alpaslan Ataman, *Bir Göz Yapıdan Külliyyeye*, İstanbul, 2000, pp.19-23.

<sup>12</sup> Alpaslan Ataman, *ibid*, pp.27-32.

<sup>13</sup> Gülrü Necipoğlu Kafadar, *Plans and Models in 15th- and 16th-Century Ottoman Architectural Practice*, Journal of the Society of Architectural Historians, Vol. 45, No. 3, 1986, pp. 225-227;

<sup>14</sup> Oya Şenyurt, *Osmanlı Mimarisinin Temel İlkeleri*, İstanbul, 2015, pp.27-38.

<sup>15</sup> Oya Şenyurt, *ibid*, p.166.

<sup>16</sup> Serim Denel, “19. Yüzyılda Ankara'nın Kentsel Formu ve Konut Konut Dokusundaki Farklılaşmalar”, *Tarih İçinde Ankara, Eylül 1981 Seminer Bildirileri*, Ankara, 1984, pp.138-139.

Anatolia at the end of 19<sup>th</sup> century and in the 20<sup>th</sup> century were given as examples on this subject, and the point of view that “these should be appraised as beyond the influence of modern architecture, and evaluated as the characteristic approach of the Ottomans, whose past is based on the “*mıstar tahtası*” drawing tradition” has been put forth.<sup>15</sup> But in fact, the early period modular planning logic presents the possibility of reproduction of a socially accepted system based on pre-arranged patterns. Furthermore, the spatial decoding of iconic buildings such as mosques, hammams, inns, schools that are owned by the empire refer to a symbolic rather than an economic value. On the other hand, the grid system that the immigrant settlements represent reflects the conditions of a period when time and space were transformed to a modern value.

For example, the settlement called Boşnak Mahallesi (The Bosnian Neighborhood) built in Ankara in 1878, was a new neighborhood that housed some of the immigrants who came to Istanbul from the Balkans.<sup>16</sup> The planning concept with the right angle street system of the period should not be regarded as the starting point of today’s monotonous one, nor should it be considered as a reference to the past. The main reason is that the relationship determinant of the early period city pattern with the “mıstar”ed building typography is not “mıster”. On the contrary, in the analyses of early period social complexes, it was asserted that the whole complex, which was composed of aligned units, was formed in accordance with the nature of the constructed environment, and this was called “*mülkiyet çizgisi mimarisi*” (property line architecture).<sup>17</sup> On the Ankara example, it was stated that “This new pattern seen in the 19<sup>th</sup> century should be regarded as the result of an evolution that brought about the change and development of traditional characteristics.”<sup>18</sup>

### 3. FIRE GROUND ARRANGEMENT MAPS IN 19<sup>TH</sup> CENTURY ISTANBUL

Between the 16<sup>th</sup> and the 18<sup>th</sup> centuries, in the Ottoman Empire, spaces were defined not by their dimensions, but their locations and functions. In other words, rather than stating how many “*zira*” square a place was, the number of people it could accommodate would be mentioned.<sup>19</sup> Definitions determined the functional value of a place; in this instance the spaces do not have modern measurement units to serve rent. In fact, even in the 19<sup>th</sup> century the rent or sale ads for some of the townhouse in the newspapers of the period the places were described the buildings by their names and the square footage was left for the reader to fathom.<sup>20</sup> It is impossible to state that there was an Ottoman city map until the 19<sup>th</sup> century.<sup>21</sup> We have already stated that the traditional Ottoman city was not set up according to a pre-conceived scaled plan. Nevertheless, there were some works that were carried out according to measurements in the early period. In the 16<sup>th</sup> century, a knotted measuring string was used for horizontal distances. Similarly, the triangle method was used for bridges and aqueducts, and bubble levels for measuring heights (elevations) and the “*havai terazi*” for bigger buildings. Therefore it is

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<sup>17</sup> Alpaslan Ataman, *ibid.*, p.29.

