VERNACULAR and TRADITIONAL OTTOMAN CITY AMASYA THROUGH THE LENS OF RESILIENCE

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THESIS ABSTRACT

Resilience and vernacular architecture are two concepts that show high correlation which is under-examined, yet promising. Both concepts were based on a system, which is a built environment that consists of 4 components (infrastructure, institutions, society, economy) and according to both concepts, they face and overcome problems, survive, and advance. This correlation between the two concepts was a starting point for this research. For more in-depth analysis of this correlation Ottoman cities were selected as a geographical context. In line with the historical and current context of Turkish-Ottoman cities and the concept of resilience, this research aimed to establish a new framework of resilience to bring a new understanding of the historical formation, maintenance, and development of the Ottoman cities. Due to there is no universal method of analyzing and assessing resilience and no previous study about Ottoman cities and their resilience, a novel framework for assessing resilience in the traditional and vernacular Ottoman cities was created. By combining two main approaches to the resilience studies, the framework was shaped by investigating in 4 steps: (1) Resilience of What?, (2) Resilience against What?, (3) Characteristics of Resilience, (4) Types of Resilience. After investigating the formation, maintenance, disaster management, and characters of the case study Amasya, the chronological order of events, actions that were taken before, during, and after disasters were investigated. This data was analyzed by following the 4 steps of the framework. Results showed, 4 types of urban resilience (infrastructural, institutional, social, economic) and 10 characteristics of resilience (redundancy, diversity, independence, interdependence, robustness, resourcefulness, adaptability, creativity, self-organization, collaboration) are evident in the Ottoman cities. Moreover, a new characteristic of resilience in the Ottoman urban context called Relevance/Usefulness was detected. This study concludes that evolutionary (socioecological) resilience is evident in the traditional and vernacular Ottoman cities. Furthermore, for Ottoman cities, *urban resilience is maintaining the traditional urban network that consists of spatial organization, waqfs, the society, and economy, retaining this system throughout the stressors (mainly disasters), and continue functioning, maintaining, adapting, transforming, and advancing when/if necessary*.

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Meryem

GLOSSARY[1]

Ahis: Muslim craftsmen organization

Anatolia: Asian part of modern Turkey, a peninsula also called Asia Minor.

Avariz Akcesi: Tax that is collected in the case of special occasions in the Ottoman Empire

Azan (Adhan, Ezan): Islamic call to a prayer 5 times a day

Ayah (Ayat, Ayet): Verses from the holy book of Islam, Quran

Bazaar (Pazar): Open Market

Bimarhane (Bimaristan): Hospital

Caravanserai (Kervansaray): Accommodation for traveling businessmen.

Carsi: Shopping area

Dar'al Imara: The residence of a governor and *kadi*

Daru'l Hadis: Next level of madrasah that provides special education of Prophet Muhammad (peace be upon on him) sayings and actions.

Daru'l Kurra: Next level of madrasah that provides special education on Quran.

Darussifa: Next level of madrasah that provides medical education.

Dervish: Followers of religious orders who abandon most of the materialistic aspects of life and tend to either live in tekkes or spend most of their time in tekkes for religious activities.

Dervish Lodge: Place for dervishes to live, Zawiya, Tekke.

Diwan (Divan): Courthouse

Ferman: Royal edict

Friday Mosque: There is a special prayer that takes place in Islam on Friday that needs to be done with the community. As a part of the urban fabric, there is at least one big mosque to serve a

[1] For glossary, various Turkish and Arabic spellings of the words are added.

bigger crowd for this prayer, and that mosque is called the Friday mosque. Friday mosque is the biggest mosque in the city and is located at the center of a central core.

Funduq (Funduk): Khan, Han, Hostelry and trade place for merchants

Hadith (Hadis): Words and actions of Prophet Muhammad (PBUH)

Hammam (Hamam): Public bath

Han (Khan): Hostelry and trade place for merchants

Hara: Neighborhood, Mahalla, Mahalle

Himis: Wooden structure filled with adobe or brick

Imaret (Imarat): Soup house that serves free food and provides shelter if needed.

Imam: Religious leader of prayers who are employed to work in mosques

Kulliyah (Kulliya, Kulliye): Complex that consists of various functions such as mosque, maktab, madrasah, and hammam.

Ksar: Houses for higher rank officials

Lonja (Lonca): Ottoman guild system

Madrasah (Madrasa, Medrese): A school for higher education, an equivalent of universities

Mahalla (Mahalle): Neighborhood, Hara

Maliki School: One of the denominations of Islam, school of Islam

Masjid (Mescit): A Muslim place of worship for daily prayers

Maristan: Hospital, Bimarhane, Bimaristan

Maqbara: Public cemeteries

Mida'at: Sadirvan, a facility for ablution next to a mosque

Minaret: Tower like structure that is part of mosque where a call for prayers cited

Mosques: A Muslim place of worship

Muhtar (Mukhtar): An elected official who runs administrative duties in neighborhoods.

Murabit: Tomb of a religious figure, Turba, Turbe.

Ottomans: A Turk, especially of the period of the Ottoman Empire.

Prophet Muhammad (Mohammad, Muhammed) (Peace be upon on him, PBUH): He was accepted as the prophet of the religion Islam. PBUH is added next to his name as a way of respect by Muslims, as well as the author of the thesis.

Qishlaq (Kisla): Army and barracks

Quran (Kuran): Holy book of Islam

Qadi (Kadi): Islamic Judge

Sanjak (Sancak): Ottoman administrative unit that is a similar size to a city today.

Sancak Beyi: The governor of sanjaks.

Saray (Sarai): Palace

Seljuks: Muslim and Turkish dynasties that ruled Central Asia and the Middle East between the 11th and 14th centuries.

Shahzadah (Sehzade): Crown prince.

Suq (Souk): Marketplace, mostly shaped among the streets in the stalls.

Sur and Bab: Wall and gate

Tanzimat Fermani: Imperial edict of reorganization

Tekke: Zawiya, A building for religious order and their follower to live.

Turbe (Turba): Private cemeteries, Murabit.

Tulumbaci: Firefighter

Waqf: Philanthropic organization that provides various services to all for free.

Wekala: Caravanserai, accommodation for traveling businessmen.

Zawiyah (Zawiya, Zaviye): A building for religious order and their follower to live.

DECLARATION

I, the author, confirm that the Thesis is my own work. I am aware of the University's Guidance on the Use of Unfair Means (www.sheffield.ac.uk/ssid/unfair-means). This work has not been previously been presented for an award at this, or any other, university.

CHAPTER 1: INTRODUCTION

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1.1. Research Gap

This research focused on two main thematical backgrounds: Resilience and Vernacular Architecture. While resilience is rather a new concept in the scholarship that is adopted and adapted by various areas of research, vernacular architecture is a more established concept that is explored through various aspects. After the initial examination, this research found a correlation among two concepts which is under-examined.

As a fairly new concept, there is no universally accepted definition or method of assessing resilience. There are various approaches to what it refers to in urban and architectural studies. While initial approaches focused on a state of equilibrium after stress (Alexander, 2013; Davoudi *et al.*, 2012), later, a new perspective highlighted the ability to withstand the shock without changing its structure (Davoudi *et al.*, 2012; Holling, 1973; Mayunga, 2007; Meerow and Newall, 2019; Mehmood, 2016). The last approach claimed that there are no equilibria in complex systems. Moreover, there is a constant internal change and systems adapt to internal or external stresses and advance to a better state than the original (Carpenter *et al.*, 2001; Davoudi *et al.*, 2012; Goncalves and Marques de Costa, 2013). Even though there is no single definition, all approaches try to investigate the reactions of any system against a stressor for its survival. The research on the resilience of urban fabric tends to focus on either the present-day or recent history with modern-day data. Furthermore, various organizations, scholars, governments tried to develop ways of measuring resilience, and similarly to the definitions of resilience, numerous ways to assess resilience were proposed. In the literature, there are various papers or reports on resilience frameworks, indicators, and characteristics (Cere *et al.*, 2017; Cutter, 2016; Fatiguso *et al.*, 2017; Gibberd, 2014; Norris *et al.*, 2008; Parsons *et al.*, 2016; Petit *et al.*, 2013; Quinlan *et al.*, 2016; Sturgess, 2016).

Unlike the concept of resilience, for the second thematical background for this research, vernacular architecture, the scholars agree on what it refers to. Vernacular and traditional architecture that exists today is shaped in a long period of time and throughout history with accumulated knowledge, reflects the culture and lifestyle of people, adapts to natural and social conditions, manages to overcome various internal and external changes and stressors, continue to survive and develop (Demirbilek, 1988; Singh *et al.*, 2011). Vernacular systems were considered in the literature as *'continuous evolution process of social, economic and cultural events for the territory and the*

community in historic built environments shows these environments' abilities to resist any change or disaster, repair afterward, and adapt to new conditions because it is a result of a knowledge that passes from one generation to the other by correcting its' errors (Fatiguso *et al.*, 2017, p. 1; Ozel *et al.*, 2015). Overall, the consensus is that vernacular architecture faced various stresses over a long period of time and survived.

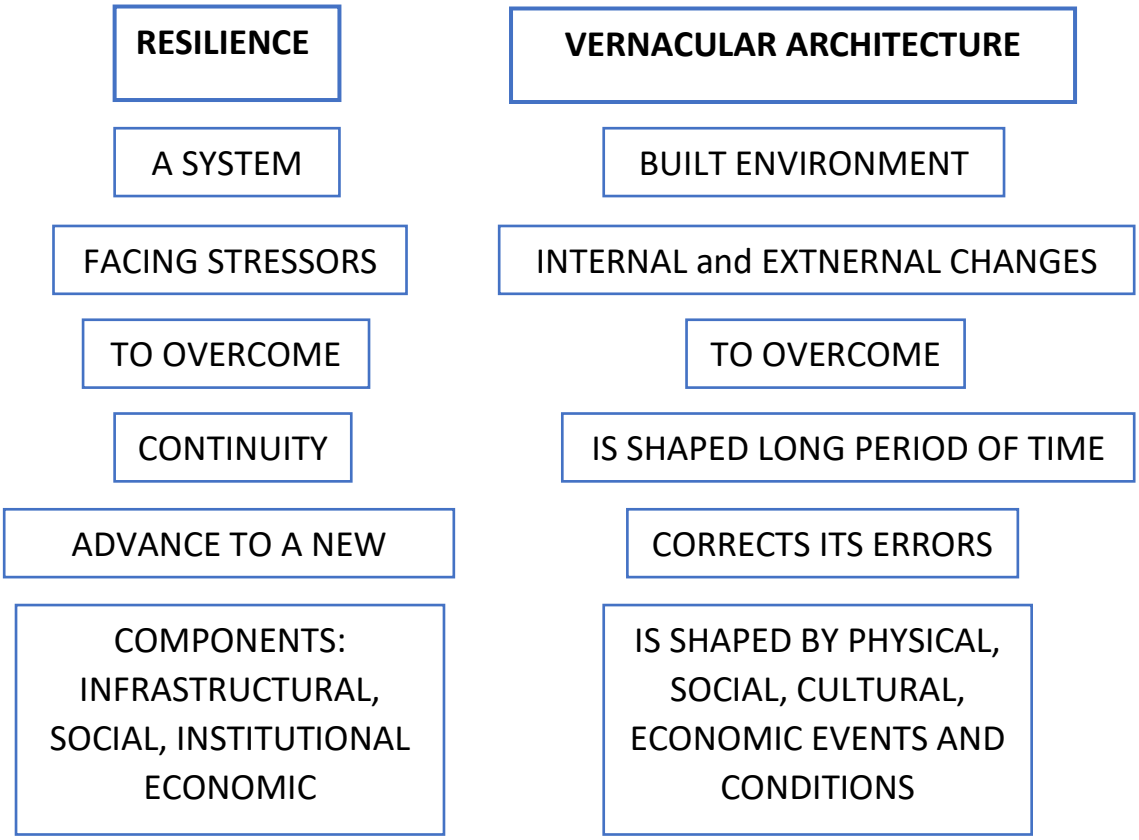

Fig.1.1. Correlation between 2 concepts of Resilience and Vernacular Architecture

Two concepts mentioned above, resilience and vernacular architecture, have common aspects (Fig. 1.1). Both concepts focus on facing a stressor, overcoming them, continuity and survival by advancing to a new level. Also, both have spatial, social, economic, and cultural aspects. Even though there is a clear correlation in between, this connection remains under-examined in the literature. Resilience was originally studied under the area of engineering and continued to be examined under scientific topics, or in quantitative urban studies. However, vernacular architecture is a topic of humanities or social sciences. As result, the scholars that brought the concepts of two different directions of the scholarship together are very limited.

Considering vernacular architecture is a local concept, the geographical context was chosen as the traditional vernacular Ottoman cities for more in-depth exploration. Many studies explored the foundation, maintenance, and evolution of Ottoman cities, however, no study explored the architectural formation and evolution of an Ottoman city through the lens of resilience. Ottoman cities were founded in the 14th century and overcome various problems that affected the urban fabric of cities and managed to survive until the 20th century. Moreover, in the present day, there are towns that are intact as the first day they were founded. Therefore, the Ottoman cities can be considered as an example of vernacular and traditional architecture that can be investigated through resilience. This research is interested in the moments of stress, recovery, and continuation process in the history of the urban fabric of the Ottoman cities, which will connect the concept of resilience to the concept of traditional vernacular architecture. This research is to investigate the possible connection between two areas of study and take the essence of descriptions of various resilience types and characteristics in the urban fabric and find similar concepts in the historical context and analyze historic urban fabric throughout the timeline of important events to find traces of resilience.

1.2. Geographical Context

As explained in the research gap, this research will trace pieces of evidence of resilience in traditional vernacular settlements. Since the vernacular settlements are defined by their geographical area, in this research, Ottoman urban fabric is selected as a geographical and cultural context for this study.

Turkish tribes immigrated to Anatolia[2] in the 11th century and during the 13th century, the Ottoman Principality became a world empire, which conquered and controlled the wide geography of Balkans[3] and Anatolia. Urbanization in these geographies followed a similar pattern. There were two possible scenarios for their urbanization process: transforming old settlements or starting a new one next to the original settlements. When the Ottomans conquered a new city, a commander or a governor was sent to the city to secure after the conquest. Dervishes[4], some traders, and Ottoman

[2] Asian part of Modern Turkey, a peninsula also called Asia Minor.
[3] A geographical region in the southeast of Europe.
[4] Followers of religious orders who abandon most of materialistic aspects of life and tend to either live in tekkes or spend most of their time in tekkes for religious activities.

citizens from different areas were brought to the newly captured city to start the urbanization. If there was enough space within the existing settlement, cities were transformed from a possibly Byzantine city to an Islamic and Turkic city. If the area inside the city walls was not sufficient, the Ottomans built new settlements outside of the city walls. For founding settlements, first, service buildings and infrastructure were constructed, then, new *mahalla*s (residential neighborhoods) were established around them (Canitez, 2010; Demirvuran, 2007; Eldem, 1987; Kayici, 2012; Kilic, 2009; Kilinc Kurtaran, 2012).

Ottoman cities consisted of two sections: the city center with commercial, religious, educational, administrative, and service buildings; and residential neighborhoods around them. The Ottomans converted or created new cities with this common spatial organization and functions. However, because the Ottomans controlled wide geography from Middle Asia to the Balkans, North Africa to the Black Sea, the architectural character showed regional differences due to local materials, topographic and climatic conditions, nationalities lived in the area, political, cultural, and historic conditions of the regions. Housing tradition and lifestyle, climate, material, technology, and economy shaped vernacular house typology in those geographies even before the Ottomans, which highlights the influence of vernacular characteristics due to the geographical context (Eldem, 1984; Guzelci, 2012; Sahin, 2006; Zeybekoglu, 2005). Therefore, even though there are common characteristics of Ottoman cities, each area also has its individual differences which make each case a unique case study.

Besides strong vernacular and traditional architectural characters, Ottoman cities faced natural disasters, invasions, wars, rebellions, immigration flows from the 13th century to the 20th century. Those factors understandably affected and changed the urban fabric over time. Especially from the 19th century, Ottoman cities entered the reforming era with the notion of 'westernization' in the 19th century (Yerasimos, 1999, cited in Canitez, 2010). This movement affected the development of Turkish cities by new rules on urbanization and construction (Canitez, 2010). Even though Ottoman cities faced many adversities over centuries, there are many towns partially or totally preserved their local architectural identity present day.

Fig.1.2. Amasya city location in Turkey map (Amasya in Turkey.svg, n.d.)

Since the Ottoman Empire ruled wide geography and each area geographically had its unique architectural identity, for more in-depth exploration for this research, Amasya was selected as a case study. Amasya is located in the northern part of the Anatolian peninsula in Turkey, in the central part of the Black Sea region (Fig. 1.2.). Today, the city is 5,520 square kilometers and it has 7 districts and 33 neighborhoods (Kozanoglu, 2006; Sari, 2010). According to the research of cities and regions socioeconomic levels by the Republic of Turkey Ministry of Development, in 2011, Amasya ranked thirty-seventh among 81 Turkish cities in the socioeconomic development list. City economic development is based on agriculture more than industry. However, with its rich historical monuments and environment, tourism became a developing sector in Amasya recently (Amasya Provincial Directorate of Culture and Tourism, 2013; Celik, 2008).

Fig.1.3. Amasya City View (Gurel, 2017)

Geographically, Amasya is surrounded by mountains and divided by River *Yesilirmak*. Being located in a narrow valley limits the area that can be occupied in the north-south direction. The main settlements are located in the southern part of the river (Fig. 1.3). This unique geography provided an advantage of security to the city over the centuries which also made it desirable for enemy invasions. Also, River *Yesilirmak*, which passes through the city, is known for its constant floods. Moreover, Amasya is in the 1st-grade earthquake zone (Guzelci, 2012). By only through its location and physical conditions, Amasya was under many threats. However, the city surviving many disadvantageous situations is one of the factors for this research to be able to investigate how the city reacted to various stressors for resilience research. Besides that, other certain factors made the city of Amasya culturally, architecturally, historically, economically, rich, and unique throughout history which became also a reason for selection for this study.

First of all, a unique history that shaped the city architecturally over the centuries. The city became the home of many civilizations from antiquity to the 20th century. Each civilization built

architectural monuments to the city, which were passed to, used, repaired, rebuilt, and maintained by successor civilizations. Therefore, even though today Ottoman architecture dominates the city present-day, Amasya still has structures and monuments built by different civilizations. Especially the road network that connects the city to the outside and internal urban fabric mainly stayed the same.

Amasya continued to develop during each civilization due to various reasons. Being located at the crossroads of trade routes is one of these factors. Amasya was at the crossroads of ancient trade routes such as the King road, Roman Trade Road, Silk road that connects Anatolia to Black Sea shores, East Anatolia to the Mediterranean, and West Anatolia. Also, besides being a trade center, it was a production center for silk and other products. This continuous economic power that was gained through trade routes was reflected in monumental and residential architecture. Even though Amasya faced problems in history, due to being a trade center at the crossroads of trade routes, the city continued to prosper. Because of this role, the city and the citizens always had economic power throughout the centuries and civilizations. One of the biggest reasons for the development of Amasya is that city's trade is well developed, and the city is located on trade routes. Also, Amasya was considered one of the three silk production centers of the Ottoman Empire, and Amasya was the only one located in central Anatolia (Catal, 2009; Emekci, 2011; Eraybat, 2011; Oltulu, 2006; Sari, 2010; Senol, 2010). This economic advantage and the wealth that comes with it made Amasya's urban fabric continue developing. Also, it made the recovery process after disasters faster.

This geo-economical advantage city had also reflected on having important administrative roles such as being the capital during the pre-Ottoman era. This important characteristic continued with the conquest of the Ottomans. The city became a *sanjak*[5] which was an administrative unit that is a similar size to a city today. These *sanjaks* were governed by '*Sancak Beyi*'. Some of the *sanjaks* were governed by *shahzadahs*[6] in order to be educated and to gain experience in governing. Some of these sanjaks that shahzadahs were sent were *Saruhan (Manisa), Menteşe, Germiyan (Kütahya), Konya, Amasya, Kastamonu, Trabzon,* and *Kefe*. The importance that Amasya had compared to other *shahzadah sanjaks* was after conquest by Yildirim Bayezid, son of Sultan I Murad in 1386 and

[5] Sanjak is Ottoman administrative unit that is similar size to a city today
[6] Shahzadah is a crown prince.

the first governor of Amasya, many crown princes next-in-line or a strong candidate to be next-in-line to the Ottoman throne were sent to Amasya to rule and to get ready for becoming a Sultan of the Ottoman Empire until the mid-16th century. This was also due to the city being a border city where *shahzadah*s can show and prove their talents by protecting or increasing the existing lands. According to the scholars, the city being ruled by princes had a tremendous effect on the architectural development, improvement, and becoming an educational, political, and cultural center. As a *shahzadah* city, religious leaders, and orders who wanted to influence future sultans started to move to the city (Budak, 2015; Catal, 2009; Celik, 2008; Gur and Kahriman, 2012; Oltulu, 2006; Sahin, 2019; Seker, 2011; Tunc, 2013; Tuzcu, 2007; Unal, 2012). Therefore, being a *shahzadah* city, not only through the opportunities the family of a crown prince can bring to the city but also through the new religious orders coming to the city, contributed to the development of the physical environment as well as the urban character of the city.

Even though Ottoman cities, in general, have strong educational characteristics to provide all citizens with education throughout *maktabs*[7], *madrasahs*[8], and *tekkes*[9] of religious orders, specifically Amasya, as a *shahzadah* city, becomes one of the most important educational centers due to their role in *shahzadah*s education from a very young age. There were 55 *madrasah*s (Yasar, 2014). According to the traveler Georges Perrot, who visited the city during the 19th century, Amasya was a science center, a scholar city with universities that they say can be named as Anatolian Oxford to emphasize the educational character of the city which was reflected in the formation and transformation of the city.

To sum up, geography, natural condition, and resources, various civilizations, trade routes and economic power, administrative roles, religious and educational characteristics formed the urban fabric of the city over time and helped Amasya to develop in urban, political, economic, and cultural means. However, as mentioned before, Amasya faced many disasters and various levels of stressors such as long-lasting wars, invasions, earthquakes, fire, floods. During these stressors, the city tried to deal with reform destruction caused by disasters (Catal, 2009; Oltulu, 2006; Senol, 2010). Even though Amasya faced many stressors over the centuries it managed to overcome and preserve its

[7] Maktab is a primary school.
[8] Madrasah is a higher education institutions equivalent of univerisities.
[9] A building typologies that accommodates religious orders.

architectural identity as much as possible. A lot of monuments and more than 200 hundred traditional houses still stand present-day (Kozanoglu, 2006, pp. 5-8). There are two fully preserved neighborhoods and ten neighborhoods with various amounts of monumental and residential structures. In the city centre and its other towns of the city, there is a total of 430 registered and under protection structures. Also, there are 76 protected areas in the city and the towns of Amasya (Kulturportali.gov.tr). There is still a dominance of historical fabric and strong traditional architecture in the city of Amasya. As a result, all these factors mentioned above and limited research of Amasya's architectural formation and development made Amasya a case study to explore resilience through traditional vernacular architecture.

1.3. Research Questions

The main research question of this thesis is 'to what extent can traditional vernacular Ottoman forms be defined as resilient? A case study into the evolution and form of historic urban neighborhoods in Amasya, Turkey'.

Subsidiary questions are:

1- What are the physical and organizational characteristics of Amasya's urban fabric?
2- How did Amasya's urban fabric evolve in response to key historical events and crises?
3- Which characteristics and types of urban resilience can be observed in Amasya's historic built environment?
4- To what extent did the physical, social, institutional, and economic aspects contribute to the resilience of the urban fabric in Amasya?

1.4. Aims and Objectives

In line with the historical and current context of Turkish-Ottoman cities and the concept of resilience, this research aims to establish a new framework of resilience to bring a new understanding of the historical formation, maintenance, and development of the Ottoman cities.

1. Identifying the physical and administrative formation process of Ottoman cities and their neighborhoods through the case study Amasya.

2. Assessing disaster management and disaster recovery process in the urban fabric of Amasya during times of crisis.
3. Creating a framework to analyze resilience in the historical built environment of Amasya.
4. Finding equivalence of urban resilience types and characteristics that were defined for modern-day urban fabric in a historical built environment of Amasya.
5. Identifying tangible and non-tangible characteristics of Ottoman cities through the case study Amasya that contributes the urban resilience.

1.5. Research Design

This investigation employs a historical case study as its method and also due to exploring a contemporary theme of resilience in historical research the nature of this study is qualitative. Because there are two main concepts of this research traditional vernacular architecture and resilience, an interdisciplinary approach is adopted. For exploring the first concept, vernacular architecture of Amasya, and the crisis Amasya faced and overcame, historical and archival research was conducted. *'Historical research is that which utilizes historical sources such as documents, remains, etc. to study ideas of the past [...] at a remote point of time'* (Kothari, 2004, p. 4). Also, according to Groat and Wang (2013) *'the nature of the historical research strategy, which typically draws upon evidence derived from archival or artefactual sources, largely because the research question focuses on a setting or circumstance from the past'* (p. 16). Therefore, due to its nature to draw data from a remote point of time, the historical investigation helped this research to explore not only the formation of the urban fabric of Amasya but also the evolution and reaction of urban fabric during a selected period of time.

The second main concept of this research, resilience, as the study of social science, has a qualitative approach in its nature due to seeking *'to understand the settings and phenomena in a holistic and full-bodied way'* and mainly focusing on *'on social and cultural circumstances that are contemporaneous'* whereas *'historical research seeks discovery through archival and artefactual material from the past '* (Groat and Wang, 2013, p. 16). This research explored a contemporary theme in a historical context over a period of time by drawing data from the past and create a new version of the historical narrative. As an interdisciplinary study, instead of adopting historical or qualitative theory, the research is driven by data. As adopting an inductive approach to analyze data, this

research aimed to observe, find, and analyze patterns, and then theorize data. Based on the extensive review of resilience studies, definitions, and methods of assessments, a novel, and concise theoretical framework was created. The theoretical framework consists of 4 steps (Fig. 1.4). It explores resilience in traditional and vernacular Ottoman cities.

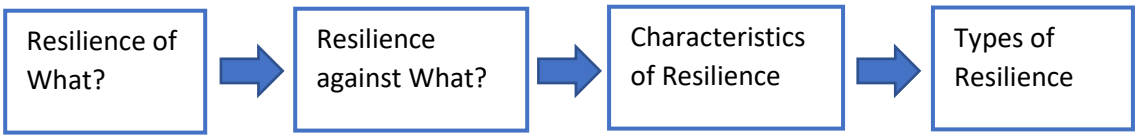

Fig. 1.4. Basic Schema of Conceptual Framework

As mentioned in the research context, Amasya was selected due to its existing vernacular architecture fabric, the continuous spatial development of the city (relating to its administration trades, religion, and education), key events that affected urban life and fabric, geography, and natural conditions and the availability of data. This research collected various types of data to investigate a long period of time especially before and after important key events. The data available did not give details of the whole urban fabric throughout the whole time period. Moreover, analyzing the whole urban fabric over 2000 years is not feasible. Therefore, after reviewing collected data, the main focus for the case study was selected as the time period from the 14th century to the beginning of the 20th century. In the Ottoman cities neighborhoods (*mahallas*) were seen as a main component of the city that represent whole by itself and *'urbanization meant the same with the process of mahalla formation in the first period of the Ottoman Empire'* (Alada, 1989, cited in Maydaer, 2008; Cerasi, 2001, cited in Kayici, 2012). Considering mahallas spatial organization represents a smaller scale of a city, it allows this research to explore the smaller area to draw a conclusion for a bigger picture. Original boundaries of Ottoman mahallas were never drawn clearly but only can be identified roughly through the surviving structures of their service cores and written descriptions. Overall, besides investigation on the urban fabric on a big scale, all neighborhoods were explored individually especially focusing on times of stress.

1.6. Data Collection and Analysis

In the first stage of the research, a desk study was conducted in order to gather eclectic and extensive data from different study fields about the characteristics and the architecture of the Ottoman cities and Amasya in specific as a case study.

The first main primary resource for this research, travelers' accounts were reviewed through libraries and online databases. The book of Ali Tuzcu called *'Seyahatnamelerde Amasya / Amasya in Travellers' Books'* was used as a guidebook to find further details of travelers who visited and wrote about Amasya over 20 centuries. Travelers' books which were not available in the original language, translated versions available were used. All written data was coded by themes and listed in chronological order. Coding was done by detecting recurrent themes of geography, topography, nature; citizens, ethnicity; trade roads, silk trade; trade, silk production, economy; wars, invasions; urban structures; architecture and architectural structures; science, religion, and culture; administrative role; disasters and how they were dealt with.

After an initial desk study, in the second phase of the investigation, a field trip to Amasya was planned in order to access archives, as well as investigate the city's current state. *'Given the focus on generating a good understanding of the cases and case context, methods such as fieldwork visits, observation, interviews, and document analysis often dominate among the various data collection methods employed'* (Goodrick, 2014, p. 1). '*Visiting [architecture] can often be extremely good, not to say the essential way of finding more out about the area. However, many images, plans, descriptions, theories, and videos you study, architecture is always different in flesh'* (Borden and Ruedi, 2000, pp. 29-30), therefore, visiting the urban and historical fabric of Amasya was vital in order to understand the geography and built environment. During the on-site visits, important architectural monuments, two fully survived neighborhoods (*Hatuniye and Sofular Mahallas*), and other smaller clusters of residential buildings, also in order to have a panoramic view, as most of the travelers described, the hills of the city were visited. During on-site visits, physical and photographic investigations of the area were executed. In-situ observations were done to witness and capture current conditions by visiting and walking through the streets of the mahallas and taking pictures and notes.

Also, in order to collect up-to-date and archival data, various governmental offices (*Samsun Iller Bankasi, Ankara Iller Bankasi, Amasya Municipality, General Directorate of Land Registry, and*

Cadastre archives in Amasya, Chamber of Architects in Amasya) in Amasya, Samsun, and the capital city Ankara visited. Archives of those offices mentioned above are open to Turkish citizens after a request. After contacting those offices, current city map from *Samsun Iller Bankasi*; master plan from 1963 (1:1000 scale), 3rd master plan from 1975 (1:000 and 1:5000 scale), 4th master plan from 1985 (1:000 and 1:5000 scale), reconstructed images of Greek era, other historical photos, aerial photos from 1927, updated information about architecture and tourism in the city, existing protection plan, recent master plan report, and other related urban reports were collected.

After collecting mostly visual but also written documents from the field trip, all secondary resources such as thesis, journal articles, online databases, official governmental websites, all possible data resources were used to collect information about the city. Besides the visuals collected from the archives of the government, visuals from travelers' books, databases, libraries, online resources available gathered. Overall, three different types of data were used in order to gather information about Amasya: primary written sources such as travelers' accounts; secondary written sources such as books, theses, journals, official governmental websites; and all visuals such as sketches, maps, plans, photos, etc. Three different types of data provided information on the general architecture and other characteristics of Amasya (Fig. 1.5).

After the data collection phase ended, according to the data collected all written data was coded by themes and was put in chronological order. After, all data were coded and grouped into themes similar to the travelers' account. Also, all mahallas, their service core buildings, and their construction history were listed with details of stressors they face, and actions are taken before and after the stressors for analyses. Due to there is no existing mahalla map from the Ottoman Era, by using written data from various sources, a mahalla network map was created in order to see the spatial organization in mahallas and urban fabric. Changes or continuity of architecture and other characteristics of Amasya were checked before and after key events according to the data available. Reactions before and after each event in the timeline were detected. After the initial phase of the historical investigation ended, another investigation of the concept of resilience started. After this historical evolution of the city was assessed, the conceptual framework for resilience was cross-checked step by step to find an answer for each. All types and characteristics of resilience that apply to traditional and vernacular architecture are listed as a result. Moreover, new characteristics that

are detected through investigation were presented. Finally, what makes the case study resilient and resilience in the traditional vernacular Ottoman forms was defined.