<sup>18</sup> Serim Denel, *ibid.*, p.138

<sup>19</sup> Uğur Tanyeli, “Ölçerek Görmek: Osmanlı Topografya Teknolojisi (16. 18.Yüzyıl)”, *Türkiye'nin Görsellik Tarihinin Giriş*, İstanbul, 2009, pp.18-45

<sup>20</sup> Sibel Gürses Söğüt, *Tarihi Yarımada'da Hocapaşa Yangını'nın Mekânsal Değişimine Bakış*, an unpublished doctorate thesis completed in June 2015 at the Urban and Regional Planning Department of MSGSU, advisor: Prof.Dr. Gülşen Özyayın p.74.

<sup>21</sup> Uğur Tanyeli, *ibid.*, pp.19-20.

impossible to speak of a lack in geometry knowledge. On the contrary, ownership regulation of land can be explained by its relation to rent capacity.<sup>22</sup>

The *zira* measurement unit started to be used for land in Istanbul in the 19<sup>th</sup> century. The city had acquired economic value, and any intervention on the city land was sure to increase its value double fold. Therefore, in many areas fires made it possible to realize modern construction applications. These applications were realized in accordance with the Ebniye regulations that were written around the mid-19<sup>th</sup> century. We will not go into the details of the said regulations. In general, the beginning of the change in the fabric of the old city can be observed as a result of the reformist policies of Sultan Mahmut II and continued with the radical decisions of declaration of “*Tanzimat*” (Reorganization). These decisions not only indicate the changes in the physical environment, but also the changes in the customary social behaviors. For example, after the *Tanzimat* Firman gave equal rights to the Muslim and non-Muslim population, we see that neighborhoods divided in different religious communities have changed to division according to classes. It is said that in the early period ownership distribution was based on “preclusion and utilitarianism.” For example a person could make additions to his/her house and take up space in the street until the neighbors complained.<sup>23</sup> In the simplest form dead-end streets were formed by these practices. The contradiction between the double law structure, namely “*şer-i and örfi*” (ecclesiastic and customary) of the Ottomans may have created a social assent zone.<sup>24</sup> Properties, which were divided on mutual assent in the early period were defined by general and abstract measurements and plot numbers in the 19<sup>th</sup> century. The plots that were in the streets which had been determined by regulations and standardized by the implementation of rules became common. In the new system, where ownership division is connected to general rules the utilitarian was transformed into value related to change instead of usage.<sup>25</sup>

The importance of the examples of street network arrangements independent of fires increased in contrast to the view that fire ground regulations were limited to the organic housing development in the surroundings of fires and arranged in right angle streets forming separate small blocks<sup>26</sup>. Moreover, these arrangements also functioned as connectors of fire grounds. In fact, directions were the founding elements of great fire ground arrangements. This was realized in two ways. The first was done by giving a direction to a street of the old pattern, and the second was by specifying a direction. As the determinants of the old city fabric were not the streets, but the buildings, both options were new. The building groups with their own orientation come together and formed a natural whole with the discipline of the temples. With the same principal, and parallel to nature, the street patterns run on the topography without a determinant whereas the streets, which are the real determinants of modern construction practices, define the direction in spite of the topography. The system was built on this premise. The standard construction blocks and plots that were set up on the directions afterwards would be remote from the city’s present identity. The city started to gain an identity with modern measuring devices and technical possibilities.

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<sup>22</sup> Uğur Tanyeli, *ibid*, pp.28-30

<sup>23</sup> Stefanos Yerasimos, “Tanzimat’ın Kent Reformları Üzerine”, *Modernleşme Sürecinde Osmanlı Kentleri*, İstanbul, 1996, pp.1-18.

<sup>24</sup> Stefanos Yerasimos, *ibid*, p.11.

<sup>25</sup> Sibel Gürses Söğüt, “Osmanlı Şehir Yönetimi’nin Modernleşme Sürecinde Yangınların Rolü”, *Toplumsal Tarih*, sayı:270, Haziran 2016, İstanbul, pp.50-59.

<sup>26</sup> Zeynep Çelik, *Değişen İstanbul*, İstanbul, 1996, p.128.

### 3.1. Hocapaşa Fire Ground Map

After the Hocapaşa fire, two fire ground maps were drafted by Mehmed Kemalüddin Bey; one from Demirkapı to Bâb-ı Âli, and the other from Bâb-ı Âli to Divanyolu. The map numbered (İAK-HRT-GEC-000981)[Figure-1] was drawn on an approximately 130/160 cm cardboard paper. In the following years, maps drafted on special waxed linoleums were found. According to the explanatory note, the draft was placed on the sheet in the east-west direction. The map, which shows traces of restoration, does have an explanatory note, but no indication of direction. This is the reason why explanatory notes are so important for us researchers.

*“Hocapaşa harik-i kebirinin Temurkapu cihetinden Bâb-ı Âli’ye kadar olan harita-i mevkiyesidir vuku/ 15 Rebiülahir 1282/25 Ağustos 1281/7 Eylül 1865”*

The scale line under the note is probably in “zira” measurement because the metric system was not used yet at that period. There are two seals under the scale. Although they are illegible, one of them probably belongs to the engineer. The name of the engineer, though not legible on the map, was found in another record.

If the map is a drawing of an existing state, no term indicating an arrangement is found on this map. Nevertheless, after showing the existing state in thin lines a red line drawn with a thicker pen indicates the suggested arrangement. Therefore, the map also contains the envisioned plan. Only Bâb-ı Âli and Police Offices were indicated and the names of the new streets that were to be opened were given. On the map where colored indications were given, beige was used for places on the construction blocks that had not burned down and pink was used for the ones that had. This two layered map takes us to the city’s old fabric, most of which has been wiped out. Or in a contrasting reading, lets us understand what the new fabric, which we have committed to memory, has wiped out.

(İAK-HRT-GEC-001433) [Figure-2] the explanatory note of this map, which has the same characteristics as the other one and is its follow up, is as follows:

*“Hocapaşa harik-i kebirinin Bâb-ı Âli’den Divanyolu’na değin vaki olan mevkinin harita-i mevzisi vuku/ 15 Rebiülahir 1282/25 Ağustos 1281/[7 Eylül 1865]”*

We know that it was drawn by the same engineer. The following names are given on the map: Ticarethane, Vezir hanı, Darülfünun Ebniyesi, Sultan Mahmut Mausoleum, Köprülü Mehmet Pasha Mausoleum, Çemberlitaş, Çifte Saraylar plot, Ali Baba Street, Nurosmaniye and Mahmudiye Streets. In the arrangement, Nurosmaniye and Mahmudiye Streets are newly opened streets. On this map, the construction block where the mausoleum of Sultan Mahmut was located is tinted green whereas on the other map it is not. It may be assumed that the color green indicates a foundation building. Both maps were aligned on the drafting paper arbitrarily. In other words, the maps that supplement each other can be joined together with reference to the common (Bâb-ı Âli) Street. No indication what so ever is given about the direction. When they are joined together the script can be read from different directions. Therefore, it is as if direction means nothing to the drafter. The reason for this is that sufficient information is given to the builder who knows the space as well as the drafter himself and will be able to carry out the project.

### 3.2. Demirkapı Fire Ground Map

(İAK-HRT-006990) [Figure-3] the explanatory note on the map dated 18 Zilhicce 1282/21 April 1282[4 May 1866] is as follows:

*“Temurkapu’da muahharan (sonradan) vukû bulan harik mahallinin tersim olan harita-i mevkisidir vukû 18 Zilhicce 1282/2 Nisan 1282[3 Mayıs 1866]”*

The word “*tersim*” in the explanatory note means the drawing. As on the Hasanpaşa fire map, there is no statement about the arrangement yet. However, on some maps we see the word couple “*tersim and tanzim*” which is used for the arrangements made on the existing state. The technical language of the map and the coloring show the same characteristics as the others. However this time, completely different from the old fabric, plots are shown on the orthogonal construction blocks. On the map, where the north sign is found, the coast line marked in blue and the fortification wall somewhat supports our assumption on the location. The North sign is rarely found on the maps dating from the middle of the period. The Demirkapı example is one of them. Moreover, as it was stated before, the images that were found in the archives were most probably supported by information written in another register. This tendency was perhaps a traditional text and image relationship custom. However, no fire registers were found in the Atatürk library.