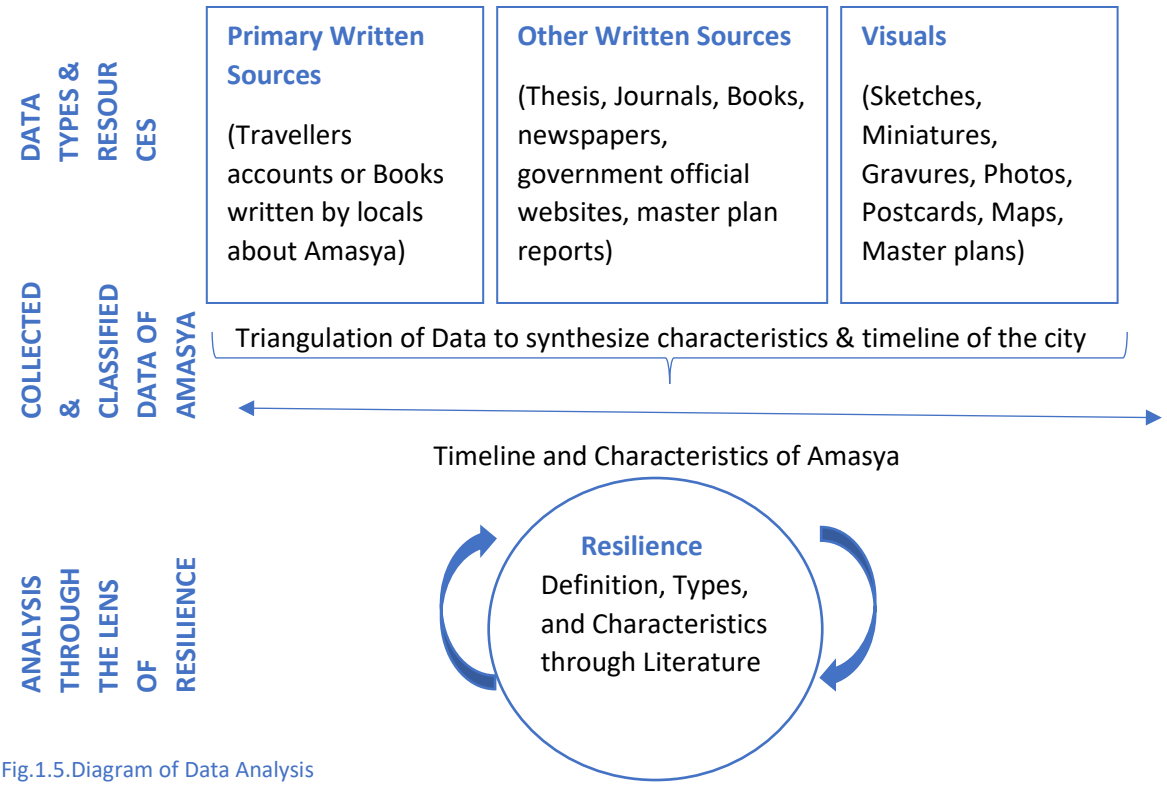

Fig.1.5.Diagram of Data Analysis

1.7. Research Boundaries and Limitations

The first limitation was the lack of consensus on the term resilience and how it can be assessed especially in the historic built environment. Therefore, instead of applying a certain assessment method, types of resilience and characteristics were listed and synthesized, and then, traced in the urban context of the city throughout the timeline. Also, today resilience research was done by modern-day data which gives researchers detailed data to explore it in quantitative or qualitative methods. However, because this research was exploring traces of resilience in a historical context, none of the material was created by its owner to provide information for a modern-day concept such as resilience. There are no continuous visuals or written data in detail for a long period of time. Also, depictions by words or visuals done by individuals may contradict or not fully support each other for various reasons. So, while gathering different resources in chronological order to analyze, there are cases of lack of data for certain periods or a certain area, or contradicting data that needs cross-checking by other sources for reliability. In order to cross-check, timelines of various data

were used. During the analysis of each data, especially by travelers, the information provided is cross-checked by travelers who visited the city very recently before and after the said traveler. Also, if there is another source of data belong to the same decade which could be visual data (sketch, photo, etc.), court records, or secondary data, these were used for cross-checking as well. For every traveler accounts which can hold personal views or wrong information which sometimes was fed by locals to foreigners, therefore, crosschecked and confirmed by other data. If data is believed to be contradictory it was not used or this contradiction is mentioned.

Another limitation was the non-existence of data on residential buildings. The Ottomans did not create records for infrastructure or individual buildings unless they were the property of waqfs or were involved in legal case records. In order to draw a conclusion on the whole mahallas, the records of individual buildings in the service core were used. Even though there are records of each waqf that owned properties in Amasya, due to the number of waqfs and tracing each one of waqfs activities from the 14th century to the recent day was not feasible in terms of time and getting access to each one of them by the government. Moreover, waqfs documents were written by the Ottoman alphabet and early Turkish translations have a very heavy language which makes it hard to transcribe. Therefore, individual waqfs and their records were not included in this research. However, any thesis, journals, and books about waqfs records were used as secondary data.

1.8. Research Ethics

Written and visual resources that are open to public use were used. Also, data that were collected from governmental offices and archives are open to citizens with an official request for data. Therefore, no ethical application from the school was necessary due to accessing only public data for this research.

For this research, due to not knowing genders or preferred pronouns of the authors cited and people mentioned, instead of feminine or masculine pronouns, plural pronouns were used in order to be respectful.

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CHAPTER 2: Ottoman Cities

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2.1 Introduction to Chapter 2: Ottoman Cities

This chapter presents the fundamentals of the traditional and vernacular Ottoman cities. Firstly, due to being under Islamic influence, the common building typologies and the urban layout of all Islamic cities are presented, which was followed by specifics of the Ottoman cities. Even though the geographical context is the Ottoman Empire for this research, due to its importance in urban formation, building typologies, the role of Islam in the spatial organization will be explained before presenting the Turkish city urban fabric. Ottoman spatial organization from forming an urban fabric period to maintenance activities through the main element of the urban fabric, mahallas (neighborhoods), their tangible and intangible characteristics are given. As fundamental elements of urban life, philanthropic organizations, *waqfs*, that are responsible for various urban services such as forming and maintaining the urban fabric are explained. In the last part of the chapter, problems that Ottoman cities faced through centuries and how those problems affected the urban fabric are presented, and how they were dealt with explained.

2.2. Vernacular and Traditional Built Environment in Islamic Geographies

Islam is a religion that is dominant in many geographies all over the world, hence, created similarities in vernacular and traditional urban architecture in a wide geography. *'From Isfahan in Iran to Fez in Morocco many cities in North Africa and the Middle East'* are connected with one common thing, Islam, even though they had very different identities (Antoniou, 2002, p. 10). Islam is considered an urban religion, which has an enormous impact on cities architecturally and socially. Even cities with long-lasting historical backgrounds gradually transformed due to an Islamic lifestyle. This was also due to Islamic legislative guidelines for urban life and fabric (Antoniou, 2002; Bianca, 2000; O'Meare, 2007; Hakim, 2010; Kisaichi, 1994).

Many scholars give an insight into what those Islamic rules and laws are and how they impacted urbanism. Hakim (2010) gave thorough information about Islamic law and its effect on architecture in their book. According to their book, in the first three years of Islam, which is between the 7th century to the 9th century, social, economic, and law principles were set. Also, with the construction activities in the Islamic cities, the need for principles and legislation for the construction process occurred over time. In Islamic law, cases related to the problems of the neighbors started to be used

as a precedent, and this helped building and urban design guidelines to be set. Legislative guidelines created similarities in architecture and how it is applied, even though local differences occurred. Verses from the Quran (holy book of Islam) and hadith (words and actions of Prophet Muhammad PBUH) were used by *kadis* (Islamic judge) *'for setting principles and guidelines to be followed in the activity of urbanism'*. Hakim (2010) gives examples of the most important principles and guidelines according to the Maliki School (one the denomination of Islam): *'not harming others'*, *'privacy'*, *'ownership rights'*, *'interdependence'*, *'right of building higher within one's airspace'*, *'respect for the property of others'*, *'right to buy adjacent property'*, *'right to access to water'*, *'avoiding putting buildings with noisy of smelly functions next to a mosque'*. Also, privacy was crucial in city life. For instance, windows had to be above eye level, roofs must be divided by parapets (pp. 18-22). Thus, these rules are for protecting people's rights, regulating neighborhood relations and social interaction, and preserve social cohesion and order. While setting architectural rules, the main aim was to regulate urban life with minimum conflict which benefits the urban fabric itself. As Bianca (2000) also stated by creating an influence on *'social structures and living habits'*, Islamic law affected the built environment in Islamic cities by affecting *'spatial preferences, basic urban layouts, and artistic concepts'* (p. 28).

The Islamic lifestyle created its own building typologies and spatial organization as a result of their functions and relations to each other. The most important building typology is a mosque (Islamic religious temple). In most of the Islamic cities, the urban settlement, building typologies, and their location was shaped by the location of a Friday Mosque[10] which was the biggest mosque in the city. Friday Mosque is the essential element of Islamic cities as a religious, political, social, and economic center. As a focal point of a city, the mosque is the center of the hierarchy of the urban fabric. Other building typologies that every urban settlement in Islamic cities had are the residence of a governor and *kadi* (local judge) (*dar-al imara*), *suq* (market, *bazaar*), *hammam* (public bath), local mosques (for Friday prayers), local *masjids* (for daily prayer), *madrasahs* (school for higher education/universities), *zawiyas* (building for religious people to live), *murabit* (tomb of a religious figure), *turba* (private cemeteries), *maqbara* (public cemetery), *wekala* (*caravanserai*,

[10] There is a special prayer takes place in Islam on Friday that needs to be done with the community. As a part of urban fabric, there is at least one big mosque to serve bigger crowd for this prayer and that mosque is called Friday mosque. Friday mosque is the biggest mosque of the city and located at the centre of central core.

accommodation for traveling businessmen), *funduk* (*khan*, hostelry merchants), *sur* and *bab* (wall and gate), *qishlaq* (army barracks), *mida'at* (a facility for ablution next to a mosque), *maristan* (*bimaristan*, hospital), *ksar* or palace (houses for higher rank official), *diwan* (courthouse), public water fountains and private gardens (Alsayyad, 2011; Antoniou, 2002; Bianca, 2000; Hakim, 2010; Kisaichi, 1994; Whitcomb, 2007). Almost all of these building typologies can be observed in Ottoman cities, however, sometimes under a different Turkish name[11].

These building typologies mentioned formed the functional heart of the city. However, even though those elements that create a city are the same, these elements do not form in a designated manner except being accumulated together. *'Most Islamic cities [...] followed an "organic" pattern of growth, marked by the presence of certain archetypes of built form which acted as architectural "seeds". Such archetypes could develop due to different reasons "such as site constraints, community size, economic resources, building materials, etc."'* (Bianca, 2000, p. 30). Therefore, how the cities were formed followed patterns of actions. After the conquest of a city, first, the army settled in a city, and development happened gradually. Population growth, mixing in groups, acquiring more space, turned these settlements into developed cities (Alsayyad, 2011; Raymond, 2000). After the formation of architectural seeds which consisted of functions and building typologies mentioned above, residential neighborhoods started to be formed by those new groups brought to occupy the new city. Antoniou (2002) wrote *'by the Middle Ages; the quarter was fully developed into an urban unit, and Islamic cities were divided into haras (districts), each with its special character'* (p. 11). Residential areas were '*the determining component of the urban fabric in Muslim cities, not only because of their sheer quantitative dominance but also because of the particular attitude of Islam towards formal civic institutions and its relative low emphasis on monumental public buildings'*. Unlike any other European city, there was no civic institution such as a municipality in Islamic cities and generally, religious leaders guided families and ethnic groups into self-regulating neighborhoods with inner balance. This *'self-regulating inner balance'* in neighborhoods was generated from the Quran and hadiths of the Prophet Muhammad (PBUH) and aimed to have good and constructive neighborhood relations. For example, one hadith says, *'nobody who has lived in affluence, while his neighbor remained hungry will enter the paradise'* (Bianca, 2000, p. 30, 72, 76). This example emphasizes the

[11] Turkish name or spelling of these building typologies are given in the glossary

social cooperation in these units. These neighborhoods *'have their own architectural seeds which consisted of own mosque, school, public bath, and local market each quarter could live almost independently if necessary'* (Antoniou, 2002, pp. 11-12). This demonstrates that the self-regulating inner balance is coming from being an independent self-sufficient architectural unit.

The Islamic cities' social structure is dominated by tribal and familial communities, and the Ottomans were the last example of that. Ethnic, tribal, religious, occupational communities lived together in the same quarters. Groups were in charge of residential and market areas in their territories. Segregation for minorities was useful for controlling these groups easily and creating space for them to practice religion freely and safely. However, in the latter examples of neighborhoods, the existence of a different type of place of worship shows that mahallas were not always socially homogenous (Alsayyad, 2011; Bianca, 2000; Raymond, 2000; Williams, 2007). However, it is clear that while shaping those architectural units, civilizations tried to bring the people who have at least one thing in common. These architectural units were almost autonomous within, with a social connection between the inhabitants. This attitude of social connection was observed in the construction of residential architecture in these mahallas. Houses were built modestly and simply because of Islam and creating equal social environments for its inhabitants (Raymond, 2000; Alsayyad, 2011). *'Until the eighteenth century, quarters were communities composed of both rich and poor living as neighbors'* (Antoniou, 2002, p. 11). Even though spending money for artistic decoration of the inside of the house is normal, *'exteriorizing it considered as a bad taste and inappropriate'* (Bianca, 2000, p. 77). So, by bringing people from different social or/and economic backgrounds yet bounding them one common character, Islamic cities created an internal community that was almost seen as an extended family.

Another effect of Islam and this social character the societies had was the importance of privacy which was reflected in spatial organization. '*Dense residential quarters tend to swallow the street space and to convert it into private access corridors. Thus, the sanctuary of the houses is not directly exposed to alien influences'* (Bianca, 2000, p. 38). During the formation process of especially residential areas, street structure played a determining role. With the organic pattern of growth mentioned above, Islamic cities had labyrinth-like streets, which were full of narrow streets, and cul-de-sacs. These streets created a hierarchical urban fabric, which limited access from public areas

to private areas. A street system is composed of main streets, which connect the main gates of the city; second-order streets of the neighborhoods, which connect the neighborhoods; and third-order streets for access within the mahalla (Bianca, 2000; Hakim, 2010; O'Meara, 2007).

To sum, due to Islam being a religion that affects the way people live, it had an impact on shaping the architecture on the geographies it was practiced. Even though vernacular and traditional architectural styles are unique due to their own nature, Islam created similarities among those. Therefore, as a dominantly Muslim community, the Ottoman city's formation was also highly affected by those rules and elements mentioned in this part. It is vital to understand Islam's role in building typologies, their spatial organization, and the social connection between those spatial organizations and the way of lifestyle.

2.3. Ottoman Cities

As explained previously, Ottoman cities were under the influence of Islam, therefore, followed similar patterns of formation and building typologies. In Ottoman cities, humility and modesty played a major role in architecture which was also an effect of Islam. Instead of pushing the city into a planned area, the Ottomans let the city grow according to its topography and needs. Even though there were some rules for the safety, comfort, and health of the city, instead of pushing citizens with some authoritarian approach, the Ottomans let cities grow naturally (Eldem, 1987, p. 258). This attitude gave locals the authority to build their own cities, neighborhoods, and houses in a way that can reflect their lifestyles and geographic constraints. *'A palace of the sultan or king, a fortress, or this and that is not the focal point of an Ottoman settlement. The urban style is more humane, more populist... The Ottoman city is not a settlement to display the power of the powerful building symbolic structures, roads, and squares, which in a way to intimidate the inhabitants'* (Bektas, 2007, p. 96). This demonstrates a human-centered and functional approach for shaping the urban fabric in the Ottoman cities. As briefly explained in the introduction chapter, the Ottomans as a Turkish tribe in Anatolia, mostly transformed Byzantine cities, according to Islamic city rules and Turkish culture, however, each city showed differences because of a human factor, culture, economy, geography, geology, topography, and climate. Basic functions and structural elements were used as a model in each city.

In Ottoman cities, there was generally one castle left from previous civilizations. Therefore, newly conquered cities sometimes developed within the city walls, and in some other cases outside of the old city. When the Ottomans established a new city, if the inside of the city wall was enough for the development of a new city, the urbanization process took place inside of the walls, as in the case of Istanbul. However, if the area inside the city walls was not sufficient, the Ottomans built a new settlement around the city walls as in the cases of Edirne, Bursa, Amasya, and most of the Anatolian cities. When the Ottomans conquered a city, similar to other Islamic cities mentioned before, they first secured the city by sending a commander or a governor. Later, dervishes[12], some tradesmen, and Ottoman citizens from different areas of the Empire were brought to the newly conquered cities. After securing the city, while dervishes brought a religious and social connection to the city, tradesmen guaranteed economic continuity in the forming phase of an Ottoman city, which hints what kind of characteristics the Ottomans put importance in their urban life (Cabuk and Demir, 2012; Canitez, 2010; Eldem, 1987).

When these different groups of people arrive in the city, they start urbanization by public and service building construction. In the literature, there are slightly different opinions about the typologies of the buildings that were constructed first. According to Eldem (1987), if the Ottomans built a new city, it was formed around the dervish lodge or an *imaret* (a soup house). However, Cerasi (cited in Canitez, 2010), explained the process by claiming that with the Muslim Turkish citizens' arrival, first, a masjid[13] or mosque is built with other service buildings to create a complex (a *kulliyah*) and with the help of a *waqf* (a charitable institution), and an *imaret* (a soup house) sites established. Regardless of different opinions, forming a central service core that consisted of main service functions was the main objective new citizens had.

[12] Dervishes are followers of a religious orders who abandons most of the materialistic aspects of life and tend to either live in tekkes or spend most of their times in tekkes for religious activities.

[13] A muslim place of worship for daily prayers

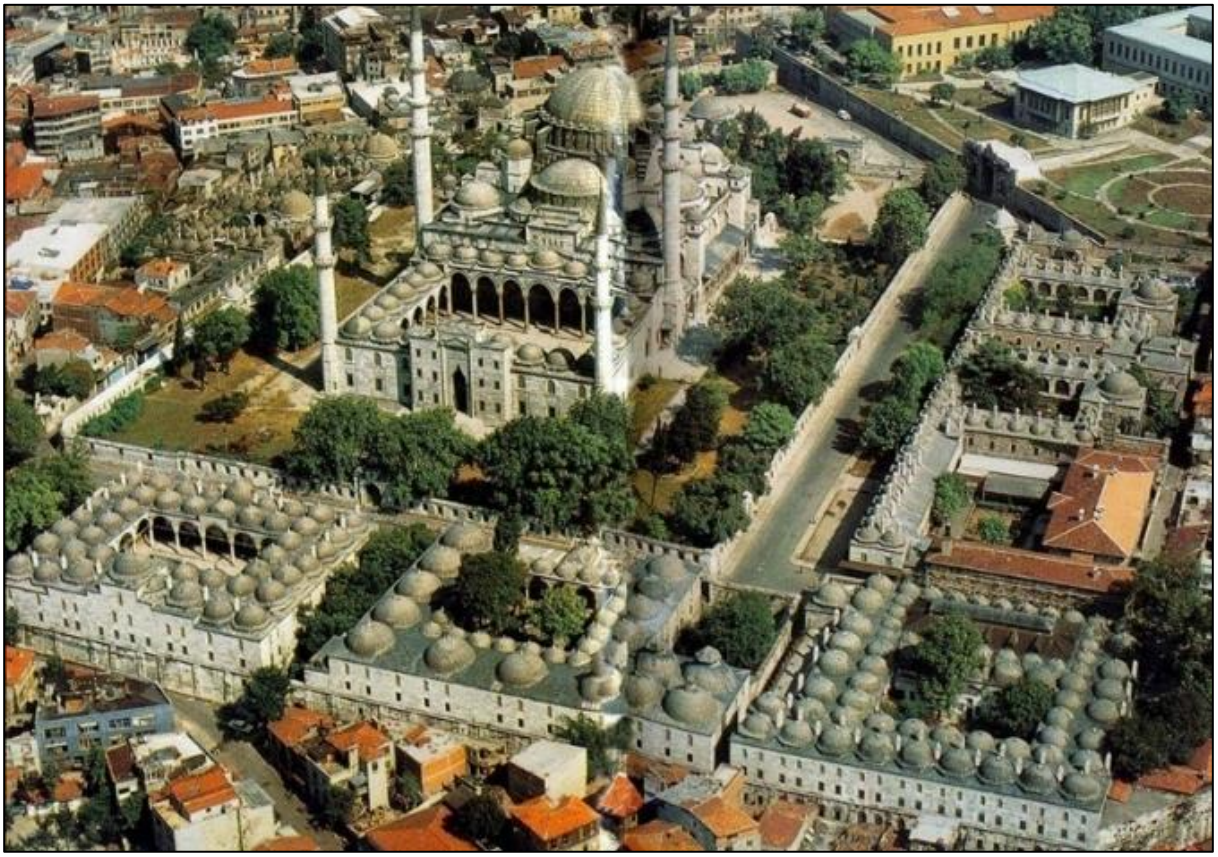

Fig. 2.1. Picture of Suleymaniye Complex in Istanbul that consists of a mosque, madrasahs, a hospital, a fountain, a hammam, and a maktab (Eren, no date).

The Ottoman city spatial organization consisted of these service cores, which are later called *kulliyah*s (Fig. 2.1) where the city center with commercial, religious, educational, administrative, and service buildings gather and neighborhoods formed around them. These typologies of *kulliyah*s generally were a mosque, a madrasah (a school), an *imaret* (a soup house), a *hammam* (a Turkish bath), a *turbe* (a tomb), and a *bazaar* (a market), and more. *Mahalla*s could not establish without infrastructure and service buildings. The closest *kulliyah* to one neighborhood was 400 meters away, and the furthest was 800 meters. The center of these kulliyahs was a mosque. Besides being a center of kulliyahs, mosques were constructed in the center of a *mahalla*, a village, a town, or a city generally by waqfs as a part of different scales of service cores. If locals decided to build a new *mahalla*, firstly, a *masjid* or a mosque were built. During the Ottoman era, there was an understanding of '*at least one masjid for every mahalla*'. Religious, social, and economic institutions mentioned above made the areas habitable and answered people's needs (Fig. 2.2) (Caliskan, 2010; Eldem, 1987; Hakky, 1992; Hizli, 2014; Sahin, 2006).

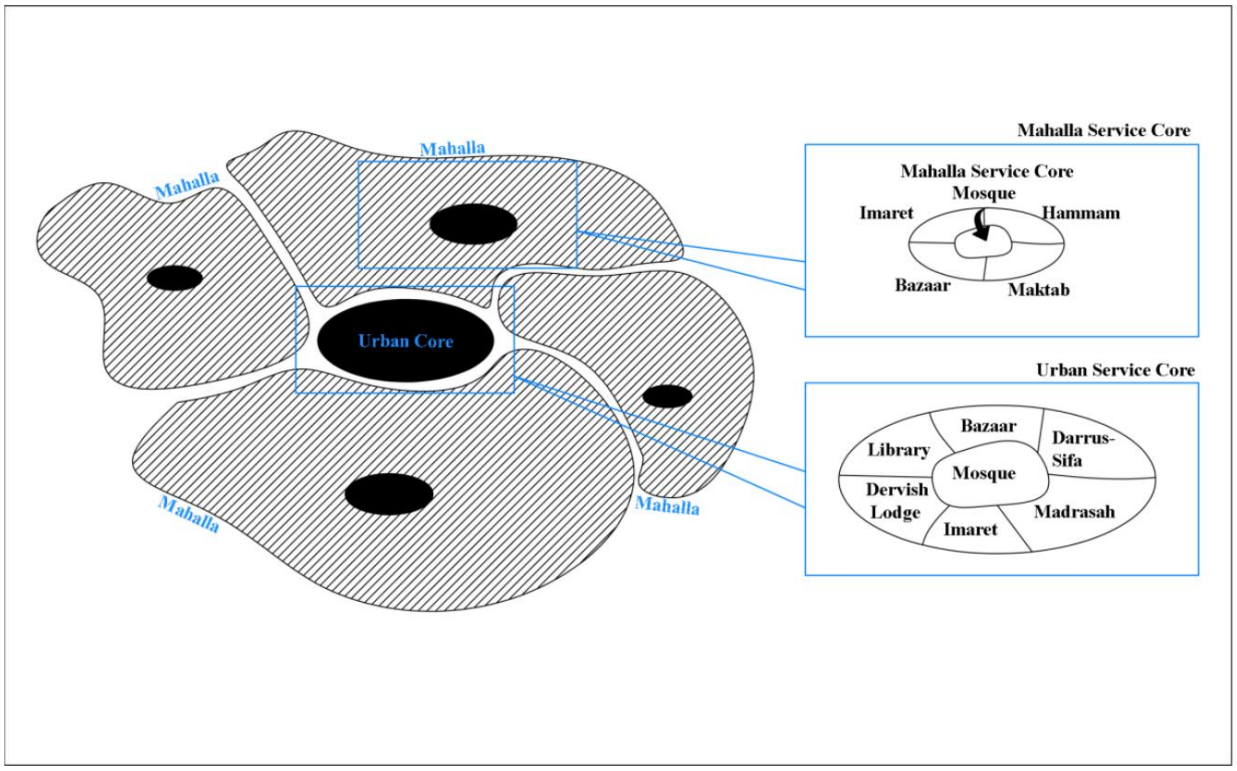

Fig. 2.2. Basic Ottoman Urban Spatial Organization Schema

These *mahalla*s built by locals, according to their own needs, were dominant and had a direct impact on urbanization. After the formation of the central city core, urbanization and construction of the city were started and completed with the formation of *mahalla*s. Due to their importance, urbanization in the Ottoman Empire meant the formation of *mahalla*s. With the formation of new *mahalla*s and the development of residential areas, a city gained a newly built city image since mahallas are the determining element of the urban fabric as mentioned earlier. Service cores consisted of various functions that made *mahalla*s self-sufficient and independent components of the urban fabric. Residential neighborhoods in Ottoman cities were seen as a sustainable urban unit that can represent the whole city within which is explained in more detail under its own title (Antoniou, 2002; Baday, 2011; Barman and Ipcioglu, 2009; Bianca, 2000; Bozkurt, 2016; Canitez, 2010; Duzbakar, 2003; Kayici, 2012; Maydaer, 2008).

Fig. 2.3. Houses from Safranbolu (Stasinopoulou, n.d.).

Lastly, even though there was a hierarchical order in typologies and an urban pattern to follow, service and residential buildings were formed coherently with direction, climate, topography and natural conditions, and privacy factors (Fig. 2.3) (Atik, 2011). Ozorhon and Ozorhon (2014) explained that vernacular architecture in Turkey has different regional characters due to the local materials available. Also, topography, natural conditions such as wind and sun, created a different spatial organization and mass in each site. The topography of a place and neighborhood relations had a great impact on the functions of the settlements. Turkish cities with a traditional organic texture have a rhythm in them and this order is not accidental (Atik, 2011; Duzbakar, 2003; Ozorhon and Ozorhon, 2014). According to Gunay (1999, cited in Atik, 2011, pp. 39-40):

> *They [streets] change direction quite often, and the width is always inconsistent (Eldem, 1987, p. 261). Even though the streets are not geometrical, there is an order in the road system. Organic streets are divided from big streets to small, from small to blocks, from blocks to dead ends. Also, streets developed organically in Ottoman cities to strengthen defense mechanisms. It formed according to the lining up of the houses, human scale, and topography. The street leads one to the mosque and from there to the trade centers (Fig. 2.4).*

Overall, Ottoman cities followed a similar pattern of Islamic city formation. The urban fabric of Ottoman cities followed similar Islamic rules, a similar hierarchy of buildings, and building typologies. Ottoman cities were formed around a central service core and each neighborhood sprawled around this central service core with its own service cores. Locals were responsible for creating their own space for their own needs, but also considering topography, privacy, security,

safety, economy, social, and religious relations. Next, *mahallas*, which were a key to understand the urban formation, Ottoman lifestyle, and fabric, will be thoroughly introduced.

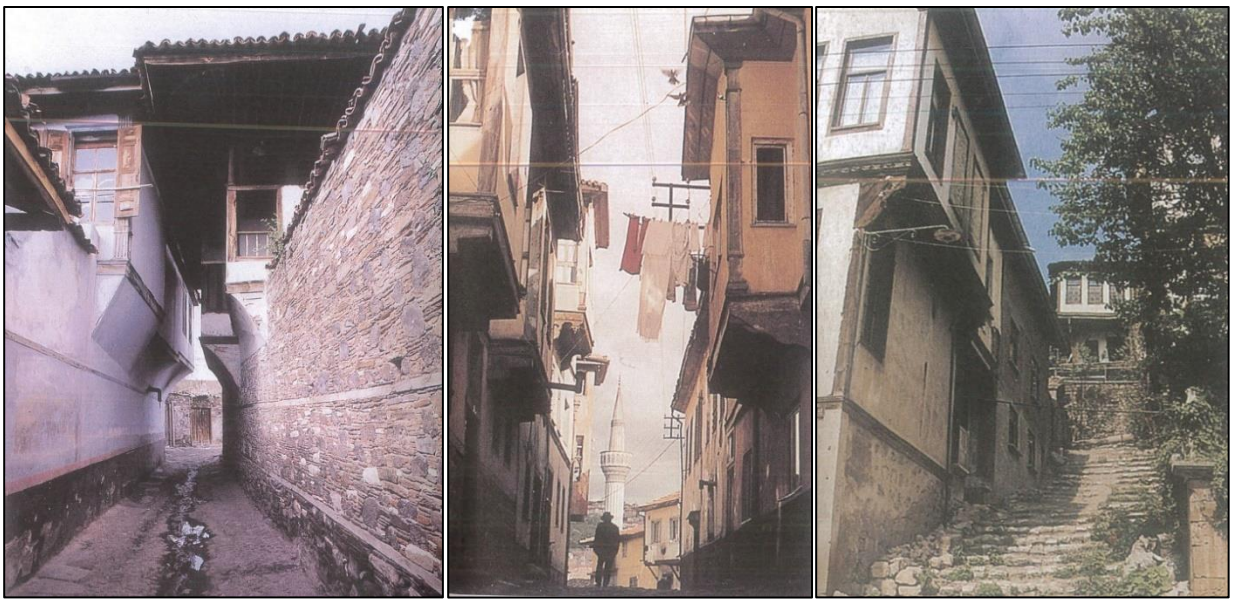

Fig. 2. 4. A narrow street with a cantilevering façade from Kula, a street view from Ankara, and a street with stairs from Kastamonu (Bektas, 2007).

2.3.1. Ottoman Mahallas (Neighborhoods)

As explained briefly previously, mahallas are the biggest element of Ottoman cities in size and their spatial organizations represent a small scale of the Ottoman city urban layout. This part aims to give an understanding of the formation, characteristics, and maintenance of Ottoman neighborhoods.

Firstly, what is a mahalla? Even though the term itself is very common and known in Turkish culture, what it technically refers to was defined by many scholars in many aspects. One set of definitions attributes to a geographical or physical character. A mahalla was originally an Arabic word to describe a place to camp in Turkish, however, later, it was used to define small housing units in Turkish cities (Baday, 2011; Diktas 2008). Atik (2011) gave another description to explain the physical boundaries and states a traditional Turkish mahalla is a place where *azan* (call to prayer in Islam) can reach from the mosque. This definition puts a mosque in the center of mahalla and creates a sphere around the mahalla as an invisible boundary. Later definitions focus on the population or number of dwellings. For instance, Maglio (2012) stated that the sizes of

neighborhoods vary from *'a few tens to a few hundreds of dwellings, that is from 1 to 5 acres'* and mahallas work as a self-sufficient district (p. 10). Bayartan (2005) also mentioned that the Ottoman mahalla is generally defined as a residential unit with an approximate population of 1000 people where inhabitants pray in the same masjid. In another explanation, Bozkurt (2016) referred to the literature that while some descriptions stated that Ottoman mahallas can consist of 5 to 100 families, Bozkurt claimed, this number generally was between 20 to 40 households, sometimes even less. However, Bayartan (2005) stated that that type of quantitative definition cannot be generalized among all mahallas. Considering various numbers were used to define the size of a mahalla, this research supports Bayartan and claims that there was no guideline or restriction on the size of mahallas and mahallas were in various sizes during the traditional period of the Ottoman Empire. By first legal definition *'according to province regulation in 1864, a mahalla is a residential area which consists of at least 50 houses'* (Mermutlu, 2011, cited in Kumas, 2011, p. 54). In the 19th century, due to the influence of the modernization movement in the Ottoman Empire, the population size was started to be used to describe the size of a mahalla, which was approximately 1000 at that time (Bozkurt, 2016; Eren, 2012).

Besides defining it physically, many scholars also added some other aspects of the neighborhood to their physical descriptions. According to Kivrim (2009), *'a mahalla in an Ottoman city is a social and physical unit'* (p. 231). Geographer Bayartan (2005) gave a more detailed definition that mahallas were the smallest administrative units where houses and streets gathered, and economic, administrative, social, and cultural activities happened. This social unit aspect was explained a bit further by Ergenc (1980, cited in Kayici, 2012) that in the Ottoman city, a mahalla was a physical unit where people who knew each other, *were* responsible for each other's behavior, lived together in social cooperation. The Ottoman period's definition of a mahalla was a part of a city where people who prayed in the same masjid, lived together in the same area as their families. Alver (2011, cited in Baday, 2011) brought the factor of humans to their definition and said that foundational elements of a mahalla are a place and a human. It is not only a place, nor only a human. It is a stage of life that was woven by humans and place together (Alver, 2011, cited in Baday, 2011). None of the definitions are wrong and incomplete, but all show a different side of what mahalla is, however, Alver's description will be one of the key definitions for this research while exploring the resilience

in the context of historic neighborhoods. Because, for this research, a mahalla consisted of the physical environment, its community, and their relationship.