### 3.3. Şeftali Street Direction Arrangement

**(İAK-HRT-007329)** [Figure-4] The Şeftali Street arrangement is an example of “direction arrangement”. The drafting technique of the arrangement is the same as the others. Comparison with late period maps was necessary to interpret the coloring. In this arrangement, which did not have any relation whatsoever with a fire, the colors reminiscent of green and orange were used to express gardens and wooden buildings while masonry buildings were expressed in black. The scale line is in “*zira*”. The difference in this arrangement is that a cross section is added to the draft. As it would have been difficult to carry out infrastructure work on a slanting and winding road, the roads that had to be rectified were most probably measured with a *havayi* scale, and the end point of each change that was made by the scale was given a letter of the alphabet. These letters can easily be read on the cross section and the plan. The purpose of the road may have been to connect Fincancılar Yokuşu, which was arranged four years earlier, to Süleymaniye.

*"Rıza Paşa Konağı'nın üst başında Şeftali Sokağı'nın Süleymaniye'de Dökmeciler Sokağı önüne kadar istikamet haritasıdır. 23 Ağustos 1287[4 Eylül 1871]"*

*"Süleymaniye civarında Şeftali Sokağı'nın iş bu gösterilen kırmızı hatta tevfiken 8 arşın arzında tanzim ve tesviyesi kararlaştırılmıştır. 3 Zilhicce 1288[13 Şubat 1872]"* The seal on the map belongs to the Şehremaneti (Municipality) engineer.

However, the street arrangement was not carried out. On the contrary, Şeftali Street was wiped out in the area where structural changes were made after the great Mercan fire of 1912.

### 3.4. Beyazıt Tavşantaşı Fire Map

The original map numbered **İAK. (HRT-004256)** [Figure-5] shows suggested arrangements drawn in red over the old texture. On this arrangement, which, compared to the others, has a relatively developed drafting language, the lines that continue outside the borders of the fire ground are drawn in broken lines. These open ended broken lines foretell that the arrangement will not be limited to the fire ground. Instead of expressing various construction blocks in different colors, indicating the borders of the fire ground was preferred on this map. The scale of the map is 1/1000. The location can be determined by the note “*Beyazid harik mahalli*” (Beyazid fire ground). Apart from the street names in Ottoman, the digits that show the slant of the street are written on the axes that pass from the middle of the streets. The metric system is used for measurements. No explanation can be found on the map except street names and direction signs. Therefore, supplementary information on the subject was found in the Prime Ministry Ottoman Archives and the newspapers of the period. According to the accounts of the said sources, the fire started on the 8<sup>th</sup> of Teşrin-i evvel 1327 (21<sup>st</sup> of October 1911) and

burnt a total of 119 houses; 60 in the Beyazit Emin Bey neighborhood, 30 in the Saraç Ishak neighborhood and 29 in the Soğan Ağa neighborhood.<sup>27</sup>

On the map number İAK.(HRT-006072) [Figure-6] a legend is added to the lower right corner of the draft plane showing block, plot numbers, existing (buildings belonging to the municipality) after the fire and the borders of the fire is symbolized. The existing buildings are the buildings, which are completely alien to the old texture, that are in orthogonal blocks defined by a network of streets crossing one another in right angles. In any case it is evident that in order to construe a map of indefinite date, more information than the draft is required. To get more information on whether the application was carried out or what part of it was carried out, and to see what the possible changes took place, in addition to archive documents cross readings with the maps of the next period (for example, the Pervititch insurance maps) will be helpful.