2.3.2. The physical formation and Characteristics of Mahalla: Administrative, Economic, Social, Cultural, Religious Unit

As a key element of the Ottoman urban fabric, understanding mahallas are vital for understanding not only urban fabric, but also a whole lifestyle of social, economic, religious, administrative, and educational connections. As stated before, a mahalla was a unit that created the whole, which was a city, but also it can represent the whole by itself. It helped this research to understand the Ottoman lifestyle and the development of today's Turkish traditional built environment and lifestyle. A newly built mahalla was not only a milestone in Ottoman city life but also a milestone of a civilization (Baday, 2011; Maydaer, 2008).

As explained under 2.3. Ottoman Cities title briefly, after constructing the central service core, which is generally called a kulliyah, a process of urbanization starts for newly brought locals in their residential neighborhoods. Locals, as a decision-maker of where and how they were going to live, started constructing their mahallas. They followed some basic rules of respecting each other's rights, considering technical and geographical constraints, and following the basic design rule of constructing their mahalla around a service core. In the center of a mahalla, there was at least a mosque/masjid or other religious buildings (a synagogue or a church) and service buildings such as shops, a coffee house, a library, a madrasah (a school, higher institution), a maktab (a school), an imaret (a soup house), a hammam and fountains depending on the size and needs of the mahalla. If a new mahalla was needed to be built, firstly, the masjid or a mosque was built. After the construction of a mosque and a couple of houses, the rest expanded with circles by taking the mosque to the center (Atik, 2011; Baday, 2011; Bozkurt, 2016). According to Eldem (1987, cited in Oktay, 2014), locals only needed to follow '*a few simple rules of civility, assuring individuality within the neighborhood as well as community identity apart from the works of government*' (p. 40).

Each street of mahallas intersected at the place of the mosque. The maximum distance between a house and a mosque was the time between the start of an *azan* (a call for daily prayer) and to the end of it for them to be able to walk to the mosque when prayer started. When this distance was

not close enough, another mosque was built (Baday, 2011). The shortest call for prayer is the 4th prayer of the day, which takes around 2.5 minutes. A man in moderate-intensity pace can take 100 steps in a minute which makes steps can be taken for the shortest prayer around 250-300. A man living on the border of a mahalla needed to take 250 steps which are around 200 meters to reach his mosque. So, roughly it can be stated that a perimeter of the mahalla circle from the center (the mosque) to its borders needed to be around 200 meters.

Also, a mosque was not only placed in the center of a mahalla because of its religious function but also socializing and educational functions. Important events such as weddings and funerals took place in the mosque. These fundamental service buildings at the core of the residential neighborhood show how much the Ottomans put importance in a public space and public service. Through the presence of a variety of functions mentioned mahallas became self-sufficient units in the Ottoman cities (Baday, 2011; Oktay 2014).

Another technical issue locals considered when constructing their neighborhood was topography. Topography had a huge impact on a mahalla in terms of microclimate, drainage system, and silhouette. In all Anatolian settlements, the street formation was parallel to the inclination. However, the topography was not a deterministic element of housing forms. Generally, mahallas were established in sloppy areas if possible, to have natural drainage, sun, and view. Sun and wind direction played an important role to select an area for a mahalla that was going to be established. Local climate conditions are reflected in the urban fabric; therefore, each region created its own unique urban fabric and architectural style. Climate affected spatial arrangement, courtyard formation, roof structure, and façade characteristics in an Ottoman house. Also, because climate affects the flora of the area, it affected the building materials. Moreover, as a result of Islamic culture, no civil buildings should surpass the height of the mosque's minarets[14], therefore, religious buildings should be located at the top of the landscape if possible. The biggest structure was the mosque with its dome and minarets out of respect, followed by other service buildings and finally by houses (Bozkurt and Altincekic, 2013; Eldem, 1987; Erdim, 2016; Hizli, 2014; Oktay, 2014). All these

[14] Tower-like structures next to the mosque that is used for citing the calls for prayers.

factors shaped mahalla as a physical unit. However, besides being a physical unit, mahalla was also an administrative, social, religious, cultural, and economic unit.

A mahalla was not only a territorial community, but it was also the smallest administrative unit in a city that was represented by a local religious leader. Until the first half of the 19th century, an imam[15], rabbi, or priest, was the responsible administrator of a mahalla. After the 19th century, elected officials, *muhtars*, took this role from imams. During the traditional period, any important action was depended on the imam's consent (Kayici, 2012). Imams had many responsibilities besides their religious duties in the mosque. *'The imam was a bridge between the central administration and locals'* (Hizli, 2014, p. 45). Imams were responsible for public order, finding solutions to communities' needs, making an announcement of orders and edicts from the central state, leading to municipal services such as cleaning, supplying water, reconciling neighbors with problems, solving small crimes, population registrations, giving religious education and collecting taxes (Acik, 2014; Baday, 2011; Bal *et al.*, 2012, Bozatay and Demir, 2014; Hizli, 2011). Since mahallas were self-sufficient and autonomous units that created the city, unless there was a serious crime, the inhabitants of each mahalla managed their own administrative duties with the help of their religious leader without communicating with local rulers. As Ogdul (2000) stated, *'because the state did not interfere in the day-to-day activities of the community. Local public services, religious buildings, schools, fountains, etc. were provided by the elites or well-off families within the community. Very strong local foundations - charitable endowments - were developed for that purpose'* (p. 32). Thus, waqfs were crucial for the continuation of daily life in a mahalla. Waqfs made crowded communities gather around a focal point, therefore, mahallas with big populations were a result of waqfs (Baday, 2011; Cakir, 2012; Maydaer, 2008). The importance of waqfs and their roles in Ottoman cities will be explained in detail later in this chapter.

The second characteristic of a mahalla that was mentioned in the literature is economic activities and roles. Economic activities had a role in the growth of mahallas in population and physical areas. Mahallas with the biggest population were the ones that had more religious and social structures, important educational institutions, and commercial centers. The more crowded mahallas were, the more locals gave back to their communities which resulted in founding more waqfs and

[15] Religious leader of prayers who are employed to work in mosques.

constructing more service buildings. Also, *Ahis* (Muslim craftsmen organization) and a *Lonja* (guild) system in mahallas helped people to be educated vocationally and in professional ethics. These organizations created business ethics, protection of businessmen's rights, education, and also provided work opportunities for young people, to prevent unemployment in the mahallas. Tradesmen and shopkeepers who answered the communities' needs were a big part of the economic cycle (Baday, 2011; Cakir, 2012; Kivrim, 2009).

Lastly, the social, cultural, and religious connections of locals in the mahalla were another important characteristic of mahallas. These characteristics created the notion that mahallas are more than the architectural surrounding. Even though it was common that people from different religions, ethnicity, or professional groups to live in the same mahalla, seeing them residing in a different mahalla was quite common either. However, the Ottoman Empire initially supported the idea that the various groups should have their own mahallas. This made tax collecting easy for them because the taxes a citizen should pay may be different according to their religion (Atik, 2011; Dortok Abaci, 2005). Thus, one common connection, which could be ethnicity, profession, religion, or kinship, created a social bond within a mahalla. By inhabiting a physical area with a boundary through one shared characteristic or identity created a special sense of belonging, attachment, and community for people. Inhabitants of mahallas accepted their neighbors in their mahallas as extended family.

People from different religious groups lived in Ottoman cities freely (Barman and Ipcioglu, 2009; Kayici, 2012). *'Non-Muslims in the Ottoman State were granted basic fundamental rights, such as the right to life, education, trade, worship, residency, ownership, and free travel. They had the opportunity to live in Muslim quarters beside theirs'* (Karatas, 2007, p. 127). Letting citizens of different religions live together made them able to practice their religion freely while feeling safe. Respect for other ethnicities and religions was a very important element of Ottoman society. However, as mentioned earlier, this homogeneity was not a rule, different groups might have lived in the same mahalla (Baday, 2011; Bozkurt, 2016; Duzbakar, 2003). *'Cohabitation of different ethnoreligious groups could happen, and identities could exist side-by-side without disturbing each other. This diversity created a rich social milieu'* (Enlil, 1994, cited in Ogdul, 2000, p. 322). Socially homogenous or not, neighborhood relations were the most important characteristic of a mahalla. There was an understanding between neighbors along with social and economic cooperation. A mahalla was

considered as a social assistance unit that strengthens love and loyalty between inhabitants (Atik, 2011). The importance of good neighborhood relations mentioned in the Quran and hadiths (sayings) of Prophet Muhammad (PBUH) became an important aspect of residential neighborhoods in Islamic cities.

Every mahalla had a founder, or a religious leader, or a rich, or an authoritarian figure. Each neighborhood had people from different socioeconomic backgrounds. *'The basic democratic structure of Ottoman society never allowed human values to degenerate to the extent of producing slums, and indeed where any poor neighbors did exist, it was generally under the patronage of the grand house in the same neighborhood'* (Eldem, 1987, pp. 261, 269). A mahalla was seen as one big residence where neighbors lived together. Beyond its geographical meaning, its elements represented the lifestyle intertwined with identity, culture, and civilization. That is why it is impossible to think mahalla without the human element. 'We' notion helped people not feel alone when they encounter a problem. Occasions such as weddings, illness, and funerals were functions that the community was a part of. Locals of mahallas had common responsibilities such as paying taxes, finding suspects of a crime in the mahalla, and paying the blood money in case of not finding the criminals and being a guarantor for each other. Neighbors could warn each other if they showed immoral behavior or disturbed each other. Neighbors could even cast a neighbor away out of the mahalla with their legal rights. In the courtroom, a neighbor could testify for or against their neighbor, which may have affected the result of the case. Therefore, when a neighbor moved into the mahalla, they tried to live within the moral law of the community and tried to get along well with their neighbors. Another function that was part of the mahalla was entertainment to relax and to fill leisure time. These events also had an economic role, unifying purpose, increasing the cultural level, and advising the community morally and religiously (Acik, 2014; Duzbakar, 2003; Baday, 2011; Barman and Ipcioglu, 2009; Kivrim, 2009; Maydaer, 2008; Pamir, 2005).

2.3.3. *Waqfs* in the Ottoman Empire

The Ottoman city spatial formation, Ottoman mahalla, their spatial organization and cultural, economic, and some other aspects of it presented previously. However, how these service cores, mahallas, and cities formed financially, and how these urban structures are managed and maintained is a question to be answered, especially to understand resilience and its relevance for

this research. This role mostly belonged to philanthropic organizations called waqfs. Even though it is an Islamic concept, how it was implemented in Turkish culture, what it refers to, types and services they provided, their contribution to the survival of urban fabric will be explained in this part.

Waqfs are philanthropic organizations that were responsible for many services to the urban fabric and urban life. During the Seljuk[16] and Ottoman reigns, most of the public services were provided by waqfs directly or indirectly. The reason they were needed for these services was that, in the Ottoman Empire, the duties of the state were protecting the country, maintaining order, securing citizens and their properties. The empire did not build any service buildings such as mosques, hospitals, caravanserais, schools, libraries, hammams. All of the monuments, which are service buildings of different functions, in the three continents that the Ottomans ruled were financed and built by waqfs (Bergen, 2010; Cizakca, 2006; Ertem, 2011).

Records show there was a great number of waqfs founded but each had different roles. Every one of them provided different services and contributed to urban life in different ways. Waqfs had social, cultural, economic, and religious objectives. They provided various public services that played a role in cities' developments. They were the symbol of stability and continuity. They provided educational services; cultural services; construction, maintenance, and restoration services; religious services; health services; philanthropic and social services; security services; transportation services; cleaning services; public services; touristic services, economic services, urbanization services. Waqfs provided trust between citizens, social justice, cooperation, integration; development of architecture and fine arts; financial development. Waqfs provided services to all, regardless of citizens' religion, language, race, which prevented social conflicts in the community. Waqfs prevented the alienation of citizens by not belittling or shaming them in any circumstances they are in. Help from waqfs which was provided in a respectable manner, helped citizens to feel love and loyalty back to their communities. Waqfs also helped regulate social relationships. The citizen's aim for helping their communities by founding waqfs created social relationships between citizens. Members of communities learned to prioritize society before their own personal interests. However, even though they were a crucial part of urban life, because waqfs were philanthropic organizations,

[16] Seljuk Empire is a Muslim and Turkish Empire that ruled Anatolia before the Ottomans.

flaws in their functions for public services did not create any negativity in the society (Ates, 2017; Bayyigit, 2001; Eren, 1987; Ertem, 2011; Ozturk, 1984; Yuksel, 1999).

How did an empire count on charitable organizations, waqfs, for urbanization, and providing all other public services? This was due to strong relations coming from the main pillar of the society, Islam. The objective to found waqfs comes from *ayahs* (verses) from the Quran and *hadiths* (sayings of Prophet Muhammad PBUH). People in economic power donated their money or properties to public use in order to gain God's approval. Before explaining the objective of waqf, this research would like to highlight the foundations of Islam. One of the 5 main rules of Islam states that one, who earns above a certain limit, must give 1/40 of their earnings to the ones in need every year. Also, Muslims were encouraged to give more to earn good deeds in the eyes of Allah to enter heaven. A hadith (sayings of Prophet Mohammed PBUH) from Jami' At-Tirmidhi[17] states that *'Fatimah bint Qais narrated that the Prophet said: "Indeed there is a duty on wealth aside from Zakat [annual donation]"'* (p. 114). Another hadith from At-Tirmidhi states that '*the Messenger of Allah stated that "Allah ordained a charity upon their wealth, which is to be taken from rich among them and given to the poor among them"'* (p. 85). After presenting these hadiths, Al-Tirmidhi commented that *'besides the Zakat [annual donation] which is a compulsory and a specified duty, there are other various rights due from the wealth which are provisional and temporary and they are related to the catastrophic incidents and needs.'* (p. 114). There are also hadiths directly on waqfs in the hadith book of Al-Tirmidhi. After a man named Umar got land from a man named Khaibar, Umar asked the Prophet Muhammad (PBUH) (pp. 166-167):

> *'O Messenger of Allah! I got some wealth from Khaibar and I never ever had any wealth as plentiful as it, so what do you order me (to do with it)?' He said: 'If you wish, make it a grant and give charity from it.' So Umar gave it in charity: That is not be sold entirely, nor given away, nor inherited, to be used to produce charity for the needy, those who are near it, for freeing slaves, for the cause of Allah, the wayfarer, the guest, and that there is no harm on its custodian consuming what is customary from it, or eating from its charity, without trying to amass wealth from it*.

[17] Jami' At-Tirmidhi is an Islamic scholar and collector of Prophet Muhammad's (PBUH) saying, hadiths.theywrote 6 volumes of hadith collections on various subject of Islam.

Thus, in the light of these verses from the Quran and hadiths, Muslims started to found these charitable organizations, waqfs. So, in the Ottoman Empire as well, when a wealthy person spotted someone in need, instead of a direct donation, they founded waqfs by the permission of *qadi* (local judge). By legalizing donations, the idea of waqf provided a systematic, regular income for whatever purpose they were founded for.

Moreover, besides all these rules and encouragement in Islam for sharing the wealth, helping people in need, and making donations during the lifetime of individuals, founding waqfs and constructing a service building was considered as a way to continue earning deeds after one dies. A hadith in Al-Tirmidhi states that *'the Messenger of Allah said: "When a person dies, his deeds are cut off except for three: Continuing charity, knowledge that others benefited from, and a righteous son who supplicates for him"'* (p. 168). At-Tirmidhi comments on the hadith and explains that *'continuing charity is charity the benefit and reward of which continues even after the death of the person. For example, if someone gives property in charity to please Allah, or does some other deed of charity, like construction of a mosque, or establishes a school, or digs a well for the use of people, it is all continuing charity. Knowledge means preaching, teaching or writing of books for the guidance of people etc., are all deeds of continuing charity'* (p. 168). Therefore, founding waqfs and continue providing services to people is a way for Muslims to continue earning good deeds to enter heaven which made them more eager to found waqfs instead of individual one-time donations. As a result, the Ottomans who are Muslims founded many waqfs to provide all kinds of services to the public. When a wealthy person spotted someone in need, instead of a direct donation, they founded waqfs with the permission of a *qadi* (local judge). By legalizing donations, the idea of waqf provided a systematic, regular income for whatever purpose they were founded for. Moreover, the idea of the continuous deed after the founder's death helped waqfs to be founded with properties of continuous income for longer service.

Waqfs were not founded by the empire itself, however, even sultans and viziers founded many waqfs from their own money in order to be an example to the society and increase the loyalty of citizens to their rulers. Even the rulers themselves became a part of this philanthropic system that supported urban fabric and life. Besides encouragement from Islam for doing good deeds, Ottoman policies encouraged public services by founding waqfs, such as through tax exemptions. This situation was reflected in the high numbers of all waqfs founded in the Ottoman Empire. There is a record of

26798 waqfs founded during the reign of the Ottoman Empire. Even though the scholars consider this number is probably higher than that, however, due to the loss of registration papers over time it cannot be proved. Two third of Istanbul's immovable properties belonged to the waqfs. 6390 waqfs founded in Seljuk and Ottoman reigns, 38571 immovable properties, and 7414 monumental structures survived and passed to the Republic of Turkey (Ates, 2017; Bulus, 2009; Cansel, 1988; Cizakca, 2006; Eren, 1987; Ertem, 2011; Yediyildiz, 1982; Yoruk, 2016; Yuksel, 1999). These numbers show how prominent and active waqfs were for constructing and maintaining architecture during the centuries of the Ottoman reign. Also, considering the high numbers of properties that were passed to the Republic of Turkey, it shows many structures of waqfs survived centuries. The Ottomans were aware of the vital role of waqfs; therefore, supported it by policies or even donating properties and founding waqfs themselves to be an example to the public.

The first of many services, waqf provided was urbanization and public works. Waqfs had a role from the first moments of the conquests of cities. As mentioned previously in this chapter, when a city was conquered, or in the case of building new settlements, first, kulliyah and other functional buildings were built. Kulliyahs and service buildings were founded and financed by waqfs. Besides constructing service buildings such as mosques and madrasahs, other structures that bring income, such as houses, hammams, hans were built as well. By building and owning a property that can bring an income, continuity, and survival of these functions were granted. Because all these functional structures were built by them, the development of the city was considered parallel to the development of the waqfs properties built. Besides forming the central city core, waqfs formed and financed smaller neighborhood-scale service cores where neighborhoods formed around them. These service cores gained self-sustainability due to the regular income of waqfs. People only constructed their own commercial buildings and houses. Therefore, by financing and forming city and neighborhood service cores, waqfs lead and shaped the urban fabric. (Ates, 2017; Bayartan, 2005; Bayyigit, 2001; Bergen, 2010; Ertem, 2011; Hizli, 2014; Inalcik and Ari, 2005; Tuncer, 2005).

Besides having a very active role in urbanization, waqfs were responsible for municipal services. In the Ottoman Empire, the state had no financial contribution to municipal services as well. Until 1854, when the municipalities started to be founded in the Ottoman Empire, all municipal duties were provided by the waqf. Waqfs helped crowded centers function properly without extra taxes

from the citizens. Waqfs were responsible for the construction of roads, bridges, water channels, dams, fountains, pavements, caravanserais, lighthouses, cisterns, and other types of structures to provide water. Besides construction services, waqfs were also responsible for the repair or reconstruction of those buildings and infrastructures if it is needed. When reconstructing, the structures were built the same, and materials from previous structures were used (Bayyigit, 2001; Ertem, 2011; Yoruk, 2016; Yuksel, 1999). Even though this approach of preserving function, but not the structure could be considered as lack of originality, preserving a function by reconstruction provided continuity in urban fabric especially in the mahalla as well as on an urban scale. Even after the foundation of municipalities, waqfs continued to serve the public, which shows how strong and vital they were as an organization because even though a public service by the hand of the central government provided, waqfs were still an active agent in urban life.

Some of the municipal duties and environmental activities were provided by environmental waqfs. These waqfs were to protect and develop the environment and they were responsible for providing clean water, cleaning streets, protecting animals, maintenance of green spaces, dealing with noise and air pollution, preventing floods, preventing erosion, cleaning rivers. Also, these environmental waqfs cleaned cities and rivers after floods, built dams to prevent flooding; diminished the damage of floods in city centers and plantations. For instance, in 1496, Sultan II Bayezid founded a waqf that hired a man to go on a bridge and clean branches and stones that floods bring in order to prevent more damage. Also, waqfs had duties of firefighting and constructing fire towers (Bulus, 2009; Tuncer, 2005; Yoruk, 2016). Therefore, waqfs working on disaster mitigation and recovery after disasters highlight another vital role of them as an agent of surviving urban fabric in Ottoman cities.

Another contribution of waqfs to urban life was supporting the local economy and providing jobs to the locals. In the initial phase of urbanization, there were permanent positions for architects, construction masters, and many other workers depending on the size and needs of the waqf. Later, to continue functioning and provide service in those waqf properties, waqfs hired many people from different professions, which had an impact on a higher employment rate in local areas. Also, waqfs rented their own properties cheaper to locals which helped local businesses. With the shops, carsis, caravanserais waqfs built to provide an income, they had an impact on the local economy naturally. With properties and incomes they had, waqfs had a big contribution to the Ottoman economy in

general also. They were the active agent in the local economy with their activities. They were making many investments, employed many people, also helped the government economically by providing many services to the public which lessen the pressure from the central government. In the 17th century %15.97, in the 18th century %26.90, in the 19th century 15.77 of the Ottoman economy was under the control of waqfs. Lastly, because they were funded by wealthy citizens to help less fortunate people, with wealth transferred from the upper class, the lower class reduced, the middle class increased and therefore waqfs brought balance to the distribution of wealth in communities. So, their economic activities were also contributing to economic equity, which also helped social bonds between citizens. Waqfs had the role of helping students, the poor, orphans, travelers, elderly, widows, disabled, lepers. They provided funeral services to people who had no family or money, freed slaves, helped bankrupt merchants, provided wood and coils for the poor, provided clothes to the elderly and orphans, gave orphan girls dowry, paid wedding expenses for the poor, paid the debt of prisoners, helped mahalla and villages expenses, provided water and food to animals. Imarets in Istanbul only provided food for 30000 people daily which shows the impact they have on society (Bayyigit, 2001; Bergen, 2010; Bulus, 2009; Eren, 1987; Ertem, 2011; Orbay, 2005; Ozturk, 1984; Sensoy, 2016; Yuksel, 1999). All this financial help resulted in contributing to a social connection between citizens.

Waqfs also was responsible for health, religious and educational services. Ottoman state did not construct any educational buildings such as maktabs, madrasahs, *daru'l hadis, dar'ul kurra, darussifa* (3 versions of higher education organizations); hospitals; or religious structures such as mosques, masjids and did not provide any support for the services of these functions. In educational facilities, waqfs were responsible for providing free education, paying teachers and other workers, paying the expenses of building such as lighting and heating, providing free food to the dormitories, and bursaries to the students. Waqfs provided free education to everyone from a different level of society which removed the financial burden from the central government for education expenses. Because people from different social backgrounds gathered in educational organizations, it helped citizens from different backgrounds to develop their relationships with each other and unite. In hospitals, waqfs provided all services, salaries of personnel, free medicine to patients with no question asked

regardless of their religion, wealth, or where they came from (Ertem, 2011; Ozturk, 1984; Yuksel, 1999).

Lastly, in mahallas, money called *Avariz Akcesi* was collected to help the needs of mahalla and its inhabitants. The money was the responsibility of an imam to collect, secure, and operate. At first, it was money-based, however, later, with the donations of immovable properties these waqfs became more powerful. The money was used for the protection, maintenance, and repair of public spaces and structures, social aid, paying public expenditure, lend money to any individuals in need, help the poor, orphans, and sick (Bergen, 2010; Berki, 1965; Bulus, 2009; Ergenc, 1984; Hizli, 2014; Yoruk, 2016).

These various roles of waqfs in the city show that while waqfs could be founded for the construction of the individual building which means they operate on a building scale when they are under the name of *Avariz Akcesi* they operate on a mahalla scale. Even though architecturally, waqfs operate and are presented in the literature mostly on the building scale, the construction of kulliyahs and infrastructure serves a bigger scale. Philanthropic and social services, economic services; cultural services; educational services; health services were provided to citizens on a city scale. Thus, it shows, waqfs were active agents on citizens' lives on various scales. Moreover, the literature shows, that the Ottomans built caravanserais through waqfs in one-day travel distance from each other and provided free stay, meal, and all other services to tradesmen regardless of their background (Berkol, cited in Yuksel, 1999; Kayaoglu, cited in Yuksel, 1999, p. 52). According to Oztune (1977, cited in Ozturk, 1984), travelers could travel from one end of the empire to the other end for free by using services of imarets and caravanserais. So, even though, these individual buildings and services were provided by their own waqfs, the network created by them was a country scale in terms of operation.

So overall, waqfs were the backbone of the urban formation and maintenance by financially supporting it. To understand the extension of waqfs services to the citizens' lives, a saying explains everything: *'a man was born in the place of waqfs, sleeps in waqfs cradle, eats and drinks from waqfs property, reads from waqfs books, teaches in madrasahs of waqfs, paid by waqfs, when he dies he is put in a coffin provided by waqfs and he is buried in a cemetery of waqfs'* (Arsebuk, 1937, cited in Ertem, 2011, p.35) So, waqfs played a crucial role in citizens' life from their birth till their death (Ertem, 2011). Also, they held importance for the community and urban life by providing all the

services mentioned above. Therefore, when exploring urban life and the fabric of Ottoman cities, waqfs and their activities should be taken into consideration for better understanding.

2.3.4. Problems the Ottoman Urban Fabric faced & How they were dealt with

Previously formation and maintenance process of Ottoman cities was explained. Over centuries, as a traditional and vernacular fabric, Ottoman cities faced natural disasters, invasions, wars, rebellions, and immigration flows. Those factors understandably changed and challenged the urban fabric over time. Especially, natural disasters affected urban fabric and life (earthquakes, floods, windstorms, and fires) *(*Altun, 2013, Bostan, 2011; Catal, 2009; Gul, 2009; Keskin, 2015; Kocaman, 2011; Misirli, 2014; Noyan, 2013; Oltulu, 2006; Senol, 2010; Zeybek; 1998).

One of the biggest reasons for infrastructural damage was the fire. Because residential building frames were made of wood, fires easily spread through buildings and damaged the whole mahalla or sometimes multiple mahallas. The reason for fires varied. It could be wildfires, arson, accidents started from individual buildings, or as a result of earthquakes. The insight on various reasons was provided by some of the travelers. For example, Ogier Ghiselin de Busbecq claimed the fire in 1555 in Amasya was started by firefighters for plunder, moreover, they witnessed a fire in Istanbul due to arson where perpetrators cannot be found. They explained that the public believed it was done by Persian spies. One time in Istanbul, investigations showed a fire in a harbor started by sailors. Busbecq believed arson was an opportunity for plunder (Busbecq et., 1881). In another example, Georges Perrot stated that when they visited the town of Amasya, Zile, in 1861, an arson happened in a han where commercial caravans stop. Even though there were rumors of fire starting from the oven, gangs in the area stole goods while the locals were trying to put off the fire (Tuzcu, 2007). Fire in residential neighborhoods also started from incidents in individual houses and spread easily. When they visited Istanbul at the beginning of the 18th century, Lady Mary Montagu Wortley wrote in their letters that (Montagu, 1805, p. 126):

> *I wish I may find the influence of the climate in this particular; but I fear I shall continue as an English woman in this affair, as well as I do dread of fire and the plague, which are two things very little feared here. Most families have had their houses burnt down once or twice, occasioned by their extraordinary way of warming themselves, which is neither by chimnies nor stoves, but by certain machine called a tendour, the height of two feet, in the form of a table, covered with a fine carpet or embroidery. This is*

made only of wood, and they put into it a small quantity of hot ashes, and sit with their legs under the carpet. At this table they work, read, and very often sleep; and , if they chance to dream, kick down the tendour, and the hot ashes commonly set the house on fire. There were five hundred houses burnt in this manner about a fortnight ago, and I have seen several of the owners since, who seem not at all moved at so common a misfortune. They put their goods into a bark, and see their houses burn with great philosophy, their persons being very seldom endangered, having no stairs to descend.

Over time and experience, various precautions were taken against fire. When there was a windstorm at night, precautions, such as putting out the street lamps, closing the shops that work with fire, and the firemen patrolling in mahallas, were taken. In another example, a local judge in Istanbul in the 16th century made a rule to have a ladder, pickaxe, shovel, and water in every house. Also, when there was a fire, people were warned by a salvo fire from the castle, or a resident fired a shotgun to warn the neighbors. Later, *Tulumbacilar* (Firefighters) was founded in 1720. Also, there were volunteer local firefighters to make the first intervention in the case of fire. Firefighters had a system to prevent a fire from spreading amongst adjoining buildings. When a fire started, they pulled down two neighbor buildings in order to prevent the spread. Hans Dernshwam stated when they visited Amasya, they saw that the soldiers tried to put off the fire, however, soldiers did not have enough equipment, therefore, they used hooks to pull the houses down next to the burning one in order to prevent spreading (Tuzcu, 2007). However, later, as Busbecq also mentioned, firefighters started a fire on purpose to plunder the houses which caused deterioration in the conditions of mahallas.

After 1826, the firefighting role was given to municipalities and every mahalla had a volunteer '*tulumbaci*'s (firefighter). Because volunteer firefighters did not have a salary, the government did not take tax from them, gave them daily food and places to stay. However, because volunteers did not know firefighting well, they were unsuccessful in the cases of disasters. Moreover, the usage of wood for construction, adjacent houses, lack of firewall caused more damage to Turkish cities in cases of fire. Even though the wooden structure was susceptible to fire, it was permitted in Istanbul due to being cheaper and providing houses for the lower-income population. Other types of precautions were taken especially in the 19th century. In 1817, with regulation, all houses were asked to build a stone firewall.

Lastly, for flood precautions, if possible, the Ottoman Empire moved the occupied area to another place, and if not possible, they made river restoration to control the flow. Similar to other disasters, the central government provided money to disaster victims in cases, but mostly local officials provided needs and shelter (Bostan, 2011; Gonullu, 2010; Kumas, 2011; Ozgur and Azakli, 2001; Seyitdanlioglu, 1999).

Because disaster prevention and mitigation skills were limited for that day, the Ottomans were focused and relied on the recovery process. Damaged buildings after disasters, also, might be repaired by notable citizens, philanthropists, citizens, and state cooperation. Especially, in the 19th century, the economic state of the Ottoman Empire was not in good shape and it could not answer all the needs. In this state, expecting the reconstruction by the central government was not a realistic aspect, therefore, citizens made their own contributions. When a fire destroyed residences, new houses and shops are built for the families by donation and help of waqf by donation of money or land. Also, repair of the religious structures after a disaster was mainly done by waqfs and citizens' donations. Even the regular maintenance was paid by locals, tradesmen, and high-ranking officials. In some cases, local governors encouraged locals to be a part of the repair and reconstruction process after a disaster. For example, Governor of Bursa, Ahmet Vefik Pasha made a great effort to include citizens to help after the earthquake in 1855. Also, when the disaster happened in one city, citizens of another city helped like in the case of the 1894 Istanbul earthquake when Bursa citizens helped Istanbul citizens to recover (Bostan, 2011; Kumas, 2011; Karakurt Tosun, 2007; Oltulu, 2006; Sari, 2010). Therefore, the locals were involved a lot in the disaster management and recovery process.

Although waqfs were an important actor in the cities that the public can rely on, because of the political problems the Ottoman Empire faced and its reflection on the society, some waqf officials were corrupted. Misuse of the resources by corrupted executives caused waqfs deterioration, and as a result, deterioration in the conditions of the urban fabric. Waqfs faced economic struggles and many buildings became ruins because of lack of maintenance. This also shows how critical the waqfs' role was in maintaining the urban structures since their deterioration caused problems to the urban fabric. Even though some waqfs struggled due to their internal crisis from time to time, waqfs generally were providing most of the public services that were needed. They had the role of

repairing buildings damaged due to aging, fires, natural disasters, windstorms, invasions, and rebellions. After facing many disasters, such as earthquakes and fires, the survival of many buildings was partially dependent on waqfs. Waqfs' own properties or civil buildings were maintained and repaired by waqfs after disasters such as fires. However, if the income of a waqf was not enough to cover costs, then, they received money from the Ottoman treasury. However, because of the tightness of the economic resources of waqfs and Ottoman treasury from time to time, when a devastating disaster hits a city, the repair was done by priority which caused less important buildings to disappear forever (Basol, 2008; Bostan, 2011; Keskin, 2015).

In the process of recovery, to protect its original structural fabric, instead of building fast, simple structures after disasters, the Ottomans rebuilt the exact same building after destruction. For example, the tomb, which destructed in the 1855 earthquakes, was rebuilt as same as the original in 1868. Some court records mention locals could not rebuild some structures after getting destroyed by a fire, therefore, they rebuild differently than the original. Also, sometimes monuments were rebuilt as original, however, with a different material than wood to prevent the second destruction from fire or other disasters. For example, after a flood in Amasya, when a wooden bridge was damaged, they rebuilt it with concrete. Also, when non-Islamic religious structures such as synagogues or churches were damaged in a disaster, the non-Muslim community had to apply to the court to get permission to rebuild the structure. The non-Muslim community was only allowed to rebuild the damaged religious structures, if they repair and rebuild exactly the same as before (Bostan, 2011; Duman, 2010; Karakurt Tosun, 2007; Kocaman, 2011; Oltulu, 2010; Ozata and Limoncu, 2014; Ozbudak, 2011; Sari, 2010).