#### 4. CONCLUSION

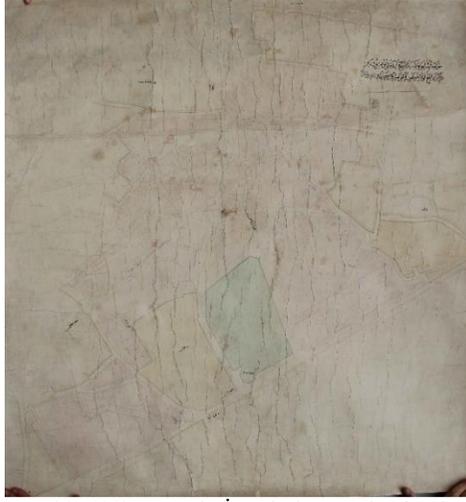
Traditional Ottoman cities were not planned in advance. This indicates that there is no drawing that represents the city plan. Nevertheless, it cannot be asserted that the Ottomans had no knowledge on how to measure land and that there were no architectural designs at that time. Early period drafts that were analyzed had no scale or measurement due to the social structure and the relationship of this structure with nature in the traditional period. Therefore, physical space was expressed in functional terms rather than measurements. However, in the plans of the late period, space began to be expressed in terms of information as to measurements and locations. In brief, abstract mathematical data replaced social values with economic values.

##### 4.1. Figures, Graphics, Photographs and Tables

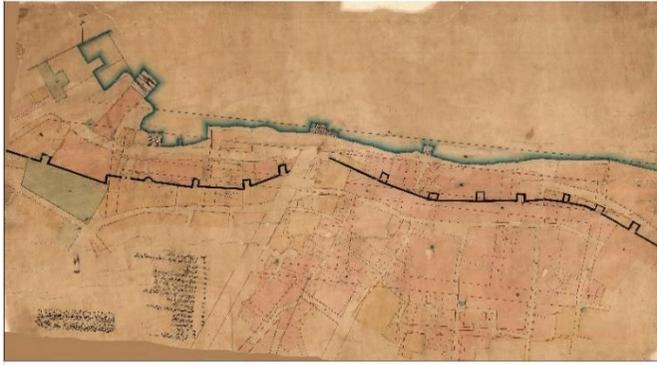


**Figure 1.** (İAK-HRT-GEC-000981) Kaynak: İstanbul Atatürk Kitaplığı, Nadir Eserler Bölümü

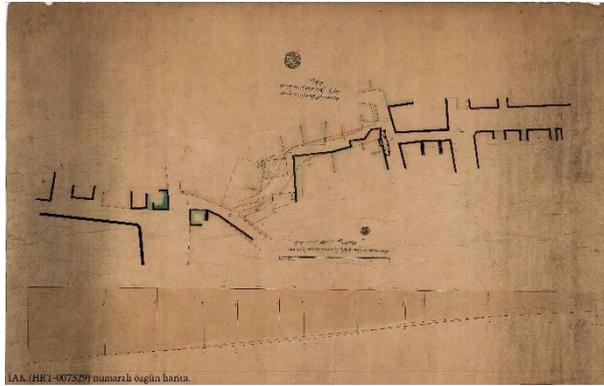
<sup>27</sup> BOA.DH.MTU.d.43/26



**Figure 2.** (IAK-HRT-GEC-001433) Kaynak: İstanbul Atatürk Kütüphanesi, Nadir Eserler Bölümü



**Figure 3.** (IAK-HRT-006990) Kaynak: İstanbul Atatürk Kütüphanesi, Nadir Eserler Bölümü



**Figure 4.** (IAK-HRT-007329) Kaynak: İstanbul Atatürk Kütüphanesi, Nadir Eserler Bölümü

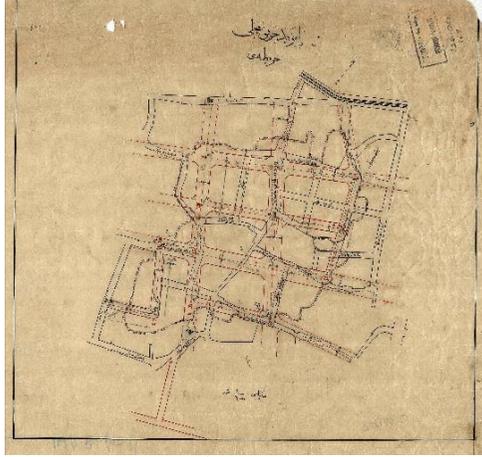


Figure 5. (IAK-HRT-004256) Kaynak: İstanbul Atatürk Kitaplığı, Nadir Eserler Bölümü