Overall, '*in the 16th and 17th centuries, most of the samples of vernacular architecture were destroyed by fires. After these wildfires, all the regulations and legislation were changed. In the 18th century, the new materials and newly-built typologies appeared, and hereby the area changed into a heterogenic settlement*' *(*Senturk and Sadikoglu, 2014, p. 279). From the 17th and 18th centuries, because of political, social, and economic changes, the mahalla also started to change and lose its characteristics. During this era, importing activities increased, which increased the population of city centers and a population of foreigners. The residential fabric started to be denser. In the 19th century, with industrialization, changes affected mahallas more in the typology of the residential

building. After fires, different structures started to be used (*kagir*, masonry). In a dense city fabric, open-closed space balance was lost. Social stratification started to happen in residential areas (Baday, 2011; Cakir, 2012; Eren, 2012).

2.3.5. The Reform Period of the Ottoman Cities from the 19th Century to the Present Day

From the end of the 18th-century reforms and modernization, movements started in the Ottoman Empire which, as a result, affected the Ottoman cities as well. Due to the decline in the power of the empire, Sultan III Selim believed the reforms were needed, therefore, between 1789 and 1808, Sultan III Selim started '*Nizam-I Cedid* / New Order' to reform the economy, administration, law, society, basically leaving the tradition behind. However, this era was stopped by another rebellion in 1808. After this, the 19th century became a true reform era which started with the proclamation of *Tanzimat Fermani* (Imperial Edict of Reorganization in 1839), which aimed 'modernization' in every part of the country with the help of Western Culture and techniques. As a result, Ottoman cities and the urbanization process were also affected. Using Western urban models, destroyed the traditional Anatolian city fabric and was seen as necessary for westernization. Sometimes, architects and engineers from Europe were invited to prepare a master plan and their design was bringing a European city image. Ottoman city forms and their internal fabric started to change, it had the biggest impact on Istanbul and most of the Anatolian cities did not have a huge change (Aksoylu, 2017; Cabuk and Demir, 2012; Canitez, 2010; Hudson, 2008; Kodaman, 2007; Sari, 2010).

With the proclamation of *Tanzimat Fermani* (Imperial Edict of Reorganization in 1839, the Ottoman local administration system turned from the state *(sanjak)* system to the city system. The civil administration, municipalities, were founded, cities started to govern by governors and planning decisions were taken by them. Municipalities started to implement planning decisions and construction codes. With new urban institutions and urban policies, new types of buildings started to appear in the urban fabric, such as government offices, town halls, hospitals, schools, courthouses, police centers, and military posts; therefore, the transformation of the built environment was inevitable. First planning activities were started. '*Permanent urban texture is aimed'* and *'roads were widened'*, *'with the growth of the city's grid system applied'*, the function of the green area was changed from fields to parks and gardens. Sometimes, the grid plan was applied

during the reconstruction period of the *mahalla*. Roads were widened for cars and trams, and a new living area was established (Aksoylu, 2017; Canitez, 2010; Sahin, 2006).

With *Tanzimat Fermani*, municipalities seek new rules to prevent damages in case of disasters. *'The Ottoman reformers had started introducing rules concerning street widths, elimination of dead ends, and building materials months before the declaration of the Tanzimat decree. [...] It provided the specifications and regularization of streets according to their width; the need for, and design of, pedestrian pathways; restrictions on timber buildings; encouragement of masonry construction; and the promotion of a series of hierarchal planning controls for construction works in the city'* (Sahara, 2011, cited in Aksoylu, 2017, p. 299). If a fire destroyed all the neighborhood, reconstruction was planned in a grid system and usage of wooden limited to prevent the spread of fire. Compulsory firewall construction was introduced in the 19th century. Also, the structure type is changed from wooden to *Himis* (Wooden structure filled with adobe or brick) and masonry, etc. to lessen the damage of a fire. The Ottoman government encouraged the usage of masonry and banned wood. However, even though the locals preferred to use wood, locals also adapted to using new techniques and materials after enormous damage from disasters, which happened after the fire in Bursa in 1863 (Dullinja, 2012; Kumas, 2011; Sahin, 2006).

With urbanization, new laws and regulations were implemented. Many regulations, edicts, laws, constitutions were put in place (Appendix 1.1[18]). They were to change urban fabric and administration in the capital of Istanbul and other Ottoman cities. Even though they were to provide disaster mitigation and recovery, they only changed the original traditional fabric of Ottoman cities and caused dissolvement, which this research claims had a negative impact. For this, the case study will be explored in-depth to see if any of those decisions made an impact positively or negatively on the urban fabric and the resilience of the city.

- **Waqfs after the 19th century**

The changes the 19th century brought also was reflected in waqfs as well. The development of the waqfs was parallel with the political and economic development of the city. Even though they were economically and administratively independent, waqfs were inspected by *qadi*s in the name of the

[18] All regulations and their effect on urban fabric were listed in detail in Appendix 1.1.

empire, which contributed to their survival over centuries. However, in the 19th century, waqfs started to be corrupted. In order to inspect, manage, and prevent corruption, waqfs were centralized under the government office called *'Evkaf Humayun Nezareti'* in 1826, which reduced the impact of waqfs. Also, the tax exemption of waqfs was canceled during this period. With these reforms to strengthen the authority of the central government, the conditions of properties gotten worsen. Because the income of waqfs was collected at the central government was used for the other expenses of the government, which caused waqfs not to be able to pay the maintenance, repair, and rebuilding of the properties. Eventually, waqfs properties started to disappear due to negligence. Also, with the decline of waqfs, mahallas started to lose their self-sufficient character. Finally, in 1920, this office was changed into another office called *'Evkaf ve Seriye Vekaleti'* of the Ottoman Empire, and eventually, after the republic era, it became an office called *'Vakiflar Genel Mudurlugu'* which was under the control of the Prime Ministry of the Republic of Turkey. While there were 20000 waqfs in the 18th century, 5859 left to the Republic of Turkey (Bulus, 2009; Cizakca, 2006; Ertem, 2011; Orbay, 2005; Sensoy, 2016). This shows how these reforms affected waqfs negatively.

- **The Republic Period of Turkey and Cities**

With the foundation of the Republic of Turkey in 1923, cities entered a transformation phase with planning activities, however, showed slow progress until the 1950s (Avci, 2005; Sari, 2010; Coban, 2012). *'After 1923 until 1950 mahallas function in a city organization did not change much. The biggest change was not using the traditional house type anymore. After the 1950s, bigger change started to occur socially'* (Eren 2012, p. 1553). Until 1934, despite natural disasters, fires, and city developments, mahallas preserved their original name, which shows their socioeconomic continuity. From the *Tanzimat* Era to the Early Republic Era, mahallas in Ottoman cities survived even despite the administrative changes they faced. However, with the removal of the *mukhtar*'s (mahallas elected officials) office between 1934 and 1944, mahallas started to dissolve. This problem partially stopped when the mukhtar's office was returned in 1944. However, because the documents about mahallas were not kept during this decade and with huge population growth after the 1950s and changes in the traditional fabric by master plans, the mahalla faced hardship in returning to its glorious spatial state (Bayartan, 2005; Cabuk and Demir, 2012; Eren, 2012).

After the end of World War II, the economy started to develop, immigration from rural to urban started and cities started to show a fast urbanization rate. New planning regulations started to be applied after the 1950s, leading to the formation of new residential neighborhoods with new housing typologies and construction techniques. Traditional houses in the Ottoman city mahallas were abandoned and left to decay or were deliberately destroyed to make space for newly built multi-story concrete apartment blocks. Planning activities did not meet social dynamics, which caused different and uncontrolled place formation. The old city fabric started to change and the new language in the urban fabric started to appear, but mahallas' inner structure did not change. The mahallas original main structure continued until the 1980s. In the 1980s, a new period of urbanization with an awareness of the importance of heritage buildings and their protection started. For the first time, with the 1982 constitution of the Republic of Turkey, cultural and natural properties were protected by law. In 1983, the act on cultural and natural heritage protection (law number 2863) defined heritage terms, protection rules, the area of jurisdiction of ministries, and the local protection committee in detail. During this period, traditional houses in the historical quarters were registered and restored. From 2000, with the urban regeneration notion, mahallas started to be a part of the urban fabric and found identity and locality back, even though it has not recovered to its glorious days (Coban, 2012; Dagistan Ozdemir, 2005; Eren, 2012; Genc and Ozgur, 2008; Gultek 1997; Imamoglu, 1994; Sari, 2010; Tureli, 2014).

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CHAPTER 3: Vernacular Architecture and Resilience

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3.1. Introduction to Chapter 3: Vernacular Architecture and Resilience

This chapter consists of two parts to introduce two main thematic backgrounds for this research: Vernacular architecture and Resilience. Firstly, the literature on vernacular architecture, in general, has various characteristics such as physical issues and cultural issues, the criticism about vernacular studies, and the importance of vernacular knowledge was presented. Then, a review of the term resilience, resilience types and characteristics of resilience in the literature, the ways of assessments used to measure resilience in built environments, and the correlation between vernacular architecture and resilience was followed.

3.2. Vernacular Architecture

3.2.1. What is Vernacular Architecture?

In studies of vernacular architecture, according to this review, there is not a disagreement on what it refers to in general. Even though the definitions made by different scholars attribute similar aspects, each scholar focused on different aspects based on their interest in research. So initially, this part includes a concise review of these various aspects addressed by scholars.

What does vernacular architecture mean? In the literature, Rudofsky was accepted as the first person to use the term vernacular for architecture. Rudofsky highlighted the characteristics of having no architect but being built according to the technology and the culture of the locals (Dabaieh, 2011; Rudofsky, 1964, cited in Susilo, 2005). Later, Oliver (2006) explained it with an etymological definition and stated that since vernacular means native, vernacular architecture means *'native science of building'*. However, Oliver (2006)made their own definition and stated that they accept *'all the types of building made by people in tribal, folk, peasant and popular societies where an architect, or specialist designer, is not employed'* is vernacular architecture. Oliver (2006) also made connotation with the usage of the term vernacular in linguistics and said vernacular architecture can be also considered as *'the architectural language of the people'* with its ethnic, regional, and local dialects (p. 4). Another description from Demirbilek (1988) stated that *'social and cultural influences have shaped dwellings and centuries of accumulated experience and struggle with physical conditions have led human beings to build best possible dwellings for themselves in which they can survive and develop'* (p. 29). Nguyen *et al.* (2011) also claimed that *'vernacular*

architecture results from long-term growth and is part of traditional popular culture; therefore, vernacular architecture is considered well adapted to the natural and social conditions of a specific location in which it exists' (p. 2088). Also, UNESCO publications stated that there are two main criteria for architecture to be called vernacular: being built without an architect and being traditional (Ringbom, 1984, cited in Dabaieh, 2011). In terms of what vernacular architecture is as a scale, as Salman stated (2018) vernacular architecture is the built environment: city, architecture, and interior space (p.4). This research accepts all scales mentioned in literature as vernacular architecture and would like to address various scales when exploring the case study.

Even though some definitions highlight no help from a professional is needed to call vernacular, especially an architect, this study argues, in traditional and vernacular settlements, naturally, it is expected that some level of professional or people with construction knowledge was in charge of construction. In Ottoman cities, even though sometimes the name of the architect for individual service buildings was recorded, there are many cases that the architect's name cannot be addressed. Also, for the construction of residential buildings, there is a high possibility that the local craftsmen were employed. However, these professionals, either architects or craftsmen, were responsible for individual construction and architectural style. In terms of the whole urban fabric, the locals were the decision-makers for forming process. Therefore, vernacular and traditional Ottoman settlements were formed and maintained by the locals with the guidance of their religion, tradition, Islamic law, and geographical conditions. So, overall, this research defines vernacular architecture as a built environment that is a reflection of the community, their lifestyle, and the physical conditions of where they are located.

Vernacular architecture is based on climate, culture, social needs, economy, religion, available limited resources, affordable technology. According to the literature, it can be interpreted that social and cultural factors form architecture, while physical conditions, which especially tested boundaries, were the reason for a change in vernacular forms. These two aspects were investigated by different groups of scholars. While one group of scholars were interested in the physical and technical aspect of vernacular architecture by studying, material, construction techniques, spatial layout, sites, etc., the other group were interested in the social, cultural, religious, and economic aspect of vernacular architecture and built environment.

The first group mentioned above who were interested in a physical and technical aspect, especially with the studies of sustainability as a trending concept, studied if or how vernacular architecture can be a part of sustainability studies. Vernacular architecture from different parts of the world was generally researched for passive design principles for its responsiveness to its local climate through sites, location, design, climate, solar orientation, thermal mass, material, etc. before the advanced level of technology of this century. Vernacular architecture is considered as an alternative solution, especially for reducing energy consumption (Al-Hinai *et al.*, 1993; Nguyen *et al.*, 2011; Sassu, 2002; Singh *et al.*, 2011). Especially, design for climate and climate responsiveness explored by many. For instance, in their studies of vernacular houses in the eastern Black Sea region of Turkey, Engin *et al.* (2007) explored the climatic effect on the design and explained the factors such as rain and wind, that can have a detrimental effect on the built environment, therefore, vernacular architecture was formed and evolved by climatic extremities. Another study by Eruzun (1989, cited in Ozorhon and Ozorhon 2014) praised *'clever and detailed solutions to the adverse effects of natural and climatic conditions on house spaces were introduced through the utilization of local materials and by employing the substantial knowledge accumulation'* (p. 178). They gave an example of chimneys in houses in Mugla, Turkey that with their special shape they can withstand winds and rainfall even to the extremities (Eruzun, 1989, cited in Ozorhon and Ozorhon, 2014). As Zare and Kazemian (2014) cited Rudofsky (1964) that vernacular architecture, instead of dominating or changing nature, is respectful and compatible with it, which makes this aspect of vernacular architecture significant for this research.

Besides investigating the climate responsiveness of vernacular architecture, vernacular studies also mention how vernacular architecture deals with an extreme climate such as hot weather, heavy snow, or rain. Moreover, vernacular architecture also deals with extreme conditions such as earthquakes, floods, and fire. For example, in their research, Sassu (2002) explained countries that face frequent earthquakes such as Turkey, India, and Portugal, vernacular architecture shows good resistance to earthquakes. They explain that good performance does not come from technical knowledge, but as a result of a high frequency of earthquakes in those regions. Locals managed to learn to create earthquake-resistant construction by trial and error. Depending on how construction practices were performed after each earthquake they were either discontinued or replicated and

improved. Another study by *Ortega et al.* (2017), moreover, highlighted that, even though local areas prone to earthquakes might be affected more due to possible limited resources and the low maintenance-built environment are still well adapted due to facing earthquakes for a long time constantly. Another study by Puspitasari *et al.* (2018) suggested that local knowledge of floating houses can be significant for developing advanced technology and contributes to the resilience of houses in the local area of Palembang to deal with floods. Considering all various studies that explored how vernacular architecture dealt with local and natural conditions, especially with adversities, can provide a connection to the second concept of this study, resilience, which will be explained later in this chapter.

Besides technical considerations, social, cultural, and economic circumstances had an impact on vernacular architecture. *'Since the process of housing is a cultural phenomenon, physical form and spatial configuration of houses are influenced by the cultural context'* (Rapaport, 1969, cited in Kamalipour and Zaroudi, 2014, p. 221). Kamalipour and Zaroudi explained (2014) that *'culture has been adopted as a complex accumulation of activities, crafts, habits, beliefs, art, ethics, and thoughts while it also has been addressed as a system of collective knowledge, meaning, value, and vision'* (p. 222). Therefore, the way of people living is reflected also in the area they inhabited. Culture, tradition, economy, religion, and climate are the underlying forces in the structure and formation of vernacular settlements (Kamalipour and Zaroudi, 2014). Also, Rappaport claimed that culture is a more important factor than climate, materials, and technology by using the example of vernacular architecture itself (Rappaport, 1969, cited in Dagistanli, 2007). Rappaport, moreover, stated that vernacular architecture shows *'changing values', 'ideology and lifestyle and finally the combination of these situations'* (Rappaport, NA, cited in Zare and Kazemian, 2014, p. 548). Oliver (1997, cited in Dabaieh, 2011) stated that vernacular architecture meets needs and accommodates *'local values, economies, and the ways of life of the cultures that produce them'* (p.39). Salman (2018) is another scholar who agreed that, besides natural conditions, vernacular architecture answers people's economic, social, and cultural norms. They even stated that it is a sign of identity and *'a mirror of nations that reflect a place, time, and culture'* (p. 4). Even though the culture mentioned more in articles as an important factor behind vernacular architecture, the economy had an impact as much. For example, Cantimur (2014) discussed in their study how silkworm breeding and silk production

affected lifestyle socially and economically, therefore, impacted in forms of vernacular houses in Bursa, Turkey.

Overall, scholars found culture and economy are vital for the formation of vernacular architecture as much as geographic constraints, materials, and techniques. Considering these insights from scholars, even though architecture studies and resilience studies tend to be more technical and physical, this research will also address other aspects that shaped vernacular architecture, especially in the case study.

3.2.2. Criticism on Vernacular Studies

Even though the scholars of vernacular studies expressed positive aspects of vernacular architecture, there was still some criticism against vernacular architecture and the knowledge that this research would like to address.

The first criticism is finding vernacular studies not scientific or modern enough. Pevsner even stated that *'a roof that bicycles left under is a structure and Lincoln Cathedral is an architectural monument'* and their view was that the term architecture should be used for structures with a style and aesthetics (Pevsner, 1970, cited in Dagistanli, 2007, p. 46). Pevsner did not consider vernacular structures as a product of architecture since they were not designed by a professional with architectural style. Literature also addresses similar approaches that associated the term vernacular with negative adjectives such as primitive, rural, spontaneous, sub-standard, second-class, undeveloped, backward, require improvements (Dayaratne, 2017; Supic, 1982; Wahid 2012; Oliver, 2006). As Oliver (2006) explained *'vernacular suffers from indifference and ignorance of its historic or social value, and from being assigned low status in housing'* (pp. 24-25). As Dabaieh (2011) cited the Centre for Vernacular studies, in 2006 only, *'10 percent of the world's buildings were designed by architects'* (p. 39). When considering %90 percent of the world's built environment is based on vernacular knowledge, it means vernacular architecture is still applicable, and should not be ignored with arrogance. Oliver (2006) mentioned, according to their experience, post-disaster construction in many places, local authorities ignored indigenous values and the original pattern of settlements. Oliver, moreover, criticized the architects who are responsible for reconstruction never visit sites or talk to locals to understand their needs and use modern materials and forms (Oliver, 2006).

Similarly, Al-Hinai *et al.* (1993) stated that generally due to mass modernization countries with vernacular architecture started to lose their characteristics to concrete blocks. Scholars from Turkey, Vural *et al.* (2007) stated that vernacular architecture is disappearing due to poor comfort conditions of vernacular structures and being replaceable by cheaper concrete materials and modern buildings. Wahid (2012) also stated that modern technology now created buildings dependent on mechanics which causes an increase in energy consumption, poor thermal comfort versus traditional construction knowledge with environmentally responsive structures that were shaped to cope with the hostile outdoor environment. This replacement of vernacular structure with 'modern' concrete block does not only comes from professionals but also from the inhabitants. As Abu-ghazzeh (1997) explained through the example of Saudi Arabia, people wanted the built environment image from western societies and seeing built heritage as backward, and an image of the past and poverty. Yet, Abu-ghazzeh claimed contemporary built environment that society's desire does not respond to the social and cultural norms of Islamic society (Abu-Ghazzeh, 1997, p. 29).

Even though there is a negative image associated with, vernacular knowledge, know-how, and architecture contain more than what was expected of it. Wahid (2012) pointed out that vernacular architecture and knowledge are more than a primitive form of design with no intelligence behind once it was perceived by some scholars, but actually vernacular architecture is climate-responsive and reflects the environment which shows their advancement. Similarly, Salman (2018) stated that vernacular architecture is *'built by people to people; it has developed through time and modified itself through trial and error to fulfill society's needs in harmony with the ambient environment'* (p. 4). Because it is based on trial and error, it changes and transforms through feedback over time (Singh *et al.*, 2011). Also, Oliver (2006, p. 110) emphasized the importance of vernacular know-how:

> *It has to do with knowledge, with awareness, understanding, even intuition. In practice, within the context of vernacular architecture, it embraces what is known and what is inherited about the dwelling, building or settlement; it includes the collective wisdom and experience of the society concerned and the norms that have become accepted by the group as being appropriate to their built environment. It is also to do with the inherited knowledge of the natural environment of climate, topography, seasonal variation, natural hazard, suitability of site.*

Supic (1982) similarly praised vernacular architecture that *'they are the expression of a reality slowly elaborated during centuries, executed with local techniques and means, expressing precise functions and satisfying social, cultural and economic needs. By their character, their originality, and the lack of pretension, they integrate themselves lithely and naturally in the surroundings'* (p. 43). Therefore, scholars of vernacular studies found characteristics of advancement in vernacular techniques for the day and conditions they were formed and also praised the system of accumulating knowledge, passing to the new generations, and continuing correcting errors to adapt to the condition they face and advance.

The second criticism about vernacular studies is towards the scholars of vernacular studies of having nostalgic longing, therefore, studying the concept. This issue is addressed and responded to by the scholars of vernacular studies themselves. Kazimee (2008, cited in Wahid 2012) responded that *'vernacular architecture represents more than a nostalgic longing for things and ways that have essentially become obsolete, but rather a learning method by which new global challenges can be addressed, which are global warming, housing crises, and economic equality'* (p. 75). Also, Oliver (2006) accepted that *'even though we might have romantic notions towards vernacular architecture, we should be aware of the weaknesses and failure, limitation of it'* (2006, pp. 124-125). As Wahid (2012, p. 84) pointed out:

> *Even though vernacular technologies, resources or forms are often suitable and sustainable, yet they may have functional limitations because of changed cultural, social and technological contexts. However, to discard them completely would tantamount to throwing out the baby with the bath water. The challenge is to find out how the achieved knowledge, skills and experience of the world's vernacular builders may, as Vellinga (2006) has said, be fruitfully applied in a modern context.*

The interest in vernacular studies does not only come from longing for the past. Scholars accept possible limitations and faults of vernacular architecture. For example, Coch (1998, cited in Singh *et al.*, 2011) accepted even though vernacular features can be out of date comparing to modern materials, technologies, and construction methods, there are still features to be explored and adapted to today. As Dabaieh (2011) mentioned, even though the vernacular architecture is perceived as a static building form once, it is *'constantly evolving and reacting to changes in the communities that shaped it, then preserving its future can be manageable. Rapoport (1969) described*

vernacular architecture as possessing an open-ended nature which gives it a special quality in enabling the inhabitants to accept changes and make adaptations' (p. 191).

Scholars of vernacular studies, including the author, do not try to bring nostalgia back, but they aim to learn from the accumulation of local knowledge over centuries, find weaknesses, combine contemporary knowledge and all local knowledge for better solutions for human needs and their built environment in the 21st century. As a Turkish scholar who grew up in a traditional neighborhood environment, no matter how objective the author tries to be, the author accepts she might have her own biases due to her own background. However, she accepts that in the Ottoman vernacular built environment, there could be flaws that can be improved by modern science. Present-day, there are many changes in functions, technology, and human needs, so the exact design principles cannot be implemented today. Also, while dwelling on the past only is not an answer, demolishing the past, in this case, vernacular architecture and built environment, for 'modern' and 'technological' structures is also not an answer. Not for nostalgia but considering the adaptive nature of vernacular knowledge and architecture, also its way of being respectful to nature and answering the needs of humans with limited resources, this study aims to learn from the past to deal with problems of modern-day, for creating a better chance for the survival of a built environment in the future.

3.3. Resilience

In the second part of this chapter, the second theme of this research, resilience, is introduced. First of all, a short history of the term resilience is presented. Later in this part, the questions of the resilience of what, against what, why study resilience in the built environment and why study resilience in the vernacular-built environment, how to assess resilience is answered. After that, types of resilience in urban fabric such as social, infrastructural, economic, and institutional are explained. Lastly, the most common characteristics of resilience mentioned in the literature are introduced briefly before the conceptual framework.

3.3.1. The History and Definition of the Term Resilience

There are many different definitions of resilience used in literature and academia and what it refers to has changed over time and through studies. The origin of the word in Latin is *resilio* which means

bounce back and jump back (Manyena *et al.*, 2011). Alexander (2013) in their literature review on the history of the term resilience explained that the first dictionary definition stated resilience is *'to rebound and to go back one's word'*. Alexander continued and stated that resilience was used to describe *'the ability to recover from adversity'* and *'ability to withstand the effect of earthquake'* (pp. 2709-2710). The initial definitions were similar in concept and emphasized rebound, recovery, and robustness against adversities.

After those initial descriptions, the concept of resilience entered into different academic fields such as engineering, psychology, economics, and environmental studies. First used by scientists in the field of engineering to describe *'the stability of materials and their resistance to external shocks'* (Davoudi *et al.*, 2012, p. 300). The term was used in the area of mechanics to describe *'the strength and ductility of steel beams'* (Alexander, 2013, p. 2710). The initial resilience descriptions of the field of engineering, which later had an impact on definitions of urban resilience focus on one equilibrium state that the system goes back after facing adversity.

After being used in different fields, the consensus among scholars points out that this definition was used and adapted by C.S Holling to the field of ecology in 1973 (Davoudi *et al.*, 2012; Mayunga, 2007; Mehmood, 2016; Meerow and Newell, 2019). According to Holling (1973), resilience is a measure of the ability of systems to absorb changes of variables and parameters and still persist. Holling (1973) also pointed out resilience's relevance to stability and stated stability is *'the ability of a system to return to an equilibrium state after a temporary disturbance'* (p. 17). Holling (1973) emphasized the speed with minimum fluctuations brings more stability and claimed a system can be resilient and due to fluctuation can have low stability. In their second attempt to define resilience in 1996, which is accepted as ecological resilience, Holling, this time emphasized how much of a disturbance a system can absorb without changing its structure. In ecological resilience, the system does not have to bounce back to a single stable equilibrium, it can bounce forth to any alternative equilibria (Holling, 1973; Davoudi, 2012). Holling's second attempt of resilience definition by introducing multiple equilibria, brought a new perspective to differentiate systems from materials. After Holling, many new definitions of resilience were made by various scholars. Other definitions similarly highlighted the ability to absorb negativity, recover, reorganize, and transform into another state (Mayunga, 2007, Manyena, 2006).

After various descriptions of engineering and ecological resilience, a new definition of resilience appeared in the literature: evolutionary resilience or socioecological resilience. This new definition has two new characters: it brings the human factor into the system and it focuses on multiple internal and external changes. As Resilience Alliance (2005, cited in Mayunga, 2007) pointed out that *'social systems have the added capacity of humans to anticipate and plan for the future'* (p. 2). Moreover, according to the evolutionary perspective *'resilience is not conceived of as a return to normality, but rather as the ability of complex socio-ecological systems to change, adapt, and, crucially, transform in response to stresses and strains'* (Carpenter et al., 2005, cited in Davoudi *et al.*, 2012, p. 302). Scheffer (2009, cited in Davoudi *et al.*, 2012), explained this by stating that systems continue changing over time, regardless of disturbance which is different from the initial descriptions that support the idea of a state of equilibria. Supporting the last two statements, Davoudi *et al.* (2012) also explained in their paper that the state of systems can change into something totally different and rarely rebound to the original state. Moreover, these changes do not always result in external changes, but internal small-scale changes that eventually cause major changes within the system. Davoudi *et al.* (2012) continued by saying that due to constant internal changes within the system, past behaviors of a system cannot be used as a predictor of the future. Moreover, Goncalves and Marques da Costa (2013) took it a step forward and claimed that the system should be introduced to the changes, and when the system absorbs and adapt to these changes, they will keep improving themselves.

In urban studies and disaster studies, all three definitions were used by different scholars. Because historical cities were in constant change and adaptation over the centuries due to internal or external stresses, the latter socio-ecological (evolutionary) definition is more suitable for the investigation of this study. Because the geographical setting of this research is an Ottoman city that consists of mahallas. As highlighted in the previous chapter, Alver defined neighborhood as not only a place nor only a human but a stage of life that was woven by human and place together, which this research supported (Alver, 2011, cited in Baday, 2011). Therefore, the socioecological definition where human and physical settings are considered together is suitable for exploring the resilience of Ottoman cities. However, the first two types of definitions can be adaptable to certain circumstances in the historic urban context and will not be disregarded. Therefore, for this study,

it is aimed to take relevant definitions and characteristics of resilience studied in various subjects and adapt and synthesize them to the historic urban context of Ottoman cities.

3.3.2. Resilience of What, against What, Why, and How?

As explained previously resilience is a concept that has been applied to many areas of study. Some of the articles used questions of what, whom, why, how, and whose to position themselves in the scholarship for understanding resilience (White and O'Hare, 2014; Meerow and Newell, 2016). Similarly, Carpenter *et al.* (2001) asked the question of '*resilience of what to what*' in their research paper to highlight resilience is defined according to these variables and important to understand resilience. Due to this research is combining two concepts of resilience and vernacular traditional Ottoman cities, where there is no clear precedent, this research follows similar footsteps of previous research investigations. Similarly, to understand the concept of resilience in scholarship briefly and position this research, questions of the resilience of what, against what, why resilience, and how to assess resilience will be explored below.

3.3.2.1. Resilience of What?

Initial descriptions in the literature answer the question of the resilience of materials or systems. By attracting the interest of ecologists, the definition was used in ecological and then in social-ecological systems (Holling 1973; Davoudi *et al.*, 2012). Eventually, bringing human factors into the area of research, scholars explored the resilience of people, groups, and communities. Buckle (1998, cited in Mayunga, 2007) defined resilience as *'the capacity that people or groups may possess to withstand or recover from the emergencies and which can stand as a counterbalance to vulnerability'* (p. 16). After them, Adger (2000, cited in Norris *et al.*, 2008) described resilience that *'the ability of groups or communities to cope with external stresses and disturbances as a result of social, political, and environmental change'* (p. 129). By studying communities and changes in environments they live in, urban studies got interested in the concept of resilience. Various scholars defined the resilience of the urban environment (Gibberd, 2017; Shaw and IEDM Team, 2009, cited in Shinde, 2017). For instance, Fatiguso *et al.* (2017, p. 1025) explained the built environment as a system where resilience can be explored and stated that:

The topic, which involves different fields – environmental, social, economic and political – depending on the main character of the 'resilient system', offers interesting research perspectives for the development of innovative planning and management models of towns. In fact, towns might be considered as complex systems, where an intersection takes place at the local scale among weaknesses and strengths of the natural and manmade 'environment', the 'society' of citizens and visitors, the 'economy' of commerce, labour and tourism and the 'politics' of administrators and institutions.

Lastly, Vale (2014) stated that socio-environmental resilience can be observed in various scales of *'individuals to households, communities, neighbourhoods, firms, civil society institutions, governance structures, and infrastructure networks, as well as to supra-urban forces of subnational regional hinterlands and even multinational regions'* (p. 191).

So, overall, scholars explored the resilience of materials, systems, ecological systems, social-ecological systems, humans and communities, and lastly built environments. Literature shows the concept of resilience is applicable to the built environment.

3.3.2.2. Resilience against what?

All three types of resilience definitions explain resilience against a negative force or stressors, which pushes a system to break or change. *'Stressors are aversive circumstances that threaten the well-being or functioning of the individual, organization, neighbourhood, community, or society'* (Norris *et al.*, 2008, p. 131). In literature, the type of shock is considered as one of the dimensions of resilience. Type of shock is a cause that can be natural or intentional/man-made or both, frequency and magnitude, level of anticipation, time scale, and source which could be internal, external, or both (Jha *et al.*, 2013).

Disasters are one of the first stressors which became an interest to scholars. In 1981, Timmerman (1881, cited in Klein *et al.*, 2003) defined resilience against hazardous or disastrous events and explained resilience as *'the measure of a system's or part of a system's capacity to absorb and recover from the occurrence of a hazardous event'* (p. 39). Different definitions by various scholars emphasized a different aspect of resilience against disasters in the literature. Shaw and IEDM Team (2009, cited in Shinde, 2017), referred to the capacity to absorb stress or destructive forces through resistance or adaptation and to recover or *'bounce back'* after an event, Klein *et al.* (1998, cited in Liao 2012) highlighted being able to resist with minimal damage without external help, Mileti (1999,

cited in Liao, 2012) emphasized the importance of preplanning to withstand and cope, Pelling (2003, cited in Liao, 2012) underlined absorbing recurrent disturbance, Manyena (2006, cited in Liao, 2012) and Berkes (2007, cited in Liao, 2012) emphasized adapting by changing non-essential attributes and rebuilt, renew and reorganizing itself. All these various definitions of resilience defined reactions of built environments against disasters.

Even though initial studies focused on natural disasters, World Bank Group (2015) pointed out that besides natural hazards, '*technological, social, economic, political and cultural shocks and stresses*' involves in resilience definitions (p. 20). In urban forms, modern-day issues such as climate change or terrorism were considered a stressor in the studies of resilience (Coaffee and O'Hare; 2008; Leichenko, 2011). Upton and Ibrahim (2012, p. 11) also mentioned:

> *Hazards and stresses come in many forms; they can be natural or manmade and are usually a complex mix of both. Hazards are sudden and unexpected events such as earthquakes, flash floods or cyclones. They can also be slower onset events such as droughts. Stresses refer to smaller, low impact events and seasonal factors, including seasonal unemployment, price fluctuations, local conflicts and gradual changes in climate, which can undermine livelihoods.*

All of these studies explored stressors in modern-day urban forms. While some of the stressors are modern era problems such as terrorism, some others are reoccurring problems from the first settlement to the present day such as disasters.

3.3.2.3. Why Study Resilience?

In this part, this literature review addresses two questions: Why study resilience in built environments? Why study resilience in the vernacular-built environment? As explained previously, the environments humans inhabited face problems of the 21st century, such as terrorism and security, climate change, disasters, etc. continuously. Many scholars highlighted various problems that the urban fabric and urbanization process will face in the present-day and future. An increase in the number of disasters, adverse impact of climate change issues and disasters, rapid urbanization, poverty, people being exposed to more hazards are highlighted by many scholars (Schilderman and Lyons, 2011; World Bank Group, 2015). By 2050, 75% of the world population will live in urban areas which will make resilience a more important concept especially for the built environment. Therefore, present-day urban resilience is more crucial than any other century due to

rapid urbanization causing unprecedented urban challenges which makes cities *'vulnerable to an array of shocks and stresses'* (Coaffee and Lee, 2016, p. 3). Also, *'increasing economic, social and spatial vulnerabilities in cities; the rapid depletion of natural resources, necessitating resource management; and the increasing frequency of ecological events and other causes of environmental degradation means that the time is right to open discussions on the term resilience and to adopt resilience thinking in planning'* (Eraydin and Tasan-Kok, 2013, p.3). The importance of resilience highlighted in the World Bank Group reported that *'investing in resilience contributes to longterm sustainability by ensuring current development gains are safeguarded for future generations'* (p.19). World Bank Group report, moreover, claimed that climate change and its effects of causing disasters and keep increasing and they found resiliency in urban areas very vital. Their report highlighted that disasters are increasing; world population and urbanization are also increasing that is exposed to hazards. They also claimed investing in disaster prevention could save a lot for the future. It has a general impact on cities and the economy overall, but according to them, but most have an impact on the poor (World Bank Group, 2015). Lastly, Feliciotti *et al*. (2018, p. 2) emphasized a vital issue for current urban forms and states that:

> *In coming years and decades, the form of our cities will be called to meet new needs and requirements by preserving, adapting or transforming their structure in response to pressures for change - internal or external, gradual or sudden, predictable or unpredictable. On this capacity will depend the ability of cities to survive and even thrive. This awareness brought the concept of resilience, particularly in its evolutionary connotation, to the forefront of the debate in urban design, where it is used to better understand the process of continuous change and adaptation characterising complex urban systems in conditions of uncertainty and address their design and management (Pickett et al. 2013).*

All these scholars addressed issues of the urban fabric of today and explained more expected issues for the future. Therefore, they found the concept of resilience a possible key for dealing with problems and adapting to them in the future for urban fabric. Also, they point out the importance of adapting and answering needs. So, while they highlighted the correlation of the built environment with resilience, their definition also shows connotation with a vernacular built environment that it adapts, survives challenges, and answers inhabitants' needs, as pointed out previously in the review of vernacular architecture. Similarly, Coaffee and Lee (2016) stated that *'learning the lessons from previous disruptive challenges has become a key feature of urban resilience*

narratives' (p. 72). They, moreover, claimed professionals can learn from incidents of the past and how *'good practice can be appropriately adopted'* for better resilience (p. 72). If the nature of the error is understood the errors will not be repeated so survival is about learning from both good and bad practices (Coaffee and Lee, 2016). Similarly, As Ripp and Lukat stated (2014) *'since we cannot predict the future, we must rely on past findings to evaluate factors of resilience'* (p. 5). Therefore, learning from the past is explained as a key for creating resilience in the built environment for the future, which brings this part to the second question mentioned above: Why study resilience in the vernacular built environment?

First of all, even comparing two concepts by definition, they show the correlation. While resilience focuses on surviving and adapting to a stressor to advance a better level, vernacular built environment with their long history of facing various threats multiple times, correcting its errors, advancing and adapting continuously, and managed to survive do take similar actions of what resilience refers. As explained in detail previously, vernacular architecture is a result of local people reflecting their culture and lifestyle, using local sources and techniques, adapting to geographic, natural, and climatic conditions as well as obstacles they face. By continuous trial and error, examples of vernacular architecture diminished their vulnerabilities and dealt with the next crisis better. Scholars who worked on resilience and vernacular architecture also suggest that the accumulation of knowledge in a long period of time and correcting its errors makes vernacular architecture show more resilience. Also, vernacular architecture proved to be reliable in disaster prevention and recovery after many crises and disasters. As a result, some of the scholars claimed vernacular architecture is inherently resilient (Choudhary, 2016; Dipasquale *et al.*, 2014; Fatiguso *et al.*, 2017; Gautam *et al.*, 2016; Hardiila and Nugroho, 2019; Ozel *et al.*, 2015; Shinde, 2017). Fatiguso *et al.* (2017) stated that in a historic urban settlement, morphology, typology, and construction technology, spatial and functional configuration are the result of '*continuous evolution process of social, economic and cultural events for the territory and the community'* and these inherent characteristics make them resilient (pp. 1024, 1025). Also, not only by architecture but also considering social connections, as Shinde (2017) claimed, *'the vernacular [...] offers the maximum resilience as the affected people absorb shocks through social capital and social networks and immediately engage in reconstruction and settling their everyday lives'* (p. 3). Ray and Shaw pointed

out (2017) that *'resilient urban systems must also have resilient communities. Traditional built forms result in the creation of social spaces promote adherence to socio-cultural value systems and imbibes a feeling of social cohesion'* (p. 117). Both tangible and intangible aspects of vernacular built environments show inherently a resilient character. However, scholars accept that they need to be adapted to the conditions of the 21st century. Considering the previous objection on indigenous knowledge might not be a part of scientific knowledge, scholars mentioned that vernacular practices that help to cope and to adapt to calamities should be investigated, weaknesses and strengths should be assessed, and should be integrated into current architectural knowledge for more resilient cities (Choudhary, 2016; Dipasquale *et al.*, 2014; Ozel *et al.*, 2015).

Yet, even though there is a promising correlation between the two concepts, there is only a handful of research that addresses resilience in the historic built environment. In urban studies, various types of resilience that can be observed in the urban fabric were investigated by scholars. Various pieces of research focused on physical and infrastructural, institutional, economic, and social resilience. These themes were investigated, alone or in groups (Adger, 2000; Bruneau, 2003; Cohen *et al.*, 2017; Cutter *et al.*, 2010; Dipasquale *et al.*, 2014; Gibbert, 2017; Jha et al., 2013; Rose and Liao, 2005; Maclean *et al.*, 2013; Maguire and Hagan, 2007; Martin and Sunley, 2014; Ozel *et al.*, 2015; Rose, 2004; Sharifi and Yamagata, 2014; Shinde, 2017; Simmie and Martin 2010). However, these investigations either focused on the existing day or recent history with modern-day data. Investigation of these resilience types for a very long period of time from the formation of the urban fabric until today is absent in the literature. Resilience and the concepts of vernacular architecture, history, and disaster management were studied individually in various research papers or graduate-level theses in few studies. Some of the research papers focus on one type of disasters such as flooding or earthquakes to investigate the history of resilience in a city (Fryirs *et al.*, 2015; Shinde, 2017), or resilience of vernacular structures against a certain type of disasters (Ankur *et al.*, 2018; Das and Mukhopadhyay, 2018; Forbes, 2018; Gautam *et al.*, 2016; Puspitasari *et al.*, 2018), or some general investigation of resilient characteristics of vernacular architecture in general and lessons that can be learned from vernacular architecture (Dipasquale et al., 2014; Fatiguso et al., 2017; Gomez-Baggethun *et al.*, 2012; Harmanescu and Enache, 2016; Moles *et al.*, 2014; Ozel *et al.*, 2015), or studies for creating resilience for today in a historic built environment (Santamouris *et al.*, 2015; Ravankhah

et al., 2017). Ozel *et al.* (2015) in their unique research about learning about resilience through vernacular architecture evaluated that modular systems, locally available and renewable resources, diverse and redundant systems such as multi-functional spaces show more resilience. This research also claimed that resilience can be learned *'through design', 'through mixed space and collectiveness', 'by using appropriate materials' 'by promoting local production and autonomy'*, and through *'the construction system'* (Ozel *et al.*, 2015, pp. 1-6). It moreover claimed vernacular architecture can feed to create urban strategies for the present day to urban planners and policymakers (Ozel *et al.*, 2015). Master and Ph.D. level research about resilience and vernacular architecture is only a handful. Similar to research papers mentioned above, there are cases of investigating resilient traditional housing systems (DeKraker, 2016), or learning from resilient architecture for dealing with disasters (Miller, 2013; Morgan, 2015; Robinson, 2011). The case studies of Ottoman historic cities or neighborhoods in Turkey and the concept of resilience investigated are also limited. The master thesis of Aygun (2015) investigates Istanbul and urban resilience for today and touches briefly on the cultural heritage of Istanbul. Also, another work of Ertan (2009) about reducing natural hazards in the case study of Istanbul briefly touching the historical aspect of the area. So overall, even though there is a promising correlation between the two concepts, there is a lack of studies and lack of explanations on what these connections might be. This Ph.D. thesis, therefore, would like to open a door for more academic works to explore the correlation between vernacular-built environment and resilience and eventually learn from them to inform architecture and architectural knowledge of today.

3.3.2.4. How to Assess Resilience?

As explained previously many scholars brought their own expertise, and area of the subject to create a way to assess resilience or bring resilience to existing urban forms. Similar to its description there is not a universally accepted method of assessing resilience. In urban, architectural, or disaster studies, quantitative or qualitative methods were used. Many organizations, scholars, governments tried to develop ways of measuring resilience. There are qualitative or quantitative studies and a set of characteristics, frameworks, or principles listed. These pieces of research worked on assessing urban in general, or community, or disaster resilience of the urban or community.

Many organizations, scholars, governments tried to develop ways of measuring resilience. There are a couple of papers that review resilience framework, indicators, and characteristics (Cere *et al.*, 2017; Cutter, 2016; Fatiguso, 2017; Gibberd 2014; Norris *et al.*, 2008; Parsons *et al.*, 2016; Petit *et al.*, 2013; Quinlan *et al.*, 2016; Sturgess, 2016). For example, Cutter *et al.* (2010) set the indicators for disaster resilience according to their review and created categories of social resilience, economic resilience, institutional resilience, infrastructure resilience, community capital and did a quantitative analysis of those through case studies. Twigg (2007) set characteristics of disaster-resilient communities to guide the organization on how to progress towards resilience by reaching those goals. For example, the work of Sharifi and Yamagata (2016) explored 36 assessment tools for community disaster resilience. Sharifi and Yamagata covered how those frameworks, described preparation and planning, absorption, recovery, adaption, and how these factors increase community resilience. Also, this research, moreover, explored dimensions of resilience as themes (environmental, social, economic, infrastructure and physical, institutional) and subthemes that are a part of frameworks.

Many other researchers reviewed existing indicators, characteristics to blend and built their own framework (Asadzadeh *et al.*, 2017; Chang and Shinozuka, 2004; Lu and Stead, 2013; Mortimer, 2010; Norris *et al.*, 2008; Parsons *et al.*, 2016; Schipper and Langston, 2015; Sherrieb *et al.*, 2010; Tabibian and Rezapour, 2015; Tyler and Moench, 2012). For example, Chang and Shinozuka (2004) used Bruneau *et al.* (2003)'s conceptual framework to and used four dimensions (technical, organizational, social, and economic) and 4 main characteristics (robustness, rapidity, redundancy, and resourcefulness) and did a qualitative study to measure disaster resilience in the communities. Also, Jha *et al.* (2013) divided it into 4 components infrastructural, institutional, economic, and social aspects of urban disaster resilience they also used indicators from Cutter, Burton, and Emrich (2010). Tabibian and Rezapour (2016) similarly divided into social, economic environmental, physical, infrastructural, and institutional aspects to assess urban resilience through surveys. Mortimer (2010) also listed characteristics of resilience in the literature and reviewed frameworks, and they set their own assessment questions through domains of institution, community, environment and economy, urban design and form, transportation, and energy. Another example by Schipper and Langston (2015), examined a set of indicators of resilience in internationally

recognized frameworks since 2013; and set their own criteria for analysis; learning options, and flexibility.

There are also a couple of studies focused on vulnerability and worked on various frameworks based on reducing vulnerabilities, therefore, increasing the resilience of communities' urban systems (Pasteur, 2011). Chmutina *et al.* (2014) introduced a portal based on integrated security and resilience design framework which also focuses to reduce vulnerabilities and improving urban spaces and resilience as a result.

3.3.2.5. Criticism on Resilience

This research would also like to address criticism for resilience studies. Having many different definitions, different assessment methods, and scholars not building up knowledge based on previous research are the main points. Hanley (1998, cited in Manyena, 2006) considered resilience as too vague to be useful to inform disaster mitigation (p.445). Vale (2014) criticized that because the resilient city can refer to many aspects in the cities from various subjects which might resilience look like an *'empty signifier'*. They believed there should be one common definition *'to rescue it from the meaninglessness of mere ubiquity'* (p. 193). Similarly, Hassler and Kohler (2014) stated that even though resilience has its positive sides, being a '*semantically*' overloaded term becomes its negative aspect. Besides terms, Meerow and Newell (2016) also stated in their review literature review lack of clarity and methods of assessing. Similarly, Davoudi (2013, as cited in Rose, 2007) states that *'resilience is a contested concept, "which is in danger of becoming a vacuous buzzword" as a result of its "overuse and ambiguity"'* (p. 307).

Despite this growing trend of setting more common indicators for assessment, there is no agreement on *'neither an agreement upon a standard procedure nor a comprehensive assessment of existing measurement frameworks in the relevant literature'* (Asadzadeh, 2017, p. 147). Having this many types of resilience assessment methods, characteristics, and indicators criticized by some scholars as a negative aspect. Cere *et al.* (2017) stated that *'the existing resilience framework research is still quite fragmented and the links behind various studies are not straightforwardly accessible'* (p. 173). Schipper and Langston (2015) claimed that all of the various definitions *'are developed in isolation, with few links to earlier frameworks (if any)'* (p. 17). Yet Hassler and Kohler (2014) accepted the shortcomings of having a lack of common definitions, however, they claimed being a subject

that is an interest of various disciplines can help build interdisciplinary bridges among various studies for the resilient built environment. Also, Manyena (2006) suggested that *'there is no problem with having multiple definitions as long as they do not cloud conceptualization. Reaching consensus on conceptualization is not an end itself but has an implication for the modus operandi of disaster risk reduction delivery'* (p. 446). Lastly, Schipper and Langston (2015, p.21) stated that:

> *Even if the indicators themselves fail to be useful, the path toward their development, involving countless meetings, documents, presentations and debates provides a robust theoretical platform on which to build more knowledge. Despite disagreements over how to define or delineate the concept, it is hoped that there will be some sort of general convergence on the characteristics of resilience, in order to ensure that rather than tearing each other down because we don't agree on how the concept is used, we can actually use this energy to help reduce the risk posed by climate change and natural hazards.*

So, even though accepting there could be shortcomings of lack of common definition and a way of assessment, similar to supporters of against critiques, this research claims it promises a big deal of information and understanding for the urban environment especially considering the rise in the problems they face. Moreover, this research reviewed all types of research in the reach of the author to feed her stance on exploring resilience in vernacular architecture.

3.3.3. Types of Resilience

Urban resilience, even though the definitions may vary, was generally defined and explored through 4 main components which are: a) physical and infrastructural systems and their functional organization, b) economic, c) social, and d) infrastructural systems (Jha *et al*., 2013; Ozel, 2015; Shaw and IEDM Team, 2009, cited in Shinde, 2017). Jha *et al*. (2013) explained that *'by breaking urban resilience down into four components, infrastructural, institutional, economic, and social, underlying issues can be addressed, and capacity can be deepened'* (p. 11). In this part of this chapter, these various types and what they refer to in the literature will be briefly explained.

3.3.3.1. Institutional Resilience

In the literature, institutions are addressed as a contributing factor to urban resilience. Adger (2000) highlighted the importance of instructions by stating that *'the resilience of institutions is based on their historical evolution and their inclusivity or exclusivity, and hence how effective they are in oiling*

the wheels of society' (p. 351), which emphasizes the crucial role of institutions on the urban fabric and their resilience. Besides enhancing and protecting the social systems of the community, and engaging residents in taking action, institutions also contribute to *'mitigation, planning, prior disaster experience'* (Cutter *et al.*, 2010, p. 8). Especially dealing with disasters, institutions were considered as *'the backbone of community functioning' by 'help[ing] communities to respond to the disaster, provide[ing] wellbeing and start[ing] recovery'* (Bruneau, 2003, p. 735). Governmental and non-governmental organizations are decision-makers of urbanization, disaster mitigation, and recovery process present day. These institutions' actions are considered vital for creating resiliency in the urban fabric.

3.3.3.2. Infrastructural and Physical Resilience

Another type of resilience is that is considered as a component of urban resilience is infrastructural resilience. Jha *et al.* (2013) stated that infrastructural resilience refers to *'reduction in the vulnerability of built structures such as buildings and transportation systems'*, and sheltering capacity, healthcare facilities, the vulnerability of buildings to hazards, critical infrastructure, and the availability of roads for evacuations and post-disaster supply lines' and *'community's capacity for response and recovery'* (p. 11). Sharifi and Yamagata (2014) stated that infrastructural resilience refers to *'building insulation, building layout, and orientation', ' preservation of housing, building codes, housing age'*, *'street connectivity, pedestrian route connectivity, walking trails that link with public transportation routes, accessible connection to evacuation routes, placing interdependent infrastructure close to each other, infrastructure redundancy, urban form, the density of buildings, independent infrastructure, urban size, elevation'*. (p. 3). Sharifi and Yamagata in another work stated that principles such as diversity, redundancy, flexibility, efficiency, creativity should be incorporated into infrastructure planning. They, moreover, explained that existing structures should be retrofitted, and continuous maintenance is needed (Sharifi and Yamagata, 2018). Lastly, they stated that even though *'centralized systems is explained by the belief that management of centralized infrastructure is less complicated and more efficient'*, there is a growing recognition that decentralized infrastructure is more resilient and provides benefits in terms of diversity, redundancy, and modularity. Decentralization of infrastructures makes it possible to *'utilize a diverse array of resources'* and prevents failure in the chain of supply (Sharifi and Yamagata, 2018, p.

20). Even though centralized infrastructures are easy to build and deemed more efficient, decentralized infrastructure, unlike the previous type of urban resilience, is not evident within the general urban context of Ottoman cities, it needs an individual assessment within cases.

3.3.3.3. Social Resilience

Similar to other types of resilience in the urban context, various descriptions are covering different aspects of social resilience. In their extensive work on resilience, Jha *et al.* (2013) defined social resilience as communities' ability *'to cope with and adapt to, disturbances or changes'* (p. 4). *'It covers the ability of communities to self-organize, adjust to stresses, and increase their capacity for learning and adaptation'* (Jha *et al.*, 2013, p. 22). Another description by Maclean *et al.* (2013) emphasized adaptability and learning capacity of social resilience and define *'social resilience as the adaptive and learning capacity of individuals, groups, and institutions to self-organize in a way that maintains system function in the face of change or response to a disturbance'* (p. 145). These stresses could be an origin of social, political, and/or environmental change (Adger, 2000). Overall, even though there is a minor difference in the descriptions, these research papers emphasized the coping ability and adaptive capacity of communities at the time of any type of stress.

In various studies, indicators, or factors that affect social resilience were investigated as well. Demographic profile of the community, a culture of cooperation, social cohesion, self-organization, sense of community, attachment to a place, trust, leadership, collective efficacy, community involvement, existing norms/attitudes/values, (Cohen *et al.*, 2017; Jha *et al.* 2013, p. 11; Maguire and Hagan, 2007; Sharifi and Yamagata, 2014). Moreover, Maguire and Hagan pointed out communities consist of different groups and certain groups could be more vulnerable and less resilient to disaster due to age, economic opportunities, and available resources (Maguire and Hagan, 2007). Moreover, Maclean *et al.* (2012) highlighted another factor and state that the community could show a different level of resilience against disasters depending on the type, size, duration, and magnitude of disasters. Repeat occurrence of a certain type of adversity could help communities to deal with it better next time due to their experience (Maclean et al., 2012). These factors highlighted for social resilience will be explored through historical documents for interpretation.

3.3.3.4. Economic Resilience

Similar to other types of resilience, there is no consensus among scholars on the description of economic resilience. Economic resilience is defined as *'the inherent and adaptive responses to disasters that enable individuals and communities to avoid some potential losses'* (Rose, 2004, p. 307). Liao (2005) brought another perspective to economic resilience and stated business might not be directly damaged by the adversity; however, as a part of a system that faced adversity, businesses will be affected by cut off from infrastructural services and communications links, which highlighted the interconnectivity of economic resilience into the urban fabric. The evolutionary perspective was mostly used when defining economic resilience among various scholars. It was claimed while there is a possibility of ecological systems to stay in equilibria when there is no disturbance, economic systems behave differently. According to some theorists, economies need to learn and adjust their behavior therefore never be in equilibrium (Simmie and Martin, 2010). Economic resilience can happen in microeconomic (*'individual behavior of firms, households, or organizations'*), macroeconomic *('economic sector, individual market, or cooperative group'*) and macroeconomic *('all individual units and markets combined'*) levels (Rose, 2004, p. 308). While examined on different scales, certain factors were taken into consideration to explore economic resilience such as economic diversity, employment rate, business sizes, income, housing capital, and most importantly businesses ability to function after a disaster (Jha *et al.*, 2013; Sharifi and Yamagata, 2014). Similar to other components of resilience, the economy's reaction and recovery process to stressors such as disasters are vital for resilience.

3.3.4. Characteristics of Resilience

When reviewing various types of resilience in literature, certain types of characteristics were used to describe them. The most extensive literature review of Sharifi and Yamagata (2014), that listed major characteristics of resilient urban systems. Their review was used as a guide for this research to explore characteristics of resilience more in-depth. Overall, there are eleven common characteristics: redundancy, diversity, interdependence, independence, robustness, resourcefulness, adaptability, creativity, collaboration, self-organization, and efficiency. For this literature review, the list of characteristics is taken as a key source and extended through the literature review.

3.3.4.1. Redundancy:

A growing body on resilience defined robustness as one of the characteristics of resilience. Foster (1997) succinctly stated that in resilient systems *'nothing must be irreplaceable. If any component fails another should be capable of fulfilling its function'* (p. 88). Similarly, Godschalk (2003) pointed out that redundant systems have multiple components of similar functions within the system, therefore, the failure of one function does not cause the failure of the whole system. While Foster and Godschalk described redundancy for any system, Fleischhauer (2008) stated that *'polycentric settlement structure'* and *'physical structures with multiple nodes'* can support redundancy in urban resilience (p. 295). Collectively, these studies highlighted that resilient systems should have multiple components of the same functions to prevent failure in the time of stress. Damage by a stressor in one function does not affect the whole system, moreover, the rest of the system can support the damaged function.

3.3.4.2. Diversity:

The second characteristic, diversity, is having *'functionally different components to protect the system against various threats'* (Godschalk, 2003, p. 139). Many scholars of resilience considered diversity fundamental for the continuation of the functions and survival of systems when facing any type or scale of destruction (Foster, 1997; Krasny and Tidball, 2009). Similarly, to redundancy, Fleischhauer (2008) claimed diversity in urban settlements can be achieved through *'polycentric settlement structure'* and *'physical structures with multiple nodes'* (p. 295). Overall, there is a consensus among scholars of resilience from different fields that the diversity of any component of the systems increases resilience against adversities.

3.3.4.3. Independence:

The third characteristic, independence, is having self-reliance in order to *'maintain a minimum acceptable level of functioning (without external support) when influenced by disturbance'* (Sharifi and Yamagata, 2014, p. 4). Also, another highly relevant concept, being autonomous, was mentioned by Godschalk (2003) that if a system has *'the capability to operate independently of outside control'*, it is autonomous (p. 139). These two studies highlighted the ability to maintain functioning

internally as a component of a system without exterior help in general and also in the cases of adversities.

3.3.4.4. Interdependence:

Interdependence, the fourth characteristic of resilience, is the connectivity of components within the system in order to support each other (Godschalk, 2003). However, Cutter *et al.* (2010) argued in their literature review that a high level of interdependence creates less resiliency in infrastructure systems due to failure in one component can cause failure in others due to tight interconnection. This means, in order to create resilient systems, interdependence should be created between independent components to prevent cascading failure within the system.

3.3.4.5. Robustness:

The fifth characteristic is robustness (strength). According to scholars, resilient systems should have the power to resist and withstand any type of disturbance without suffering degradation (Frommer, 2010; Godschalk, 2003; Longstaff, 2005, cited in Pfefferbaum and Wyche, 2008; Weick and Sutcliffe, cited in Frommer, 2010). Frommer (2010) explained that *'it can be regarded as the degree of disruption that can be absorbed or buffered without the system changing significantly its function or structure'* (p. 96). In general, this characteristic was highlighted mostly as an infrastructural and constructional character (Fleischhauer, 2008). Together, these studies outlined that robustness is one of the most crucial properties of resilience and it is about the strength to withstand adversities.

3.3.4.6. Resourcefulness:

Another characteristic of urban resilience is resourcefulness. Sharifi and Yamagata (2014) briefly explained that resourcefulness *'relates to the resources at disposal of urban planners and decision-makers to appropriately prepare for, respond, and recover from possible disruptions'* (p. 4). Frazier *et al.* (2013), in their work on community resilience, stated that *'people with greater access to resources often have higher resilience to disaster events, and often suffer less than those with limited resources'* (p. 98). These two studies highlighted the importance of available resources before, during, and after the adversities to create resilient urban systems.

3.3.4.7. Adaptability:

The seventh characteristic is adaptability or adaptive capacity. Scholars defined adaptability as an ability of a resilient system to learn from disturbance and being flexible and adapt to change (Berkes *et al.*, 2003; Godschalk, 2003; Jha *et al.*, 2013; Sharifi and Yamagata, 2014). Godschalk (2003) claimed in order to develop resilient cities; they should be built according to what has been learned after calamities. Furthermore, Frommer also (2010) stated *'a high resilient system enhances its functioning by learning from experience and improving its capacity for adjusting to new conditions'* (p. 96). The more resilient it is, the more adaptive it is to change and perturbations (Frommer, 2010; Berkes, *et al.*, 2003). Collectively, these studies outlined a critical characteristic of learning from the past and adapting to create the resilience of systems.

3.3.4.8. Creativity:

Creativity is another characteristic that refers partially to adapting but moreover highlights advancing to a better level of functioning than the initial level (Frommer, 2010, p. 96). Similarly, Frommer also linked this characteristic to a previous characteristic, adaptive capacity, and claimed resilient systems increase their functioning by *'learning from experience and improving its capacity for adjusting to new conditions'* (Frommer, 2010, p. 96). The difference between creativity than adaptability is using adversity as an opportunity for achieving a better state than the original.

3.3.4.9. Collaboration:

The diversity of different stakeholders is mentioned as a factor for resilience above. Several numbers of studies mentioned collaboration among these different stakeholders as a property of resilience as well. In the literature, it is highlighted that in urban systems, a wide range of stakeholders should have cooperation among themselves and be active participants in the decision-making process (Fleischhauer, 2008; Sharifi and Yamagata, 2014). Besides regular contributions to city planning, design, and construction, collaboration among various stakeholders, such as governments, local stakeholders, and the community, work to prepare and deal with disasters (Godschalk, 2003; Jha, *et al.*, 2013; Krasny and Tidball, 2009). Overall, not only diversity and the number of stakeholders but also their connection and collaboration are vital for achieving resilience, especially to deal with disasters in urban systems.

3.3.4.10. Self-Organization:

Another characteristic self-organization is seen as one of the properties of resilient systems and defined as *'the emergence of macroscale patterns or properties from smaller-scale rules'* (Berkes *et al.*, 2003; Frommer, 2010; Jha *et al.*, 2013; Krasny and Tidball, 2009; Sharifi and Yamagata, 2014, p. 4). One independent process from a small-scale component contributes to the whole system. Another aspect of self-organization mentioned in literature was citizen participation and their initiative to change the state of things in the city (Folke *et al.,* 2002, cited in Krasny and Tidball, 2009; Krasny and Tidball, 2009).

3.3.4.11. Efficiency:

Lastly, efficiency is the other characteristic of resilience mentioned in the literature. Sharifi and Yamagata wrote in their literature review that efficiency *'implies that the ratio of energy and resources supplied by an urban system to the energy delivered to it as input should be positive'* (Sharifi and Yamagata, 2014, p. 4).

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CHAPTER 4: Conceptual Framework: Resilience in Vernacular and Traditional Ottoman Cities

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4.1. Building a Conceptual Framework for Assessing Resilience in Traditional Vernacular Ottoman Cities

The initial phase of this research started to understand the formation, maintenance, transformation, and survival of Ottoman cities. There is little study to connect historical research to the concept of resilience. As explained in Chapter 1, this study employs a historical case study as its method, and also due to exploring a contemporary theme of resilience in historical research the nature of this study is qualitative. This study aims to interpret the formation, maintenance, and survival of the Ottoman cities and urban life through the lens of resilience. However, as previously mentioned, there is no universally accepted method of assessing resilience and this is criticized by some of the scholars of resilience. Each scholar from different subject areas brought their own perspective to analyze resilience. Also, as explained before, a lack of studies exploring vernacular architecture and resilience, and no example on assessing the resilience of the Ottoman cities, results in no previous clear and common method. Moreover, assessment of resilience in urban forms was done for existing urban forms, not through historical documents throughout a timeline. Therefore, for this research, a new conceptual framework for assessing resilience in traditional vernacular Ottoman cities was needed. After, reviewing the literature, two sets of approaches for resilience studies were found. Some of the articles used questions of what, whom, why, how, and whose to position themselves in the scholarship for understanding resilience, and define resilience according to these variables (Carpenter *et al.*, 2001; Meerow and Newell, 2016; White and O'Hare, 2014). Another approach was creating a framework by using common characteristics, types, and traits (Sharifi and Yamagata, 2014; Sharifi and Yamagata, 2018). In studies about the assessment of resilience, it is very common to pick a framework of traits and characteristics to use them as guidance and explore their own unique framework. As a result of reviewing the literature, as shown in Chapter 3, this study combined two approaches mentioned above to set a conceptual framework. This conceptual framework is created to assess the resilience of Ottoman cities and their urban forms with clear, fundamental, and concise structure and it is adaptable to investigate other urban forms in other case studies. Three main questions posed: Resilience of what?, Resilience against what?, What are resilience types and characteristics of resilience that are applicable to the Ottoman urban fabric and life?