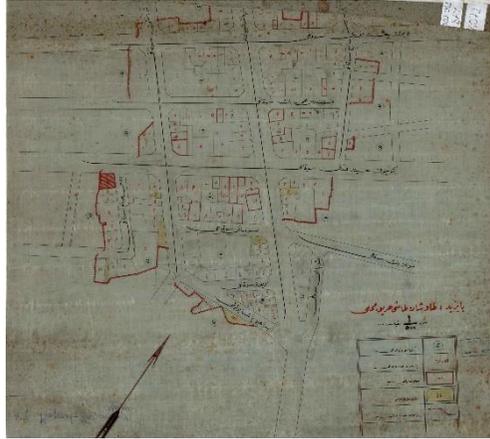


Figure 6. (IAK-HRT-006072) Kaynak: İstanbul Atatürk Kitaplığı, Nadir Eserler Bölümü

## REFERENCES

- Ataman, A. Bir Göz Yapıdan Külliyyeye, İstanbul, 2000.
- Denel, S. "19. Yüzyılda Ankara'nın Kentsel Formu ve Konut Konut Dokusundaki Farklılaşmalar", Tarih İçinde Ankara, Eylül 1981 Seminer Bildirileri, Ankara, 1984, ss.131-153.
- Gürses Söğüt, S. Tarihi Yarımada'da Hocapaşa Yangını'nın Mekânsal Değişimine Bakış, M.S.G.S.Ü. Şehir ve Bölge Planlama Bölümü'nde, Prof.Dr.Gülşen Özaydın danışmanlığında tamamlanmış olan yayımlanmamış doktora tezi, 2015.
- Gürses Söğüt, S. "Osmanlı Şehir Yönetimi'nin Modernleşme Sğrecinde Yangınların Rolü",Toplumsal Tarih, sayı:270, Haziran 2016, İstanbul, ss.50-59.
- Çelik, Z. Değişen İstanbul, İstanbul, 1996.
- Devellioğlu, F. Osmanlıca-Türkçe Ansiklopedik Lügat, Ankara, 1993.

- Karamustafa, A. "Military, Administrative and Scholarly Maps and Plans", The History Of Cartography, Part One, (ed.) J.B.Harley, David Woodward, published by the University of Chicago Press, 1987, ss.209-227.
- Köksal, A. "Doğa-Kültür İlişkisi Üzerine", XXI Mimarlık Kültürü Dergisi, sayı.7, Mart-Nisan 2001, ss.16-17.
- Kuran, A. "Mimar Sinan Yapısı Karapınar II. Selim Camiinin Proporsiyon Sistemi Ozerine Bir Deneme" (An Essay on the Propor- tion System of Selim II's Mosque in Karapınar built by Mimar Sinan), VII. Türk Tarih Kongresi, Kongreye Sunulan Bildiriler, Ankara, 1973,ss. 711-716.
- Necipoglu, G. Plans and Models in 15th- and 16th-Century Ottoman Architectural Practice, Journal of the Society of Architectural Historians, Vol. 45 No. 3, 1986, ss. 224-243
- Rogers, J.M. "Itineraries and Town Views in Ottoman Histories", The History Of Cartography, Part One, (ed.) J.B.Harley, David Woodward, published by the University of Chicago Press, 1987, ss.228-255.
- Şenyurt, O. Osmanlı Mimarisinin Temel İlkeleri, İstanbul, 2015.
- Tanyeli, U. "Ölçerek Görmek: Osmanlı Topografya Teknolojisi (16. 18.Yüzyıl)", Türkiye'nin Görsellik Tarihine Giriş, İstanbul, 2009, ss.18-45.
- Tükel, U. "Beyân-I Menâzil'in Resim Dili: Çözümleme ve Yorum" Sosyoloji ve Coğrafya (Yay.haz. E. Eğribel/U.Özcan), Sosyoloji Yıllığı Kitap 15, İstanbul, 2006, ss.563-571.
- Yerasimos, S. "Tanzimat'ın Kent Reformları Üzerine", Modernleşme Sürecinde Osmanlı Kentleri, İstanbul, 1996, ss.1-18.