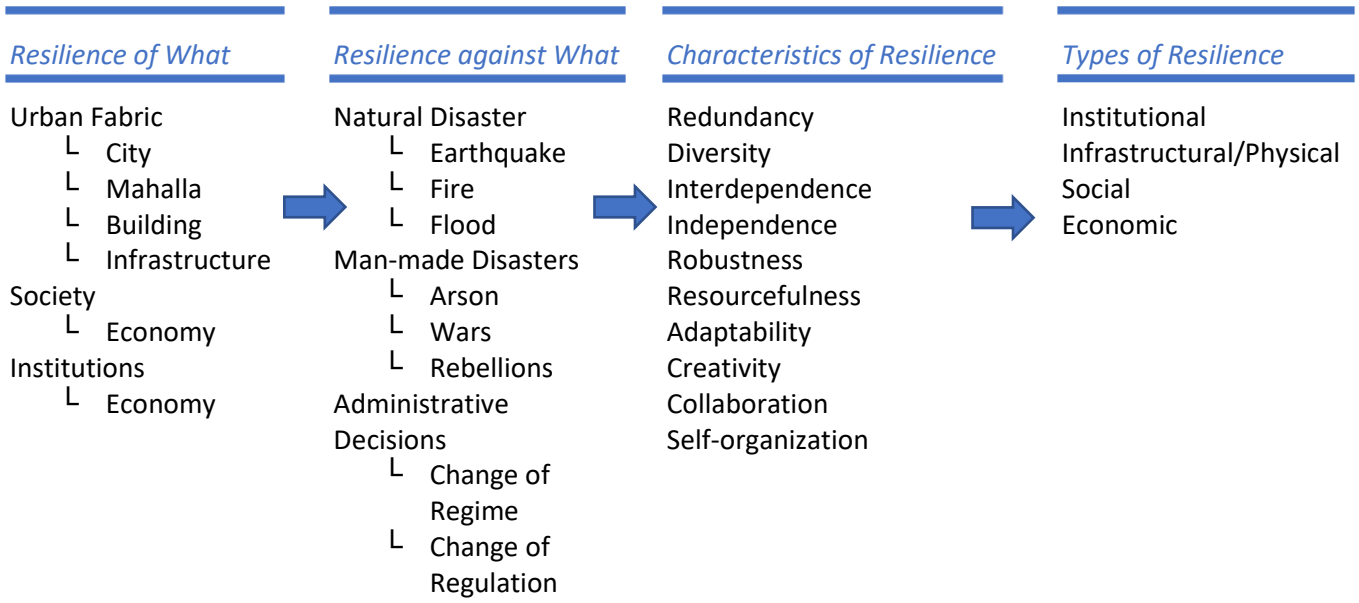

Table. 4.1. Conceptual Framework for assessing the resilience of Ottoman cities

4.2. Resilience of What?

'*Resilience of what?*' is one of the most common questions that the scholars of resilience investigated. As Vale (2014) pointed out that '*the significance of resilience depends on whose resilience is being described*' (p. 191). Even though resilience is considered a concept that can be applicable to urban studies, as a fairly new subject, studies mainly explored existing modern-day urban environments. In the context of this research, it is the resilience of the vernacular-built environments. Because vernacular urban built environments formed over centuries and they continuously had to deal with various problems, with their longer existence while facing various problems continuously, they make a great example to explore if and how resilience could be evident in-built environments with a long history. This study especially focuses on the Ottoman cities. Therefore, the first question of 'resilience of what?' aims to answer whose resilience is being described in the context of Ottoman cities. Ottoman cities have three main elements: physical fabric, community, waqfs, and their economy. The physical fabric has 4 scales, city, infrastructure, mahalla (neighborhood), buildings. Assessment will be done for all elements mentioned.

4.3. Resilience against What?

As explained in Chapter 3, resilience definitions are made against a negative force or stressors. For this research, all of the types of internal or external forces that triggered a change or fail will be considered as a stressor. Because most of the studies that defined stressors are focused on the modern-day-built environment, issues that vernacular and historic urban forms faced throughout history might show similarities and differences. In vernacular built environments, there were natural, or human-made adversities locals had to deal with. Natural adversities were disasters such as fire, storm, earthquake, floods or plagues, or natural deterioration of time. Human-made adversities were wars, rebellions, arson, reforms, or decisions by governments. These are examples of what stressors could be in traditional built environments but considering the concept of vernacular architecture is a local concept, each case study might have their own stressors and should be assessed accordingly. Even though stressors from the past and today might be different, there are still common stressors which are mainly natural disasters. Also, this research is interested in how traditional and vernacular built environments dealt with stresses which could be new or regular. The reactions of the vernacular built environment to these stressors could be insightful for informing design solutions of the built environment of the present day. Overall, the second question of 'resilience against what?' aims to answer the internal and external stressors of historic Ottoman cities. According to the initial literature review of the Ottoman cities, there are natural disasters (flood, fire, earthquake), man-made disasters (arson, wars, rebellions), administrative situations (change of regime, change of regulations). Even though these are common factors, individuals case studies might have their own stressors, and this should be considered while evaluating the case study.

4.4. What are the Types of Resilience Evident in the Ottoman Cities?

As explained in detail in Chapter 3, urban resilience is generally broken into 4 components for deeper investigation. Many scholars explored institutional, economic, physical and infrastructural, social resilience in various and as well as in urban contexts (Jha *et al.*, 2013; Ozel, 2014; Sharifi and Yamagata, 2014; Sharifi and Yamagata, 2018; Shaw and IEDM Team, 2009, cited in Shinde, 2017). In this part of this chapter, 4 components of urban resilience and if and how they can be evident in the context of Ottoman cities will be presented. This research is interested in how those resilience types

are reflected in the resilience of urban fabric and would like to make a brief remark according to available data of Ottoman cities in general.

- **Institutional Resilience**

As explained in the literature, *'the resilience of institutions is based on their historical evolution and their inclusivity or exclusivity, and hence how effective they are in oiling the wheels of society'* (Adger, 2000, p. 351), which emphasizes the crucial role of institutions on the urban fabric and their resilience. Since there was no official governing body until the 19th century in the Ottoman cities, the only institutions that *'oils the wheels of society'* with a long history and inclusivity were waqfs. By the continuous income and strict rules to be managed, even though sometimes they were the ones affected by calamities, they continued to serve the community they are in, in every possible way for generations.

Besides enhancing and protecting the social systems of the community, and engaging residents in taking action, institutions were responsible for disaster management and recovery. Waqfs with various duties in urban life were the institutions took this role and contributed to urban resilience. Waqfs were clearly the main and only institutions of Ottoman cities which also contributed to their resilience. An in-depth exploration of how they formed and maintained urban fabric was presented in Chapter 2 and more details will be presented through examples in the next two chapters through the case study.

- **Infrastructural and Physical Resilience**

Another component of urban resilience is infrastructural resilience and it mainly focuses on the physical elements of the city. It focuses on different scales from individual buildings to the spatial layout of the urban fabric and how they function before, during, and after various stressors. Overall, when exploring these physical components of the urban fabric, certain principles were attributed to the infrastructure planning such as diversity, redundancy, flexibility, efficiency, creativity (Sharifi and Yamagata, 2018, p. 19). The characteristics of resilience will be used as guidance for exploring the physical and infrastructural elements of the case study. Also, different views on the resilience of centralized and decentralized urban networks exist in the literature. As a decentralized urban

network, Ottoman cities are assessed. The pieces of evidence of infrastructural resilience should be explored in the case study with the guidance of the literature mentioned above.

- **Social Resilience**

Social resilience in the urban context is generally considered as groups' ability to cope and adapt to any type of stress. Social cohesion, sense of community, community involvement, attachment to a place, trust, leaderships are characteristics that correlate with the social aspect of mahalla and Ottoman city urban life as explained in Chapter 2. However, social resilience is seen in the community especially during the time of stress. As Jha *et al.* (2013) highlighted *'people affected by an emergency are often the first responders and the most critical partners in the reconstruction. Any attempt to build resilience thus has to consider social factors, utilizing local knowledge and networks for managing and reducing risk'* (p. 22). According to Aguirre (2006, cited in Maclean *et al.*, 2012), a resilient community *'predicts and anticipates disasters; absorbs, responds and recovers from the shock; and improvises and innovates in response to disasters'* (p. 17). By interpreting historical data, this research will focus on how social resilience is reflected in the urban fabric by exploring the actions of the locals, especially through disasters in the Ottoman cities.

- **Economic Resilience**

Economic resilience is mentioned in the literature as one of the 4 main components of urban resilience. Similar to social resilience, considering data for this research is based on historical evidence, in-depth analysis of economic conditions of centuries is not feasible, instead of detailed analysis of economic resilience, exploration will be about if pieces of evidence of economic resilience existed and how the economy is reflected on urban life and urban fabric especially before and after disasters will be pointed out as a remark.

4.5. What are the Characteristics of Resilience Evident in the Ottoman Cities?

The characteristics of resilience were investigated by various scholars and each focused on different characteristics. For this part of the conceptual framework, Yoshiki Yamagata and Ayoob Sharifi's two studies Major Principles and Criteria of Development of an Urban Resilience assessment Index (2014) and Resilience Urban Form: A Conceptual Framework (2018) was used. The framework they built in the paper Resilience Urban Form: A Conceptual Framework (2018), is concise and clear

based on answering questions related to the fundamental aspects of the concept of resilience. The type and characteristics of the resilience of a system were defined against a stressor. Because they made an extensive review to list themes of urban resiliency and characteristics of urban resilience, their work was used as guidance to this part. Sharifi and Yamagata proposed eleven characteristics of resiliency in an urban system, including redundancy, diversity, interdependence, independence, robustness, resourcefulness, adaptability, creativity, collaboration, self-organization, and efficiency (Sharifi and Yamagata, 2014). Each characteristic is presented in the below sections to show if and how they can be evident in the Ottoman cities and mahallas. When the characteristics of urban resilience were explored within the Ottoman urban system, 10 of their list of characteristics is observed with the Ottoman urban system.

- **Redundancy**

Redundancy is a characteristic of resilience explained as multiple components of similar function within the system which prevent cascading failure in the time of stress (Foster, 1997; Godschalk, 2003; Fleischhauer, 2008; Sharifi and Yamagata, 2014). Fleischhauer provides an understanding of how to find redundancy in urban fabric which is through a polycentric settlement with multiple nodes (Fleischhauer, 2008). When this definition is cross-checked with Ottoman spatial organization, it can be observed that the Ottoman city fits the definition by having a main central service core and network of mahallas with individual service cores (Fig. 4.1).

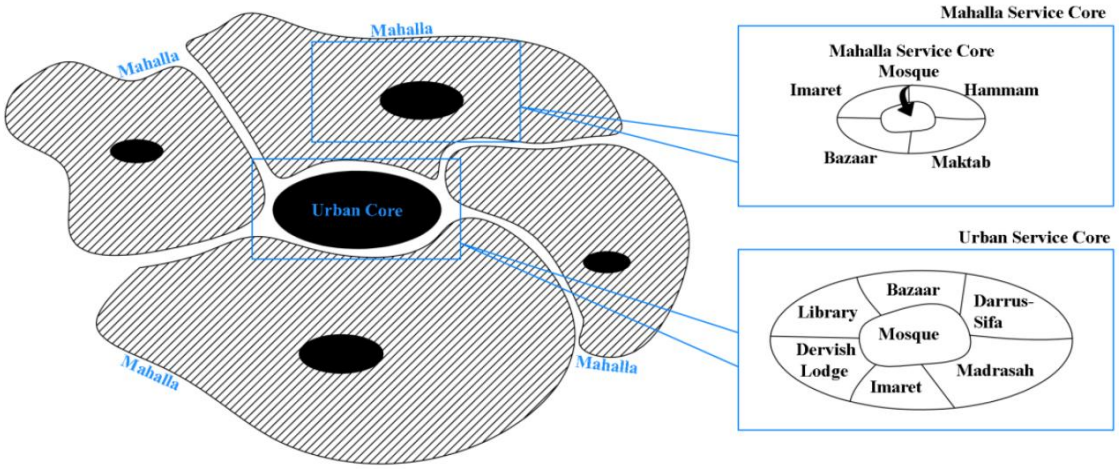

Fig. 4.1. Basic Ottoman Urban Spatial Organization Schema

Instead of relying on one central service core, each neighborhood had its self-reliant service cores. At the time of damage in one service core, they were supported by neighboring service cores and the main central core. Moreover, the rest of the urban fabric continued to function regardless of damage in one mahalla. This spatial organization of the city and its mahallas comes from socio-economic reasons and there is no evidence of this system was created for disaster mitigation; however, this system created redundancy in the Ottoman city spatial organization. In terms of institutions, because there is no central municipality or governing body but countless waqfs were responsible for different actions, damage in one waqfs property did not cause malfunction within the waqfs system in the city and each damage was supported by citizens for quick recovery. Redundancy for building scale, infrastructure, and society is not observed in the general concept of the Ottoman urban fabric and urban life, however, could be explored within individual case studies for further verification.

- **Diversity**

The second characteristic is diversity which is related to redundancy. In literature, diversity is containing various functional components within a system which increases resilience against a stressor (Foster, 1997; Godschalk, 2003; Fleischhauer, 2008; Sharifi and Yamagata, 2014). In the Ottoman spatial organization of polycentric urban fabric, a variety of functions happens and support each other. Mosques, maktabs and madrasahs, hammams, fountains, and many other functions can be observed in different numbers and sizes. Also, besides a variety of components and functions, diversity of knowledge and stakeholders with knowledge and resources is observed within Ottoman urban life by actions of the society and waqfs before, during, and after adversities. Diversity for building scale and infrastructure is not observed in the general concept of the Ottoman urban fabric and urban life, however, could be explored within individual case studies for further verification.

- **Independence and interdependence**

These two characteristics of resilience are relevant to each other. In literature, independence is the ability to maintain functioning internally as a component of a system without exterior help in general and also in the cases of adversities. Interdependence is the connectivity of components within the system in order to support each other (Godschalk, 2003); however, in order to create

resilient systems, interdependence should be created between independent components to prevent cascading failure within the system. In Ottoman city spatial organization these two characters are evident inherently. As explained previously, mahallas are self-sufficient and autonomous urban units. They do not require external help, and all decisions are made within their boundaries, and there are enough functions built within their boundaries to be self-reliant, which is the evidence of independence. However, since all mahallas are part of a whole system and there are still social and economic connections between mahallas and its residents which creates a certain level of interdependence due to being a member of a wider system. Also, within each house and family, actions are taken individually but within a mahalla, with the notion of extended family, there is still interdependence. Also, each *sanjak* (city) was administered independently but as a part of trade routes and economic activities, they were in a level of interdependence. Moreover, in the cases of disasters or any type of adversities, support came from immediate surroundings for each city. So, independence was seen on each scale from buildings to the cities, from waqfs to the society to individual members. Also, within the whole system of the Ottoman urban fabric and urban life, there was an interdependence between each stakeholder and component to a certain level in order to create support.

- **Robustness**

According to resilience literature, robustness is the strength to withstand adversities without a decline in its original state (Frommer, 2010; Godschalk, 2003; Sharifi and Yamagata, 2014). In the literature, this characteristic was highlighted mostly as an infrastructural and constructional character (Fleischhauer, 2008). When exploring the general concept of the Ottoman urban fabric and urban life, it could be claimed that there is a certain level of robustness in the physical surroundings which could be residential buildings or infrastructure or whole urban fabric; however, considering different levels of robustness from different structures and urban fabrics, this needs to be explored within a case study individually.

This research wants to add another point that is overlooked within the literature. Most of the definitions of robustness focus on the physical aspect of robustness as explained in Chapter 2. One different approach from Frommer explains that robustness is about resisting change in the structure as well as function (Frommer, 2010). When investigating robustness in urban fabric with a long

history, structures might not be in the original state while the functions can be preserved by the replacement of the structure which can be considered as the robustness of function in urban systems. Therefore, the robustness of functions can be evident in the city fabric, mahallas, and infrastructures in urban fabrics of a long history. Yet, this also needs to be explored within the case study, individually. Moreover, waqfs and the close-knit society managed to preserve its identity and character and resisted problems, therefore contains the characteristics of robustness.

- **Resourcefulness**

Another characteristic of urban resilience is resourcefulness. In literature, it refers to available resources before, during, and after the adversities to create resilient urban systems (Sharifi and Yamagata, 2014). The Ottoman vernacular architecture was shaped according to local resources, however, how rich those resources are should be explored within each case study to make a clear statement.

- **Adaptability**

The seventh characteristic is adaptability or adaptive capacity. The literature on adaptability outlines a critical characteristic of learning from the past and adapting to create the resilience of systems (Berkes *et al.*, 2003; Godschalk, 2003; Jha *et al.*, 2012; Sharifi and Yamagata, 2014). Different than other characteristics which can be found in the spatial and administrative organization of the Ottoman city, in this research context, adaptability can be observed on a smaller scale, in the buildings and their materials and construction systems. Due to Ottoman Empire controlling wide architectural geography with different materials and building techniques were used and developed over time. The ability to adapt to disturbance should be explored within each case study.

- **Creativity**

Creativity is another characteristic that refers partially adapting but moreover highlights advancing to a better level of functioning than the initial level (Frommer, 2010). The difference between creativity than adaptability is using adversity as an opportunity for achieving a better state than the original. This character should be explored in building scale with adaptability. Similar to adaptability, this is a characteristic maybe not general to the concept of the Ottoman city and mahalla but may be evident in each case study. For example, in Amasya, when disasters damaged

one of the mahallas service core functions when the community was rebuilding the existing functions, they added new functions. This explains, locals sometimes take disasters as an opportunity to advance a better level of functioning. Yet, this should be explored individually in case studies.

- **Collaboration**

Collaboration among different stakeholders as an active participant in the decision-making process of forming and maintaining the city as well as the decision of disaster mitigation and recovery is seen as one of the key characteristics of resilience. In Ottoman cities, the community and waqfs are the two main stakeholders as a decision-maker in the neighborhood level. While waqfs are the main participant for forming service cores, the community were forming their own residential areas. Due to their nature, they were interlinked. Community members founded waqfs to serve the community back for not only urbanization but also disaster mitigation. However, even though there is a clear link between the collaboration of waqfs and communities, it is not clear how and if waqfs were in active collaboration with each other. This aspect should be explored within the case studies. Even though collaboration is a characteristic related to the waqfs and the community, its existence reflects positively on the physical aspects of urban fabrics.

- **Self-organization**

In literature, self-organization is an independent small-scale component that affects the macroscale patterns (Sharifi and Yamagata, 2014). One independent process from a small-scale component contributes to the whole system which again takes this research back to the concept of mahallas where they act as an independent small-scale component of an Ottoman city. Moreover, since they are part of an interdependent network of urban units, any social or economic activities that take place within a mahalla influenced the whole urban system. Another aspect of self-organization mentioned in literature was citizen participation and their initiative to change the state of things in the city (Folke *et al.*, 2002, cited in Krasny and Tidball, 2009; Krasny and Tidball, 2009). In the Ottoman city context, the exact equivalent of citizens' actions to change the state of things is waqfs. All waqfs were founded by more fortunate and concerned citizens to address any problem with urban fabric and life. Therefore, self-organization is a character that is evident in Ottoman cities.

- **Efficiency**

Lastly, efficiency is the other characteristic of resilience mentioned in the literature. Efficiency, in the literature, refers to the ratio of energy and resources supplied by the urban system (Sharifi and Yamagata, 2014). The concept of energy is a modern concept that cannot be addressed in the historic built environment. Therefore, this characteristic cannot be applicable to this research context.

- **The Conclusion to Characteristics of Resilience**

Overall, there are 11 common characteristics of resilience defined. All 11 characteristics were reviewed in the elements of the urban fabric and life (city, mahalla, building, infrastructure, waqfs, community) (Table. 4.1). Initial investigation on Ottoman cities showed that redundancy, diversity, collaboration, independence, interdependence, robustness, creativity, and self-organization are seen in an Ottoman city spatial organization naturally and inherently. Even though the system of multiple self-sufficient mahallas with their own service core creating a whole urban system was a result of socio-economic decisions, they demonstrated certain characteristics of resilience in the urban context of Ottoman cities. Also, other elements of the Ottoman urban life, waqfs, and community, showed 8 characteristics except for adaptability, creativity, efficiency. Lastly, some of the characteristics such as robustness, resourcefulness, and adaptability can be evident in vernacular forms, yet need to be assessed within the case studies. For robustness, besides considering physical strength, strength to preserve functions is considered as robustness. Lastly, efficiency as a modern concept related to energy cannot be found in historical urban forms. Also, while This list of characteristics is for all urban systems, while some of the characteristics can be only seen in physical environments, some others are traits that can be applicable to institutions and communities such as collaboration and self-organization (Table 4.2).

	Urban Fabric				Institutions/ Waqfs	Society/ Community
	City Infrastructure	Mahalla	Building			
Redundancy	+	+	NA	NA	+	+
Diversity	+	+	NA	NA	+	+
Independence	+	+	+	NA	+	+
Interdependence	+	+	+	NA	+	+
Robustness	+	+	+	+	+	+
Resourcefulness	+	NA	NA	NA	+	+
Adaptability	NA	NA	+	+	NA	NA
Creativity	+	+	+	+	NA	NA
Collaboration	NA	NA	NA	NA	+	+
Self-Organization	+*	+*	NA	NA	+	+
Efficiency	NA	NA	NA	NA	NA	NA

Table 4.2. Resilience characteristics in the Ottoman urban fabric and urban life

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CHAPTER 5: Case Study:

Vernacular and Traditional Ottoman City Amasya

TABLE OF CONTENTS

5.1. Introduction

After presenting the two main concepts of resilience and vernacular architecture, this chapter aims to present the case study Amasya. Amasya with a long history is ruled by various civilizations over centuries and therefore architecturally consists of various architectural structures over time. Even though the main focus of this study is the traditional Ottoman Period from the beginning of the 14th century to the beginning of the 20th century, due to stratifications of traditional and vernacular architecture, and certain elements that managed to survive are presented as well. Overall, urban fabric, mahallas, service cores, and their buildings, infrastructures, residential buildings are presented by using three types of data: (a) travelers account, (b) other written sources, and (c) all types of visuals. While presenting the architectural formation and maintenance of the city, various types of stressors the city faced and actions that were taken before, during, and after is presented.

5.2. General Information about Amasya

Amasya is located in the northern part of the Anatolian peninsula in Turkey (Fig 5.1). Amasya is the central part of the Black Sea region at 35° 00' and 36° 30' east longitude, and 40° 15' and 41° 03' north latitude. The city is 5,520 square kilometers, and it has seven districts and 33 neighborhoods. According to Population Registration System in 2020, the city's population is 335,594 and it ranks 57 among 81 provinces (Turkish Statistical Institution, 2020).

Fig. 5.1. Amasya City location in Turkey map (https://tr.wikipedia.org/wiki/Merzifon#/media/File: Amasya_in_Turkey.svg., no date)

According to the research of cities and regions socioeconomic levels by the Republic of Turkey Ministry of Development, in 2011, Amasya ranked thirty-seventh among 81 Turkish cities in the socioeconomic development list. The city's economic development is based on agriculture more than the industry. However, with its rich historical monuments and environment, tourism became a developing sector in Amasya recently (Amasya Provincial Directorate of Culture and Tourism, 2013; Celik, 2008).

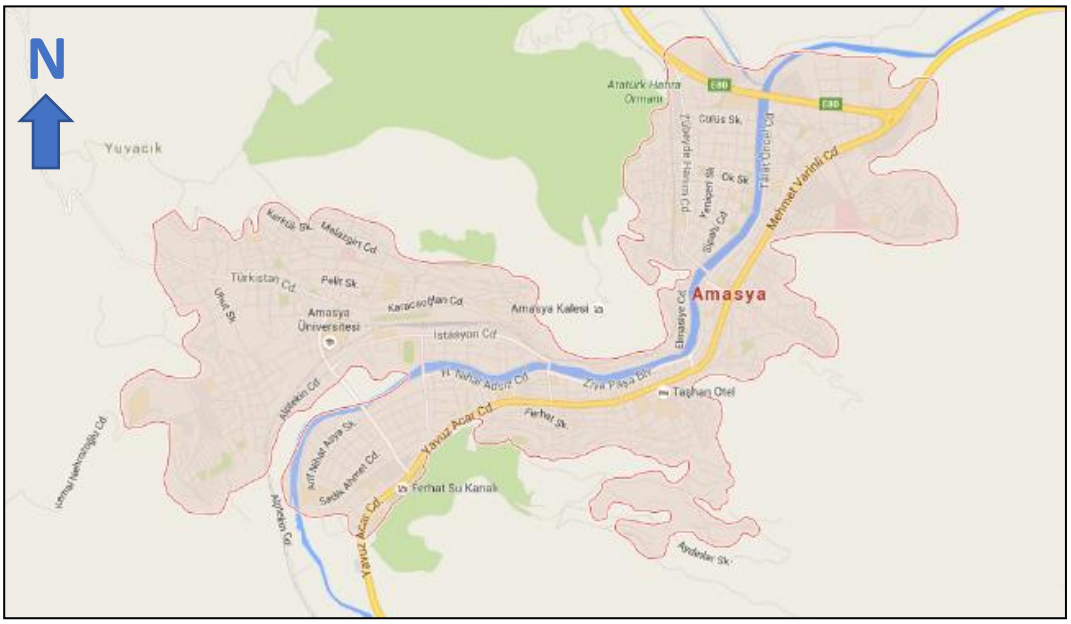

Fig. 5.2. Amasya Map from Google Maps

According to Koppen climate classification, the area is in the oceanic climate zone. Cold winters and warm summers can be observed in the city. In summers, the amount of precipitation and humidity rate decreases (Fig. 5.3) (Kottek *et al.*, 2006).

Natural conditions affected settling decisions in the city. Amasya is surrounded by mountains, and the city center is divided by the *Yesilirmak* river (Fig 5.3). The city developed to the southern strip of the *Yesilirmak* river due to geographical conditions. Roads from the first settlements in this area are still used as streets today.

Amasya	Jan	Feb	March	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	Yearly
Median Temperature (°C)	2.5	4.4	8.3	13.3	17.6	21.3	23.7	23.7	19.9	14.5	8.4	4.4	13.5
Median Maximum Temperature (°C)	6.9	9.7	14.6	20.3	25.0	28.7	31.0	31.4	27.8	21.8	14.5	8.7	20.0
Median Minimum Temperature (°C)	-0.8	0.2	3.0	7.2	11.1	14.4	16.6	16.6	12.8	8.6	3.8	1.2	7.9
Median sunlight (hour)	2.1	3.2	4.4	5.9	7.2	8.7	9.5	9.1	7.4	4.8	3.3	1.9	67.5
Median Rainy Days	12.3	11.1	12.5	13.1	13.0	8.9	3.3	2.7	4.7	8.1	9.3	12.6	111.6
Median monthly total precipitation(mm)	49.7	37.0	48.2	54.8	53.8	38.2	16.8	10.4	20.0	35.3	43.6	55.9	463.7
Maximum Temperature (1961-2019) (°C)	21.3	24.8	31.2	35.8	37.5	41.8	45.0	42.4	40.3	36.0	29.7	22.9	45.0
Minimum Temperature (1961-2019) (°C)	-21.0	-20.4	-15.3	-5.1	-0.1	4.8	8.5	8.8	3.0	-2.9	-9.5	-12.7	-21.0

Table. 5.1. Statistics of weather analysis of Amasya between 1961 to 2019 (mgm.go.tr, n.d.)

5.3. Timeline of Events

Amasya was occupied during Chalcolithic Period (BC.5500-BC.3800), Bronze Age (BC 3800-BC.3200). The first civilization that is identified is the Hittites that lived in the area up to BC. 1680. Followed by Phrygians (c. BC. 1200), Scythians-Cimmerians (c. BC. 700), Medes-Persians (c. BC. 585), Pontus (Greek) Empire until BC. 1291, Romans (BC. 29- 395), Byzantines (395-1075), many attacks and short conquests from Arabs between 8th to 10th century, Danishmends (from 1175), Mongols (c.1175), Eretna Principality (from 1341), Sadgeldi Principality (1360), and finally the Ottomans in 1386 (Appendix 5.1)[19].

Geography, natural condition, and resources, various civilizations, trade routes and economic power, administrative roles, religious and educational characteristics formed the urban fabric of the city over time and helped Amasya to develop in urban, political, economic, and cultural means. Similar to other Ottoman cities, Amasya faced many stressors such as long-lasting wars, invasions, earthquakes, fire, floods. The unique geography provided an advantage of security to the city for centuries which also made it desirable for enemy invasions. According to the record between the

[19] See the appendix for timeline of events

16th and 19th centuries, Amasya had faced many earthquakes and fires. During those centuries, the city tried to deal with reform destruction caused by disasters. The recorded earthquakes in Amasya's dates are 127, 236, 509, 526, 968, 1051, 1209, 1318, 1415, 1449, 1579, 1591, 1598, 1647(-48), 1658(-59), 1668, 1684, 1734, 1776, 1794, 1825, 1828, 1893, 1923, 1939, 1942, 1943, 1950, 1992, 1996. It is now classified as a 1st-grade seismic zone. Frequently, a flood from the *Yesilirmak* River damaged structures closed to the riverfront. Recorded floods from the 19th century to today's dates are 1733, 1824, 1826,1848, 1855, 1865, 1867, 1875, 1880, 1881, 1940, 28-31 July 1946, 1948 (12-13 April and 3-6 June), 1949, 27 March- 5 April 1952, 1954, 1959, 1967, 1968, 1975, 1977, 1980, 1990. Fires dates to 1485, 7 April 1555, 14 April 1555, 1602, 1612, May 1688, 1730,1855, 1885, 1887, 1893, 1915, 1946. The biggest disasters in the 20th century were the fire in 1915, and the earthquake in 1939. One-third of the whole city was burnt in the fire and most of the civil architecture examples were destroyed (Catal, 2009; Oltulu, 2006; Senol, 2010). (Appendix 5.2)[20]. Details of what happened to the urban fabric before, during, and after these stressors are presented later in this chapter.

5.4. Architectural Formation and Development of Amasya

5.4.1. Architectural Formation and Development of Amasya before the Ottomans

The oldest structure of the city is a fortress on top of the Harshena Mountain, which also houses the rock tombs (Fig. 5.3). Even though the date the fortress was first built was not clear, the first civilizations settled there. One of the important landmarks of the city, the rock tombs, was carved initially during the era of the first settlements (Fig. 5.4). Due to its strategic advantage of its location, the upper castle was renovated during the 16th century by the Ottomans and used as a headquarters of the army. Victor Fontanier, who visited the city in 1827, mentioned the castle had many renovations over centuries, therefore, lost its original characters. Even though the Ottomans and other civilizations renovated monuments from previous civilizations, it caused a loss of authenticity. Their survival came with the expense of losing an architectural character. Fontanier moreover stated that there was even a guard to protect these structures from damage by locals and treasure hunters, these statements show that at least during the 19th century, the central government or local government had the notion of protecting the tangible cultural heritage. Fontainer stated seeing

[20] See the appendix for timeline of events from 11th century to the 21st century

locals carving stones from old ruins to carry construction sites and Dr. Heinrich Barth also (visited in 1858) mentioned construction activities in the city center and lack of materials caused damage to these structures from previous eras (Busbecq, Forster, and Daniell, 1881; Porter, 1822; Tuzcu, 2007; Van Lennep, 1870). These actions resulted in recycling materials for creating resources for fast and cheap construction in the city.

Fig. 5.3. View of Harshena Mountain with the castle on top (Meryem Gurel's archive, 2017)

Initial urbanization activities such as building roads, water channels, and city walls started during the period of the Kingdom of Pontus[21]. The very first description of the city comes from the Greek Geographer Strabo. First, of many, they described the city's geography and nature, also, gave some details about the city (Fig. 5.6):

[21] Greek Era.

'My city is situated in a large deep valley, through which flows the Iris River. Both by human foresight and by nature it is an admirably devised city, since it can at the same time afford the advantage of both a city and a fortress; for it is a high and precipitous rock, which descends abruptly to the river, and has on one side the wall on the edge of the river where the city is settled and on the other the wall that runs up on either side to the peaks. These peaks are two in number, are united with one another by nature, and are magnificently towered. Within this circuit are both the palaces and monuments of the kings. The peaks are connected by a neck which is altogether narrow, and is five or six stadia in height on either side as one goes up from the river-banks and the suburbs; and from the neck to the peaks there remains another ascent of one stadium, which is sharp and superior to any kind of force. The rock also has reservoirs of water inside it, a water supply of which the city cannot be deprived since two tube-like channels have been hewn out, one towards the river and the other towards the neck' (Strabo and Jones, H.,1928, pp. 446-447).

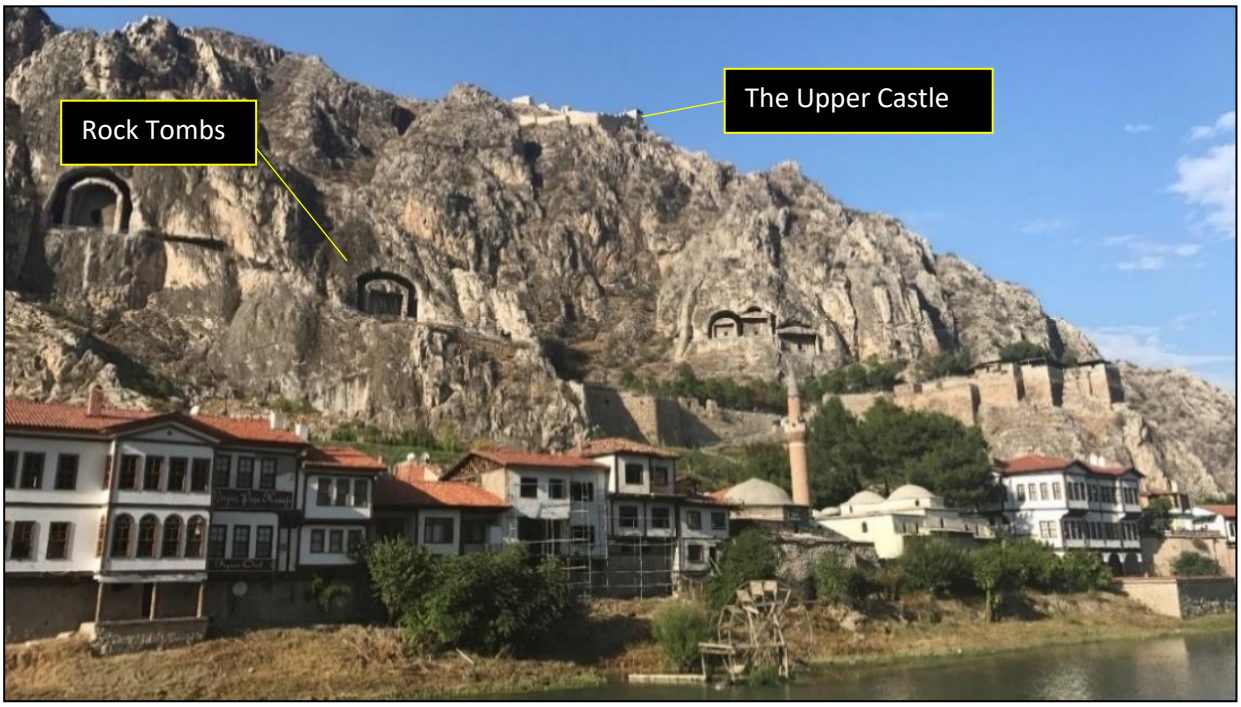

Fig. 5.4. View of Harshena Mountain with the castle on top and also rocky tombs (Meryem Gurel's archive, 2017)

During this Hellenistic period (Fig. 5.5), the lower castle, and castle walls from the upper castle to the riverfront of the River Yesilirmak were built. Alcak (Low) Bridge was built to connect two riverfronts. Also, a bridge in the place of today's Kunc Bridge was built to connect the city to other settlements around the area. With the economic power that was gained through trade routes, the city continued to be developed (Karakul, 2002; Kuzucular, 1994; Ozbucak, 2005).

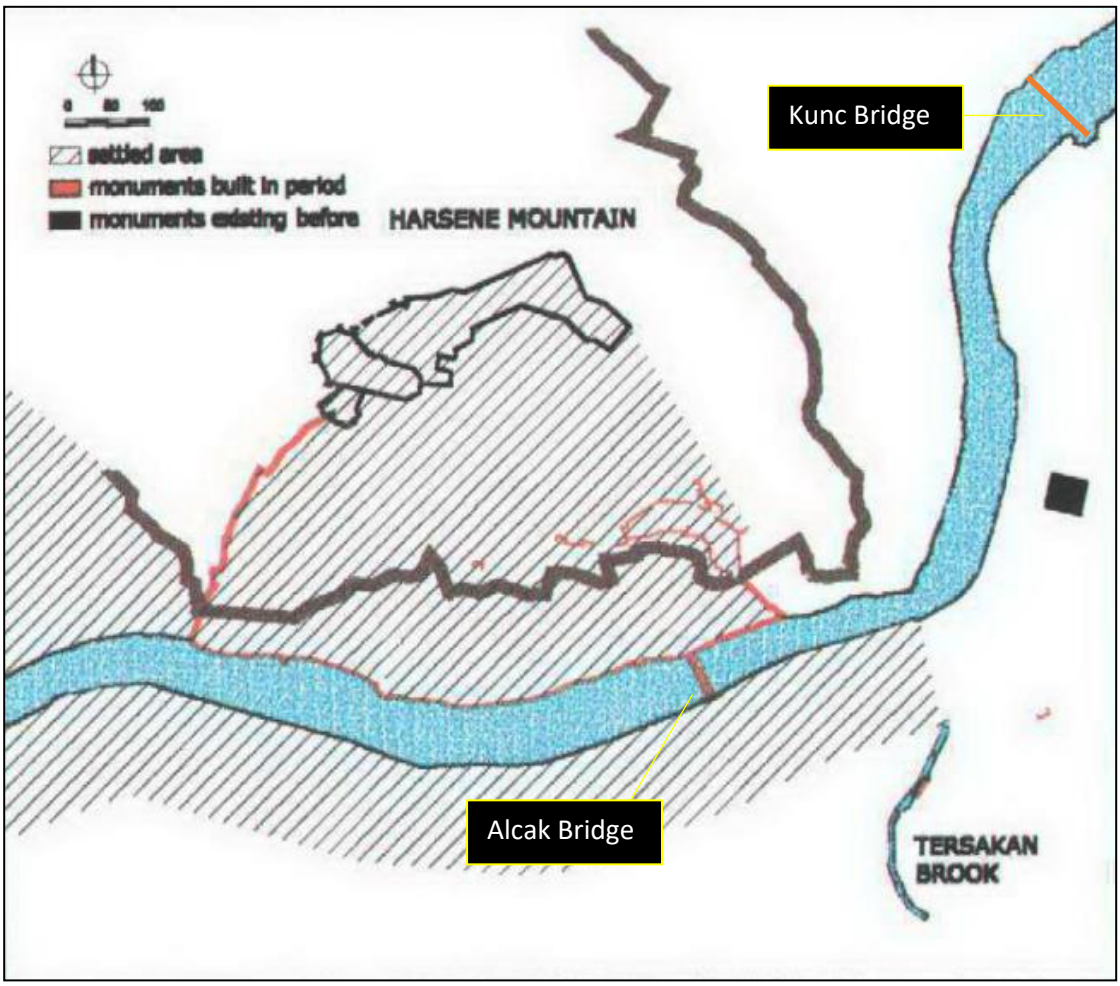

Fig. 5.5. Amasya during the Hellenistic Period (Karakul, 2002, p. 249).

Fig. 5.6. Depiction of Amasya during the Pontus Empire period (Amasya Municipality Archive, NA)

After the Romans burned the city down while conquering it from the Pontus Empire, they rebuilt the castle and started urbanization activities (Fig 5.7). Helkis (Hukumet) Bridge was known to be used during the Roman era and continued to be used by the Ottomans as well. Because it was a wooden bridge, it was rebuilt many times in the same location (Canik, 2011; Er, 2009; Kuzucular, 1994).

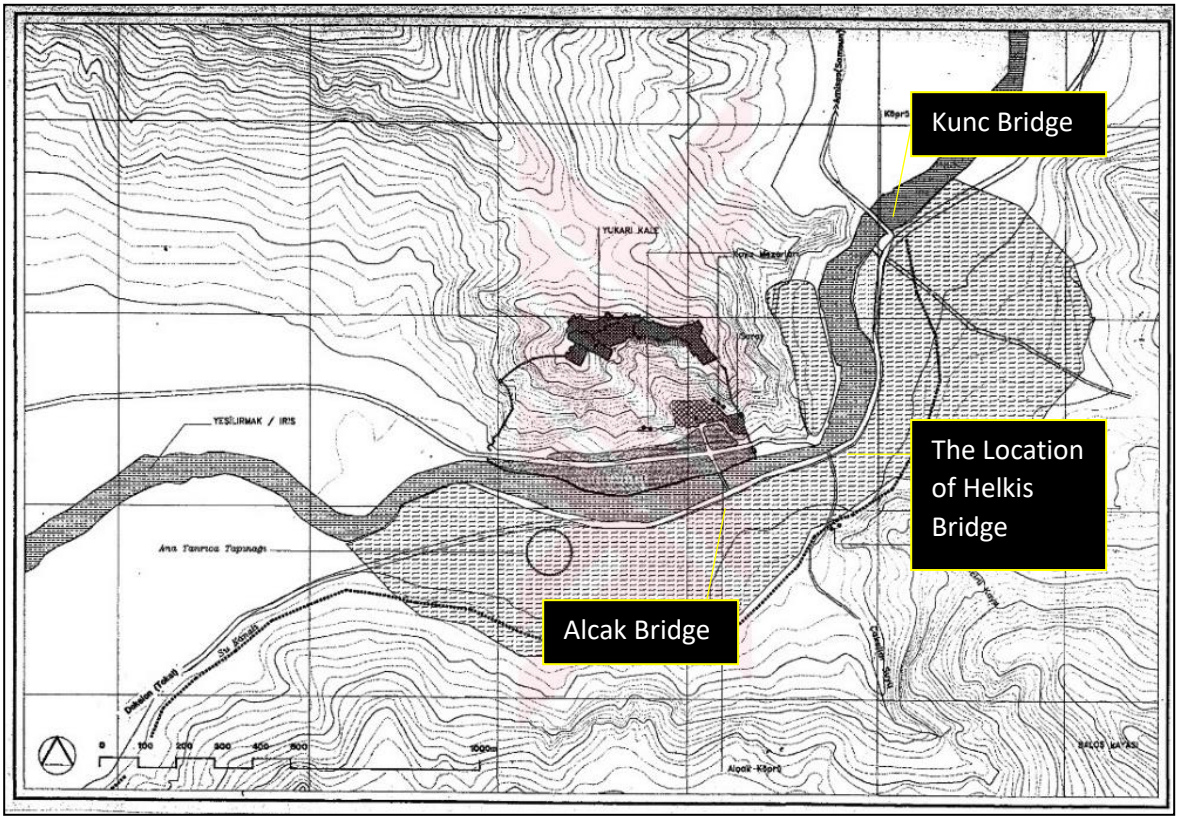

Fig. 5.7. Amasya During the Roman Period by Kuzucular (1994, p. 23)

From the Hellenistic Period to Roman there is no record of a disaster. Even though the city was taken by Romans, two significant structures of the city, the upper and the lower castle survived the conquest and were preserved. Moreover, the city continued to develop from the lower city to the strips of River Yesilirmak in the east-west direction. According to the map by Altinoz (2003, cited in Canik, 2011) (Fig 5.8), the density around this area was low. Even though River Yesilirmak was known for its frequent floods, the city was continued to form along with it due to the importance of water sources and geographic limitations.

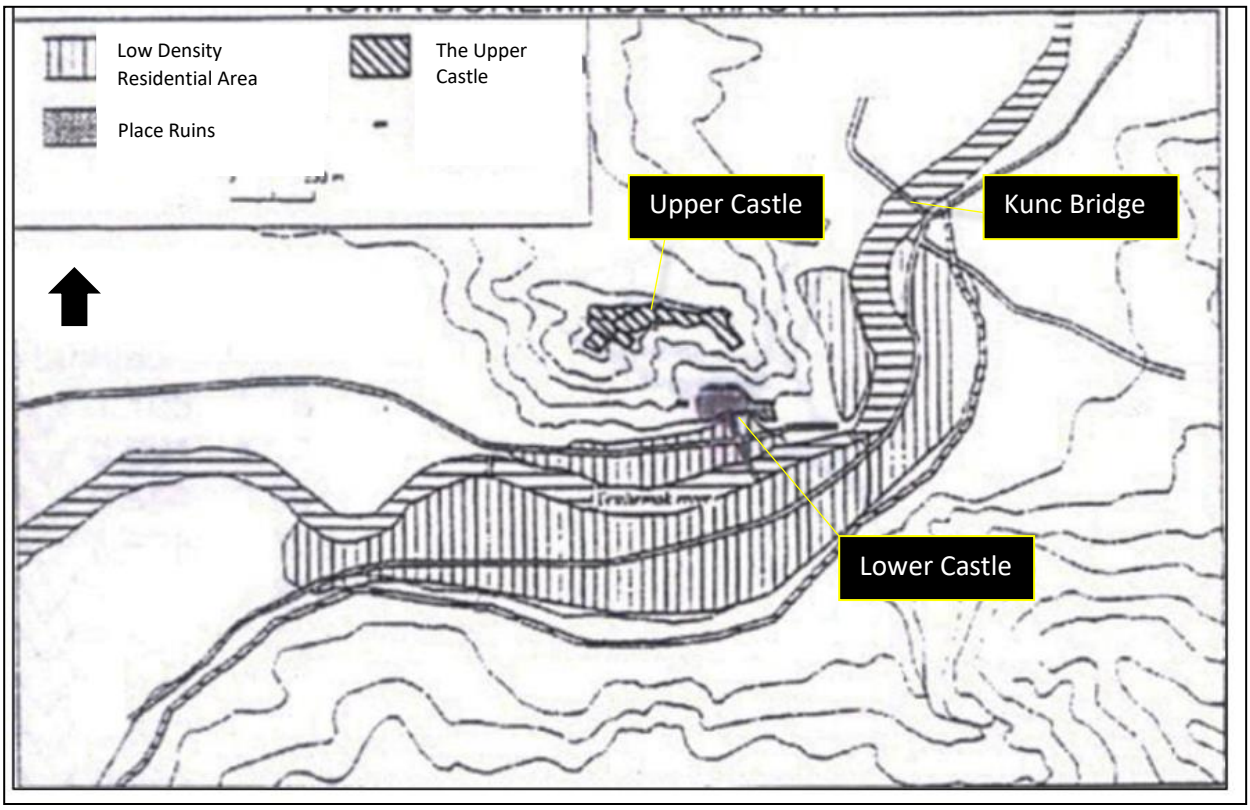

Fig. 5.8. Amasya during the Roman Period by Altinoz (2003, Cited in Canik, 2011, p. 78)

After the Roman period, during the reign of the Byzantines (Fig. 5.9), new typologies such as churches and monasteries were introduced to the city fabric. A new bridge, Magdenus Bridge, was constructed in this era. It was a wooden bridge, which was demolished because of the flood many times. During the Byzantium period, settlements were located on the upper castle and the lower castle where Hatuniye neighborhood was located today. There was a neighborhood in the southern part of the Yesilirmak as well, but it was not a dense settlement (Canik, 2011; Er, 2009; Kuzucular, 1994).

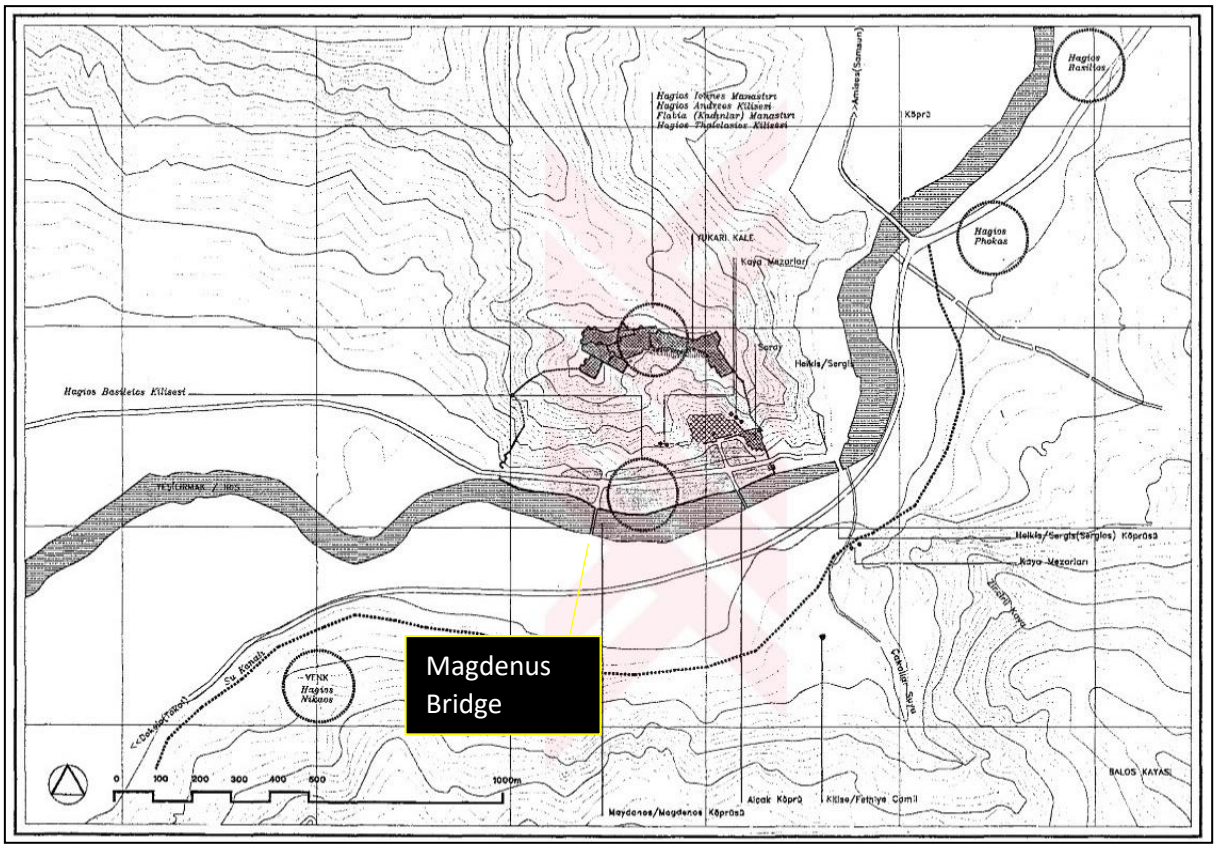

Fig. 5.9. Amasya during Byzantine Era by Kuzucular (1994, p. 32)

Although the land was ruled by different civilizations, urban development increased to the outside of the city walls during the Turkish civilizations period. After the beginning of the 8th century, the city was taken by Arab and Turkish civilizations. Each civilization brought its own style of architecture to the city. Turks as a tradition did not demolish the city but adapted it to their own use. When Danishmends[22] conquered the city, they first settled in the interior city on the northern strip of Yesilirmak River. Due to geographical constrictions, this area[23] did not change a great deal. The only difference was increasing the connections between the two riverbanks. Later, they started to found neighborhoods around a masjid or a zawiya (tekke) in the southern part of the river. During the Danishmend period, the city first developed towards the east and then towards the southwest. The settlements outside of the inner city started from three focal points, Fethiye Mosque, around Kunc Bridge in Samlar Mahalla, and Melik Gazi Masjid in Danismendiye Neighborhood. During the Danishmend period, they converted churches to mosques. For instance, Helena Church was

[22] Danishmends were Turks and had a Turkish principality which can be considered as a petty kingdom.
[23] Today, it is Hatuniye mahalla.

converted to Fethiye Mosque (Alaca, 2012; Canik, 2011; Er, 2009; Kok, 2006; Kozanoglu, 2006; Kuzucular, 1994; Ozbucak, 2005). During the Ottoman period, Traveler Fontanier in their visit mentions seeing this mosque that is converted from a church. According to their travel account, there was a religious structure that was claimed by Orthodox Rums (Anatolian Greeks), Armenian Gregorians, and Turkish Muslims (Fontanier, 1829, cited in Tuzcu, 2007). Even though there were disputes over time of use for the structure, sharing a sacred structure could be a factor for better maintenance of the religious structure. Even though converting can cause losing authenticity, it might help the survival of those structures under new functions.

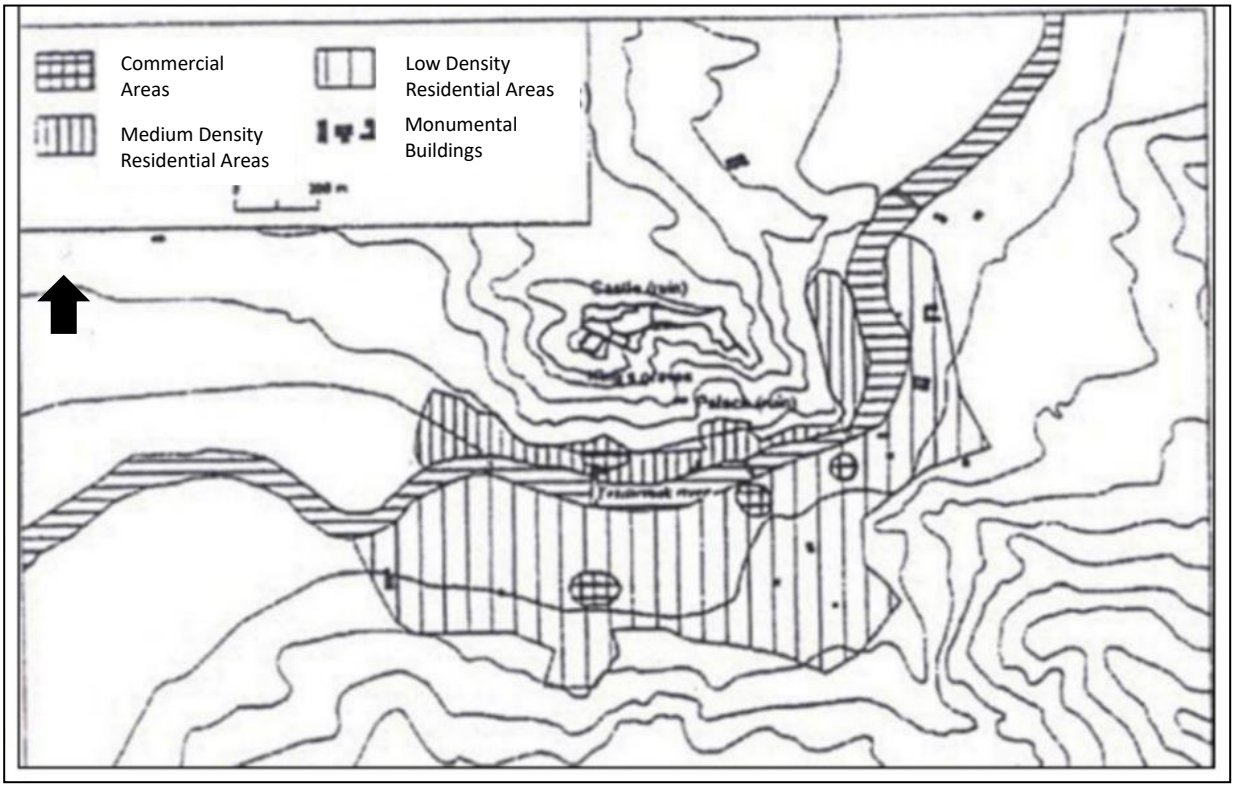

Fig. 5.10. Amasya during Seljuk Era by Altinoz (2003, cited in Canik, 2012, p. 80).

After Danishmends, in the 13th century, during the Seljuk reign[24], urbanization activities were increased. During the Seljuk era, the number of mosques and masjids, therefore, the number of neighborhoods increased. During the Seljuk Period, the effect of Islam started appearing in the urban fabric. Depictions made by Altinoz (2003, cited in Canik, 2011) (Fig. 5.10) and Kuzucular (1994) (Fig. 5.11) present the upper castle and lower castle with churches, mosques, and hammams.

[24] Seljuks are Turkish Principality.

Turkish-style neighborhoods started to appear in the areas occupied before. Building types of Islamic cities such as mosques, masjids, hammams, madrasahs, bimarhane (hospital), tekkes (religious orders facilities), tombs were built. Due to geographical restraint, the built area started to grow to the south and northeast where inclination was getting higher but still inhabitable. Considering Fethiye Church was converted to a mosque, there is also a possibility of conversion of other churches in the upper and lower castle. Two new palaces around the Fethiye mosque were built. A new bridge called Sultan bridge was built which no longer exists today. According to the map by Altinoz (Fig. 5.10), the first commercial cores appeared in the city fabric which shows an increase in the economic activities in the city. Besides residential buildings, various types of service buildings and functions were built which show the continuous development of the city. While residential areas in the south and norths were mid-density and at the northern strip residential area got denser.

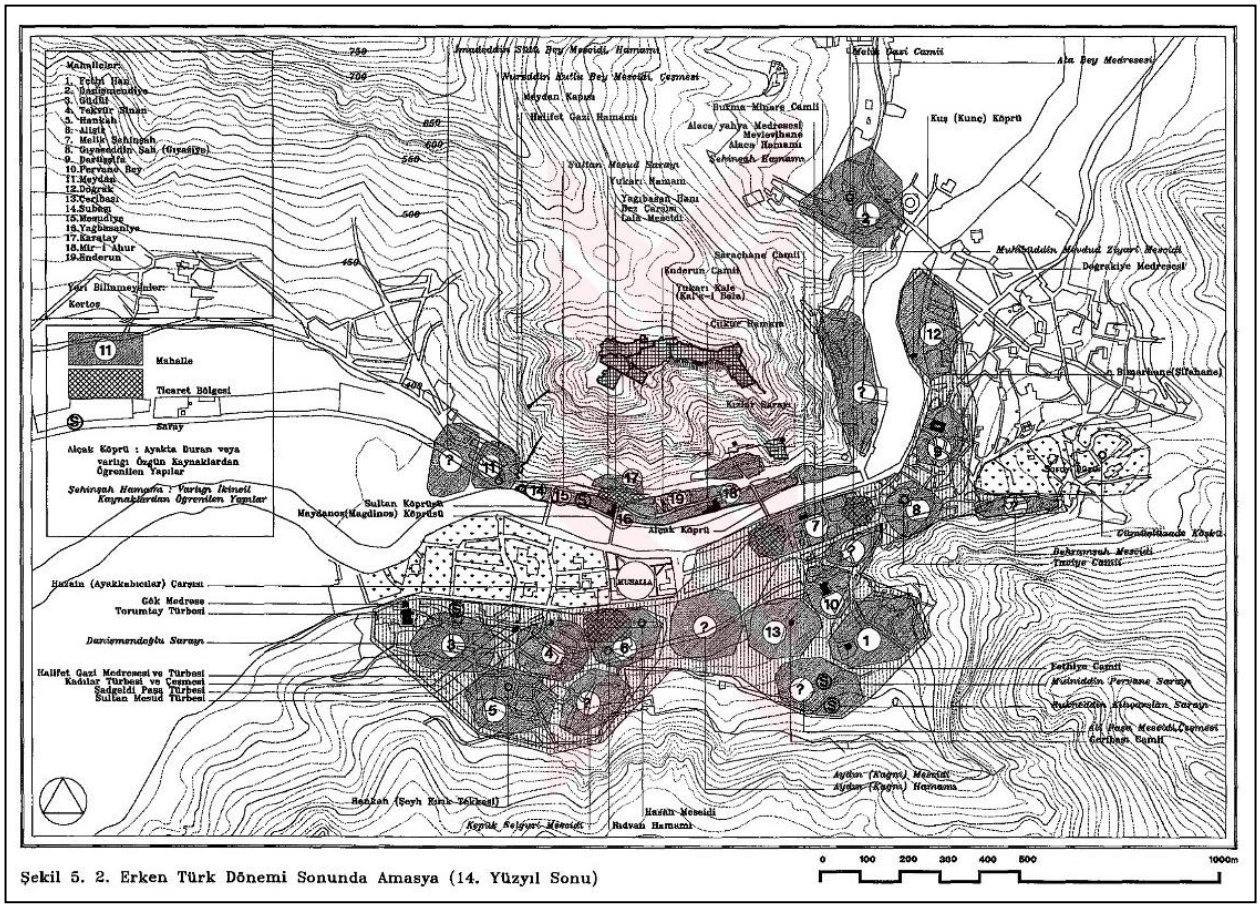

Fig. 5.11. Amasya during the Seljuk Era by the end of the 14th century by Kuzucular (1994, p. 46).

5.4.2. Development of Amasya's Urban Fabric during the Ottoman Era

After the Seljuks, the Ottomans brought their own style of architecture to the city. In the Ottoman Era, mosques, masjids, madrasahs, tekkes, and khans, and residential buildings were built. The city had the golden era architecturally during the 15th century when it was a popular shahzadah city. During this period, Amasya was considered one of the most developed Ottoman cities, and construction activities never stopped. This growth was considered due to being a shahzadah city and being located on trade routes. This urban expansion was shaped according to the city's geography. Because of the high inclination of the south and the north part of Amasya, the inhabitable area was limited to the valley between mountains. Therefore, the city growth formed in Yesilirmak River directions. Various monumental structures were built as focal points to the different parts of the city. The main focal point of the city was the biggest kulliyah, Sultan Bayezid Kulliyah. As seen in Fig. 5.12, even in 1899, even after 5 centuries later after the foundation of the city, Sultan Bayezid Mosque and Kulliyah is the dominant and focal point of the urban fabric. The main settlements were shaped at the southern part of the river. The southern part had commercial buildings, monumental buildings, and mahallas that consisted of 1 or 2 story traditional houses. After the 16th century, when religious orders lost power, the construction of tekkes (zawiyas) decreased. From the second half of the 16th century until the 17th century, due to rebellions, Amasya became one of the most affected cities in Anatolia. The rebels had arson attempts and damaged the city. From the 16th century to the 19th century, the urban texture of Amasya was damaged because of earthquakes, fire, floods. During those centuries, the city mostly had to deal with reconstruction and repair caused by disasters instead of focusing on development (Canik, 2011; Catal, 2009; Guzelci, 2012; Kok, 2006; Kuzucular, 1994; Ozbucak, 2005).

Fig. 5.12. Picture of Amasya by Manisaciyan in 1899 (Menc, 2018, p.19)

As explained previously, there was no prior planning for urbanization and no records of the urban fabric in the Ottoman Empire except waqfs records of individual buildings. Therefore, for this research, travelers' writings, their insight on the city fabric and urban life, and their plan or sketches were valuable as data. For the Ottoman period, 40 travelers' accounts that have information about Amasya highlighted the long-time period of limited documents (Appendix 5.3)[25]. Through their writings, the long history, and characteristics of Amasya are unfolded. All of the travelers' writings were coded into various categories for more in-depth analysis which is added to Appendix 5.4[26]. The section below is based on the summary of all travelers' writings, quotations from important writings, and visuals by travelers.

Most travelers had the tendency to read and compare Strabo's definition of the city and what they see on the day they visit because the writings of Strabo were the oldest surviving description of the city from the Greek period. They mentioned generally the city was almost as same as it was described and preserved mostly without damage. Travelers described similar characteristics of the

[25] Appendix 5.3. List of travelers and their details
[26] Appendix 5.4 Details from travellers accounts

city: the narrow valley surrounded by mountains, the river *Yesilirmak* dividing the urban fabric and the valley, houses lined on both sides of the riverbank, the castle located on top of the mountain, the rock tombs which were carved into the face of the mountain, the ancient aqueduct, the waterwheels, and the mulberry plantations with their silk production houses that were surrounding the city. They noted how unique and distinct Amasya was compared to other cities they had visited (Busbecq, Forster, and Daniell, 1881, pp. 150-151; Le Gouz de La Boullaye, and Clousier, 1653; Hamilton, 1842; Morier, 1812; Texier, 2002; Tozer, 1881; Tuzcu, 2007; Van Lennep, 1854; Perrot, 1864; Porter, 1822).

Famous Turkish traveler Evliya Celebi visited the city in 1645, the earliest and the most detailed description of the city, and its architecture during the Ottoman period was given by them. They wrote shahzadah *Yildirim Bayezid* made their *shahzadah* (crown prince) *Isa Celebi* the governor of the city. Then, Amasya became the government center and sultan's throne. With palaces that were built for the Sultans, Celebi emphasized the important administrative role and stated that the city became '*Al-i Osman taht sehri* – Ottoman crown city'. They described the upper castle and lower castle, which were next to the river and surrounded by short stone buildings. It had 4 doors and the southeast door opened to *Alcak* (Law) Bridge, *Maydonos* Door opened to Bayezid Han Bridge road, in the west, *Meydan* (square) Door was opposed to the big wooden bridge that leads to *Gokmadrasah,* and lastly, in the east the door of *Serkiz* bridge that leads to *Garipler* Mosque. The importance of these doors is that the location of infrastructure (roads or bridges) these doors are connected to does still exist present day. Evliya Celebi also explained the surroundings of the lower castle had a built environment, other palaces, and 600 houses which was probably an approximate number and explain the density of the northern strip of Amasya riverfront, today's Hatuniye Mahalla. Celebi continued that *carsi*[27] was small and there was a mosque. At the point where the *Tozanli* River and *Yesilirmak* meet, there was a big stone bridge. Amasya city was a big city that grew on two sides of the river. The river flowed from the south to the wards of the north, while irrigating plantations and gardens via water wheels. Amasya, which was divided into two by a river, had 48 Muslim neighborhoods and 5 Christian neighborhoods. There were small and big 5000 houses and palaces. Celebi, moreover, categorized building typologies and gave details about them

[27] Commercial area.

which are tabulated in Table 5.2. According to their description, it was clear that by the mid-17th century, the city was well-developed, 53 mahallas with various functions existed. Also, their writings pointed out the support of waqfs to these service buildings. Moreover, according to their writings, while there were 5000 thousand houses, more than 1000 shops with 160 different types of artisan existed. This big ratio of commercial buildings shows how strong commerce was in the city (Evliya Celebi, Dagli, Kahraman, 2008).

Typologies	Description
Mosques	*There is a total of 240 mihrabs.*
Sultan Bayezid Veli Mosque	*This historical building was built between 17 December 1487-4 December 1488. It has 2 minarets and an inner courtyard. Its waqf is very big. The waqf has rich, big properties. Shahzadah Bayezid had their second experience as a governor in Amasya after Trabzon. When they became a sultan after the death of their father Fatih Sultan Mehmed, they said I ruled in Amasya and forgave their taxes, and built this mosque.*
Miskinler/Garipler Mosque	*Miskinler/ Garipler Mosque is in the Samlar neighborhood, close to houses.*
Kucuk Aga Mosque	*…next to Cekerek River, in Irem vineyard.*
Bayezid Pasa Mosque	*x*
Mehmet Pasa Mosque	*It is next to the river and has a stone dome and one minaret.*
Hizir Ilyas Mosque	*It is a big mosque with a dome.*
***Mahkeme* (Court) Mosque**	*The roof is wooden. […] The minaret is wooden.*
Fethiye Mosque	*It was converted from a church and without a minaret.*
Yorguc Pasa Mosque	*It was built by the vizier of Celebi Sultan Mehmed Han, Yorguc Pasha.*
Gok Medrese Mosque	*It is without a minaret and has a dome.*
Other Masjids	*Saraclar Masjid, Buyukaga Masjid, Temenna Masjid, Kilci Masjid, Kadikoprusu Masjid, Deyre (Dire, Dere Neighborhood) Masjid, Yukari Pazar Masjid, Sefer Aga Masjid, Bedesten Masjid, Copluce Masjid, Mustafa Bey Masjid, Kanli Ali Aga Masjid, Asagi Pazar Masjid, Garipler Masjid, Cukurlar Masjid, Hocazade Masjid, At Meydani Masjid, Kanli Pazar Masjid, Bakacak Masjid, Yukari Meydan Masjid, Asagi Meydan Masjid.*
Madrasahs	*There are 10 madrasahs.*
***Sultan Bayezid Veli* Madrasah**	*The most perfect, flamboyant, and built up*
Other Madrasahs	*Mehmed Pasha Madrasah, Kadi Madrasah, Gokmadrasah, Buyuk Aga Madrasah. […] Kucuk Aga Madrasah: Bayezid Pasha Madrasah and others.*
Daru'l Kurra's	*They have 9 daru'l-kurra which teaches Islamic and Quranic knowledge.*
Daru'l Hadis	*There is one daru'l-hadis.*
Maktabs	*There are 200 maktabs teaching literacy to kids. Other than those, each neighborhood has always at least one child maktabs.*
Tekkes	
Sanli Dervishes *Tekkes* (Lodges)	*There are 40 dervish orders with zawiya.*
Mevlana Celaleddin Rumi* tekke, *Mevlevihane	*The most perfect one is Mevlana Celaleddin Rumi tekke, Mevlevihane.*
Kadiri Tekke	*…in Kanli Pazar.*
Other Tekkes	*Haci Ilyas Tekke, Gok Madrasah Tekke, Pirler Tekke, Samlar Tekke, Gulabizade Tekke, Muftuzade Ahmed Efendi Tekke, Miskinler Tekke, and others.*

Imarets (as a souphouse)	*There are 10 soup houses to feed the poor and travelers. They are administered by Sultan Bayezid Veli imaret, which provides abundance and good meals twice a day.*
Mevlevihane Imaret	*…serves poor besides dervishes.*
Other Imarets	*Pir Ilyas Dede Imaret, Mehmed Pasha Imaret, Yorguc Pasha Imaret, Gokmadrasa Imaret, Hatuniye Imaret, Coplu Imaret.*
Caravanserais -as a guesthouse	*Bayezid Veli winter guesthouse, Bayram Pasha Guesthouse, Bayram Pasha Guesthouse, Copluce guesthouse, Gokmadrasah belong to Yorguc Pasha. Dogruotur Guesthouse.*
Hans	*They have iron doors covered with leads*
Mehmet Pasa Han	*Close to Timarhane (Mental Hospital). It had an income from many waqfs and was well taken care of.*
List of Hans	*Sultan Bayezid Han, Yorguc Pasha Han, Bayezid Pasha Han, Koca Mehmed Hans, Kapan Han. Ridvan Aga Han.*
Bekar* (Bachelor) *Hans	*It has rooms for bachelors and travelers.*
Hammams	
Mustafa Bey hammam	*Mustafa Bey Hammam next to the Mehmet Pasha Mosque close in the Bayezid Pasha area…*
Ilica Hammam	*Ilica Hammam next to Hunkar palace, one at the beginning of Alcak (Low) Bridge…*
Alaca Cardakli Hammam	*Alaca Cardakli Hammam next to the river…*
Sultan Bayezid Hammam	*Sultan Bayezid Hammam close to Fethiye Mosque…*
Kadizade Hammam	*Kadi Hammam in Hacizade area…*
Other hammams	*Sazlioglu Hammam, Kumacak (Kocacik) Hammam, Yorguc Pasha Hammam, Kanlipazar Hammam. In the castle, there are four hammams. Two of them are regular and two others are twin hammams. In the Meydan neighborhood, there are two hammams and one of them is a twin.*
Carsi and Bazaars	*160 different artisans, and 1060 shops. Most of the carsis are stone and strong like bazaars of Bursa. 4 doored with dooms bedesten is close to Bayezid Han mosque.*
Neighborhoods	*Total is 48. Close to the castle Samlar neighborhood, the opposite side of the Bayezid Pasha neighborhood, Mehmed Pasha neighborhood, Saray (palace) and Hoca (Havace) neighborhood (Armenian population), Sofular neighborhood, Copluce neighborhood which is next to the castle. The others are Serkiz neighborhood, Dere and Kadikoprusu neighborhood, Temanna neighborhood, Kilci (Killica) neighborhood, Bakacak neighborhood, Kanli Pazar neighborhood.*

Table. 5.2. Lists of building typologies and details by Evliya Celebi travel book.

After 2 years after Evliya Celebi, the first visual depiction of Amasya was drawn by French traveler Boullaye le Gouz in 1647. Even though they did not provide elaborate details in their travel accounts, their sketch holds valuable importance due to being the first visual evidence to interpret the city fabric and silhouette in the 17th century (Le Gouz and Clousier, 1653; Tuzcu, 2007) (Fig. 5. 13). Their depictions lacked some details; nevertheless, they managed to capture some of the prominent elements of Amasya. First, of many travelers, they depicted the upper castle and the city walls from earlier civilizations on the top of Harshena mountain; a water wheel with a mill on the River

Yesilirmak; a towering structure, which strikingly resembles a minaret[28]; and dense residential buildings with gabled roofs and cantilevering parts. Additionally, Boullaye Le Gouz, in the center of the sketch, portrayed a domed structure with a crescent-topped finial surrounded by structures; yet, without a minaret. Its positioning in the landscape as a focal point and being surrounded by smaller-scale structures alludes that the structure is a mosque of a complex (kulliyah), which is probably the Sultan Bayezid Mosque and Kulliyah (Appendix 5.5)[29].

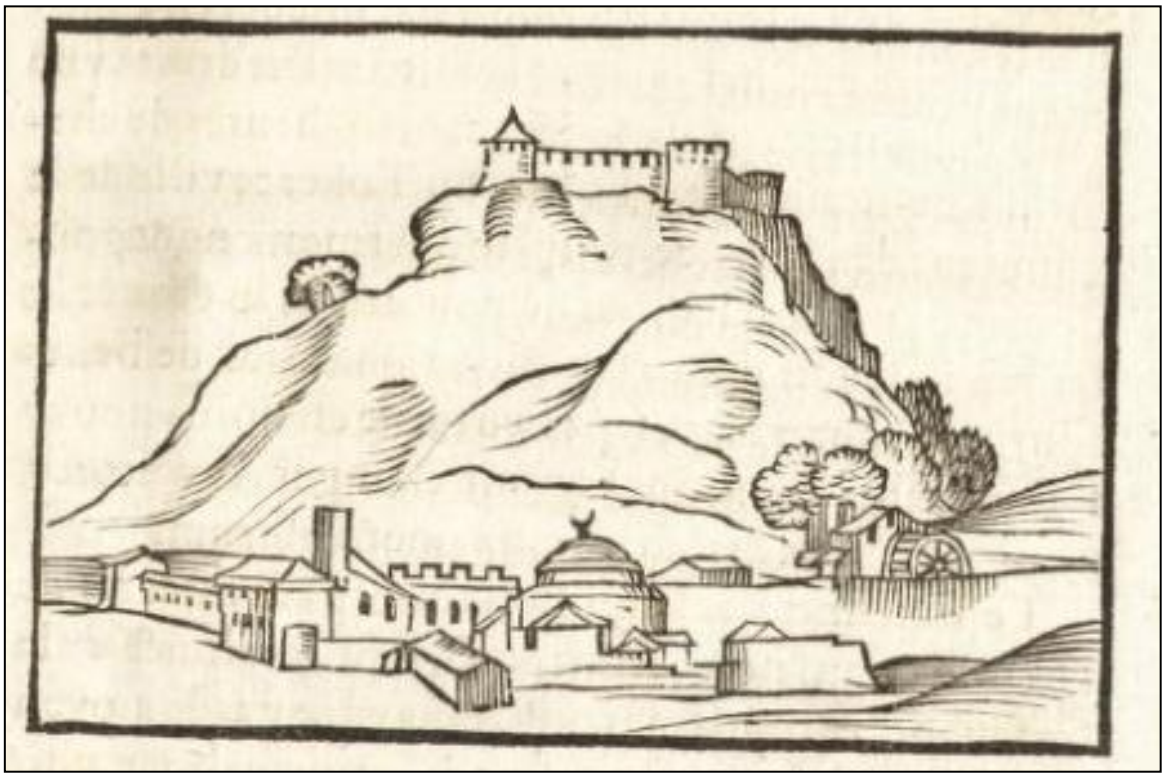

Fig. 5.13. Gravure of Amasya by Boullaye Le Gouz, 1647 (Le Gouz La Boullaye, Closier, 1653, p. 67)

Half of the 40 travelers visited the city during the 19th century, therefore, most of the information dates back to the 19th century. The second visual of the city is a miniature by Turkish traveler Bozoklu Osman Sakir in 1810, who is the only Ottoman to depict the city, at the beginning of the 19th century. They painted the miniature of the city when they were traveling to Iran as a member of an ambassador committee. Even though their technique did not cover many details of architecture, their miniature provides a more comprehensive understanding of the city fabric due to having the perspective and knowledge of an Ottoman before the entering modernization period

[28] Tower-like structure next to a mosque that is used for call for prayers
[29] For more detailed visual please see the appendix.

and face changes (Fig. 5.14). Similar to Le Gouz, Bozoklu Osman Sakir depicted the upper castle, the water wheels, dense housing, and mosques. In addition, for the first time, three hammams with elephant eyes, rock tombs, and two bridges (Alcak and Istasyon/ Meydan Bridges) were illustrated. Besides the Sultan Bayezid Mosque, Burma Minareli Mosque, Hatuniye Mosque, Gumuslu Mosque, and Yildiz Hammam can be identified as shown in Appendix 5.6[30]. Two hammams on the right side can be identified through the domes with elephant eyes. Furthermore, from the image, certain mahallas can be identified. On the right upside, today's Fethiye Mahalla; on the right side of riverfront Gumuslu, Dere, and Haci Ilyas Mahalla; on the left side of riverfront Helkis and Hatuniye Mahalla can be is visible. Bozoklu Osman Sakir depicts a city with multiple service buildings which can be considered as traditional service cores and dense urban fabric which hints at a fully developed urban fabric. No empty spot on the depictions shows no previous damage is left from prior stressors. Lastly, their depiction shows that the roof style and material that was used changed.

Fig. 5.14. Miniature of Amasya at the beginning of the 19th century by Bozoklu Osman Sakir (Kavak, 2016, p. 79)

[30] For more detailed visual please see the appendix

Another visual was depicted by Ker Porter who visited the city in 1819. They entered the city from the west and used this perspective for their illustration (Fig. 5.15). In their writings, Porter did not have a positive impression of the city, which explains their decision of placing emphasis on geography in their illustration and depicting the city from afar (Porter, 1822). They depicted Sofular mahalla at the back, mahallas on the riverfronts, and Hizir Pasa mahalla from where they entered the city. Similar to their predecessors, they depicted the upper castle, rock tombs, residential buildings, and half a dozen mosques. Different from previous travelers, they depicted the lower castle and a fountain. The importance of illustrating a fountain as a stop for travelers is, for the first time, indicating a trade route was passing through the city (Appendix 5.7)[31].

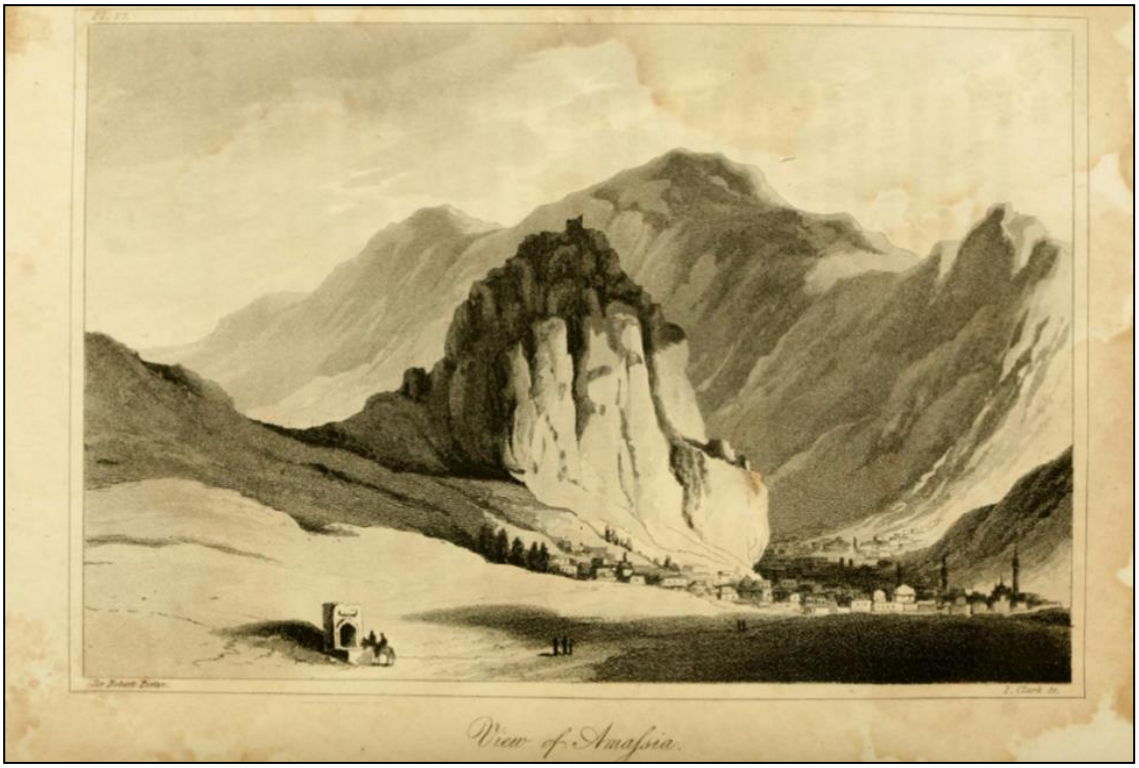

Fig. 5.15. View of Amasya by Sir Robert Ker Porter (Porter, 1822, p. 712).

Victor Fontanier, in 1827, wrote they entered Amasya through narrow and long streets where two sides of the street were full of old ruins. In Amasya, houses looked like they were built on top of each other, aligned among the river. Streets were full of shops, workshops, and businesses. Where two riverfronts get closer, there were two bridges from the ancient era which were also described by Strabo. Stone bridges were repaired with materials from ruins in the surrounding, which were

[31] For more detailed visual please see the appendix.

damaged by natural disasters. This gives an example of recycling materials for repairs after disasters. According to Fontanier, the most modern structure was the mosque which was built by Sultan Bayezid. Next to the mosque, there was a madrasah, library, and guesthouse. Fontainer requested permission to stay in the city and got an assistant to draw plans of the city and monuments. They explained that it was difficult for strangers to get permission to investigate which might be the reason why there were no drawings of Amasya (Fontanier, 1829; Tuzcu, 2007). In their map, Fig. 5. 16, they pointed out approximate locations of the monuments without detail. Their maps show organic street layout, focal points of the city, and vineyards surrounding the city which shows the importance of agriculture for the city.

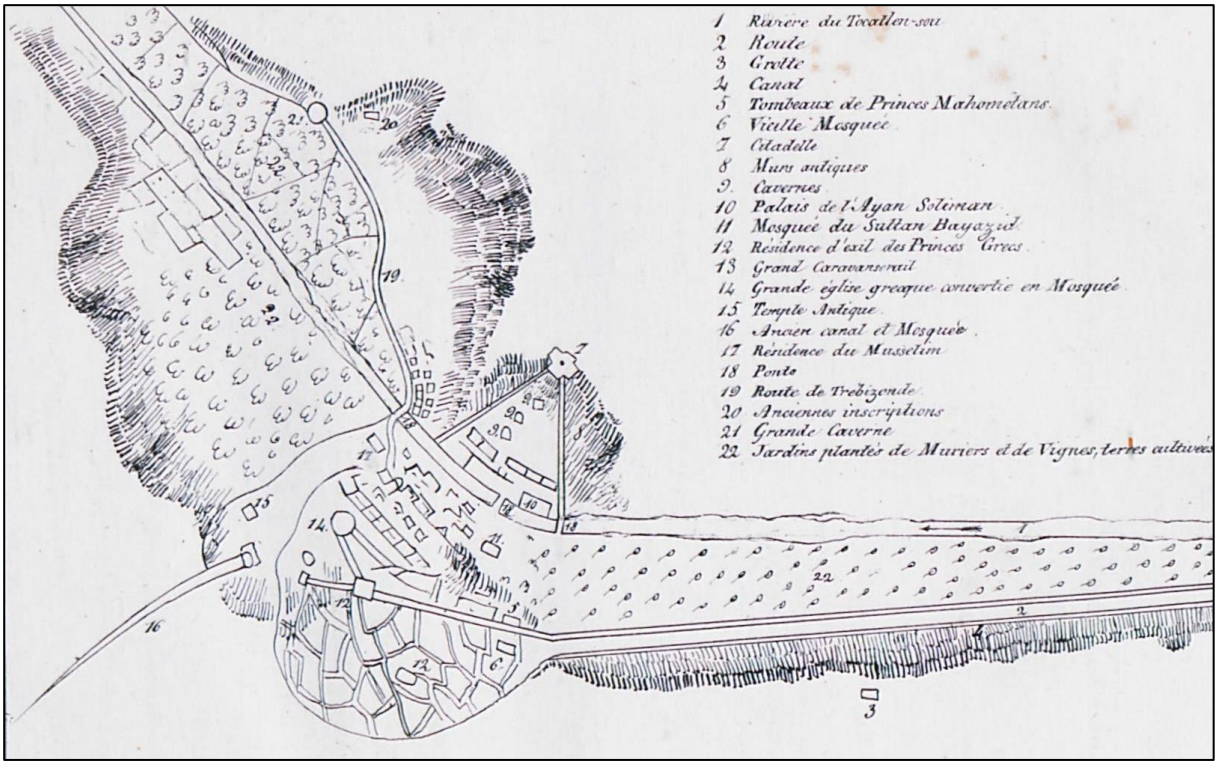

Fig. 5.16. City Plan by Fontanier in 1827 (Fontanier, 1829).

The following image was drawn by John Hamilton in 1836 when they visited Amasya to see what Strabon described in their book, instead of seeing an Ottoman city (Hamilton, 1842). Thus, the focus of their drawings was to capture the monuments from previous civilizations (Fig. 5.17). They used a similar perspective of Le Gouz's image from two centuries ago (Fig. 5.13). Akin to previous drawings, Hamilton drew the upper castle, the lower castle (maiden castle), castle walls, the rock tombs, a standalone minaret, and residential fabric. Unlike previous travelers, their drawings give more

details of residential architecture and its materials. For instance, tiled roofs, and traditional *himis*[32] construction style, which is a wooden structure filled with earth were depicted (Appendix 5.8)[33]. These depictions show locals moved from using adobe bricks with flat earth roofs to wooden structures with gabled roofs and finally to *himis* construction style. These changes were to make maintenance easy and deal with disasters better. While adobe is susceptible to earthquakes and the next material locals used, wood, is susceptible to fire so *himis* became a better solution for both types of disasters.

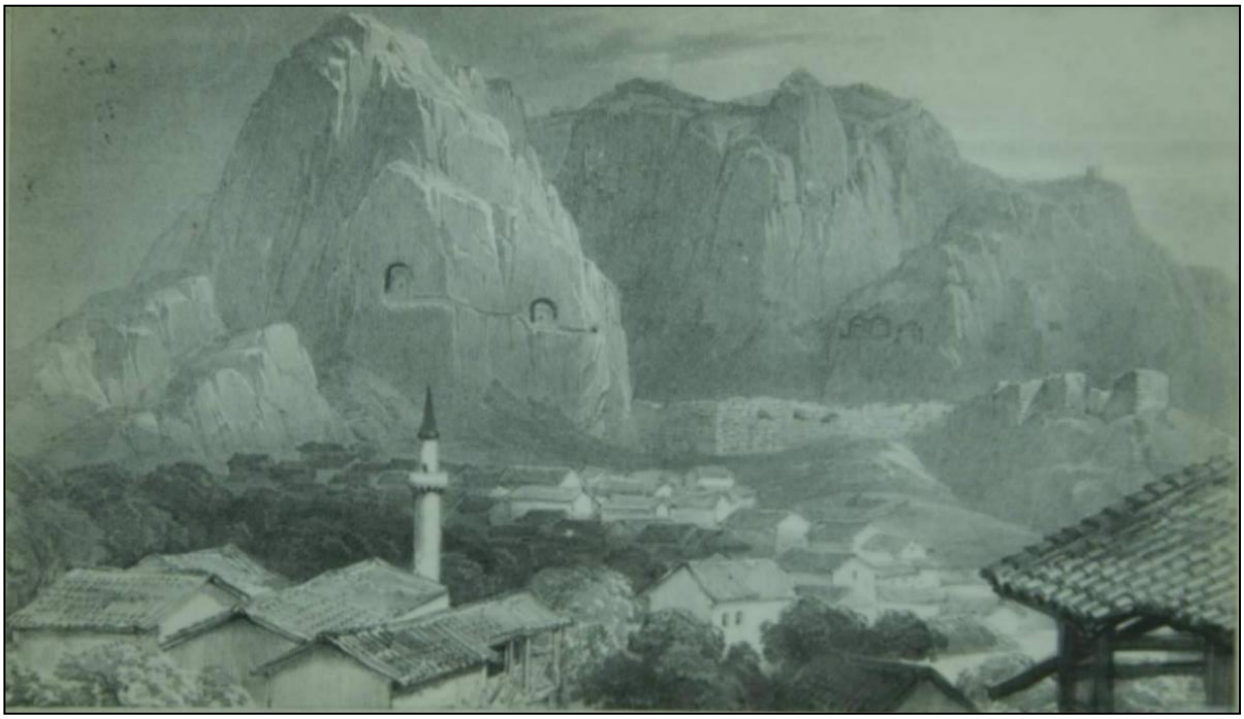

Fig. 5.17. Panorama of Amasya by Hamilton in 1836 (Tuzcu, 2007, p. 140).

After Hamilton, Count von Moltke visited the city. Foreign travelers tended to give their attention to the geography of Amasya and its pre-Ottoman urban landmarks. However, one of the rare examples is that of Moltke's account (v. 1838), which was unlike their predecessors. Even though they did not create any type of visual, they described the city. Moltke wrote that in the city, there were domes, minarets, and dense houses for 20000-30000 people who lived there. According to their description, the most prominent elements in the city fabric were mosques and the density of urban fabric was high due to geographical constraints (Tuzcu, 2007).

[32] Himis is construction method of wooden carcass filled with adobe or brick.
[33] For more detailed visual please see the appendix.

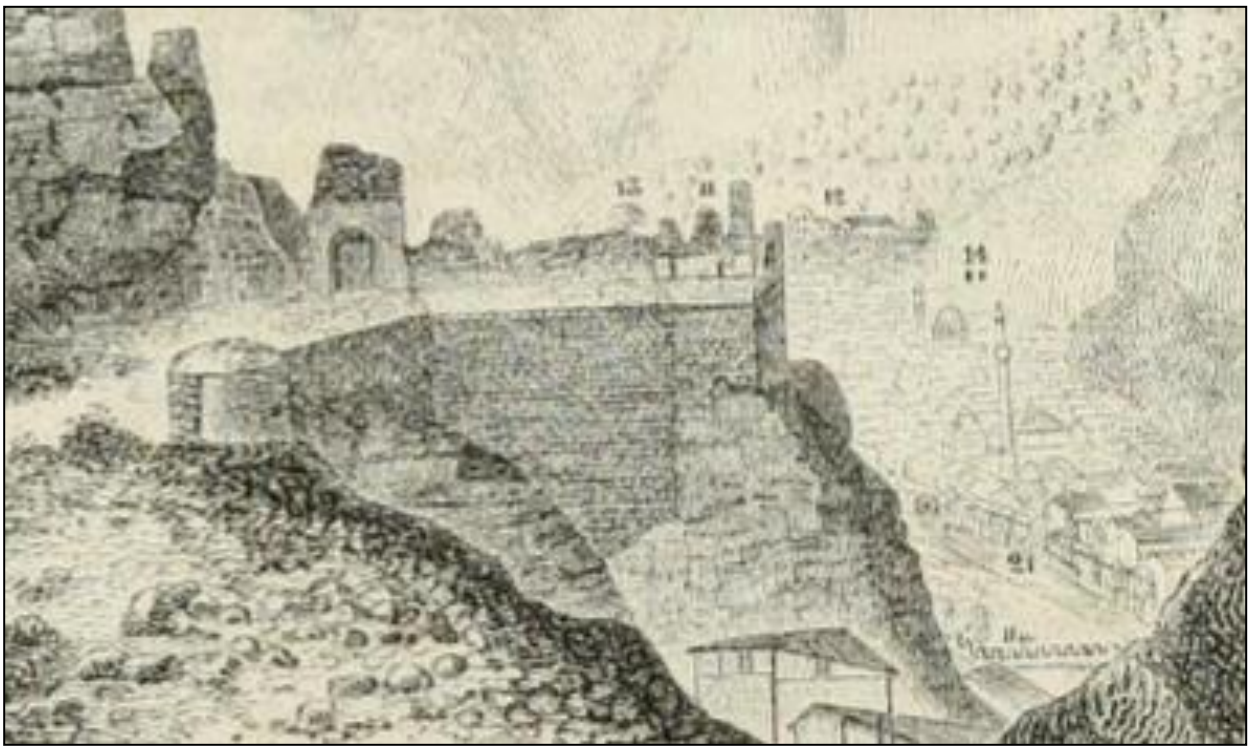

Fig. 5.18. Close-up of Dr. Barth's depiction (Tuzcu, 2007)

In 1854, similar to other foreign travelers, Dr. Heinrich Barth was interested in earlier civilizations' monuments rather than the Ottoman architecture; as a consequence, they depicted the three distinct rock tombs above the Maiden Castle. Even though they were inattentive to the city's urban fabric of Amasya, on the lower right side of the gravure, an illustration of some parts of the town center can still be observed (Fig. 5.18). Hatuniye, Dere, Gumuslu, Mehmet Pasa, and Sofular mahalla can be identified. They depicted two mosques, which are Gumuslu and Sofular Mosques; Alcak bridge; and residential buildings (Appendix 5.9)[34]. Similar to Fontanier, Dr. Barth's traveler book provided a map of the city (Fig. 5.19). Similar to the previous map, this map shows important monuments and places in the city without details. This map provides an insight that the city fully developed in the north-south direction possible and instead of one main road passing through the city, in 1854, two main parallel roads formed probably due to the traffic.

[34] For more detailed visual please see the appendix

Fig. 5.19. City Plan in 1854 (Tuzcu, 2007, p. 212).

After Barth, another information about the city fabric, at first sight, was given by Georges Perrot (v. 1861) that when entering the city center, they saw big, strong, beautiful mosques and *madrasahs* from Seljuk and Ottoman Eras. At the square close to the river, they saw the mosque built in the name of the sultan (Perrot, 1864; Tuzcu, 2007). Their descriptions show even during the second half of the 19th century, the city preserved its Ottoman city characteristic of the urban fabric with multiple and various service buildings as focal points scattered around the city.

Fig. 5.20. Sketch of Amasya's general view by Van Lennep (1870, p.87)

10 years after Barth, Van Lennep illustrated the city in 1864 from a different angle and for the first time from this perspective (Fig. 5.20) (Appendix 5.10)[35]. Similar to previous artists, they portrayed the lower castle, residential buildings, five mosques, and three bridges. Three of the five mosques depicted, according to their location and architectural characteristics, are Sultan Bayezid Mosque, Sofular Mosque, and Gumuslu Mosque. Three bridges, from the front to the back, are Hukumet, Magdenus, and Istasyon Bridges. According to Yasar, there was a flood in the Selagzi area, which is around the Hukumet Bridge area, in 1855 after heavy rain. The flood damaged bridges and Alcak Bridge was not rebuilt until 1881 (M.amasya.bel.tr, 2015; Yasar 2007). This information explains the reason for Alcak Bridge's absence in the illustration even though it was existed in the previous depiction by Dr. Barth in 1854.

[35] For more detailed visual please see the appendix.

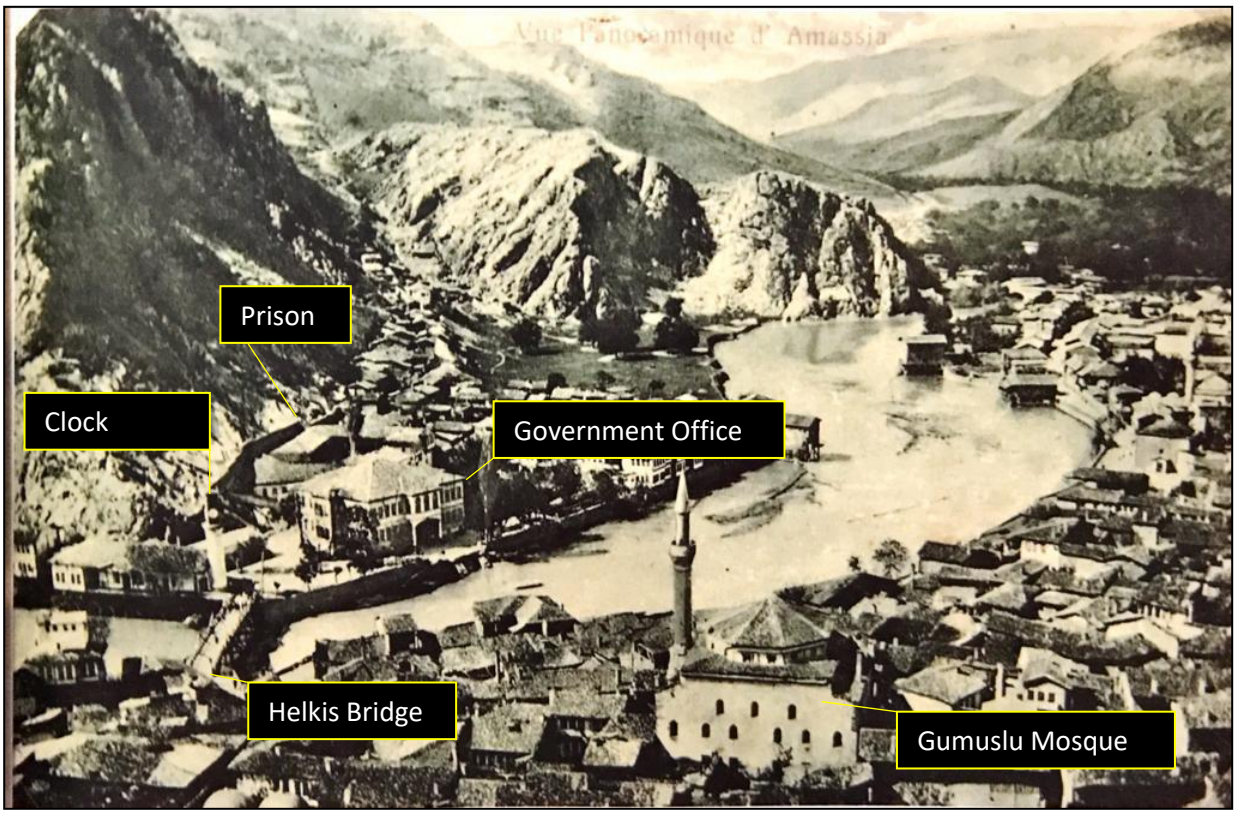

Fig. 5.21. Postcard from the beginning of the 19th century (Menc, 2018, p. 81)

From the second half of the 19th century, travelers reported that the city governors were government officials who were in exile in Amasya. According to travelers' observations, some of them were inexperienced, some of them were crooked and corrupted, but some of them genuinely worked for the city (Mordtmann, 1812, cited in Tuzcu, 2007; Perrot, 1864, cited in Tuzcu, 2007; Nahmer, cited in Tuzcu, 2007). Yet, Amasya *sanjak* was still described as one of the most important *sanjaks* in the Ottoman Empire, despite its declining importance (Tozer, 1881). With new regulations and the initiation of governmental offices in the 19th century in the city of Amasya, there were offices of finance, region, and criminal courts, tax collection, mine, and forest, post, and telegraph, agriculture, trade, city planning, education. In the city council, Muslims and Christians were represented according to their population ratio (Cuinet, 1890, cited in Tuzcu, 2007; Tozer, 1881). The governor of Amasya between 1865 and 1867, Ziya Pasa, started urbanization activities according to these new decisions. New roads and market areas were built; new typologies such as the government office (*Hukumet Konagi*), Hukumet Bridge, the clock tower, and the prison were constructed (Fig. 5.21). The governor rebuilt another bridge on top of Alcak Bridge, which was later

replaced in 1911 with wooden structures after a flood damaged all. With these new types of administrative buildings, the focal point of the city was moved from the kulliyah to those areas. Even though many changes were aimed to be done, it did not change the fabric of Amasya in a great deal according to the pictures taken during that period (Fig 5.23-Fig.5.29).

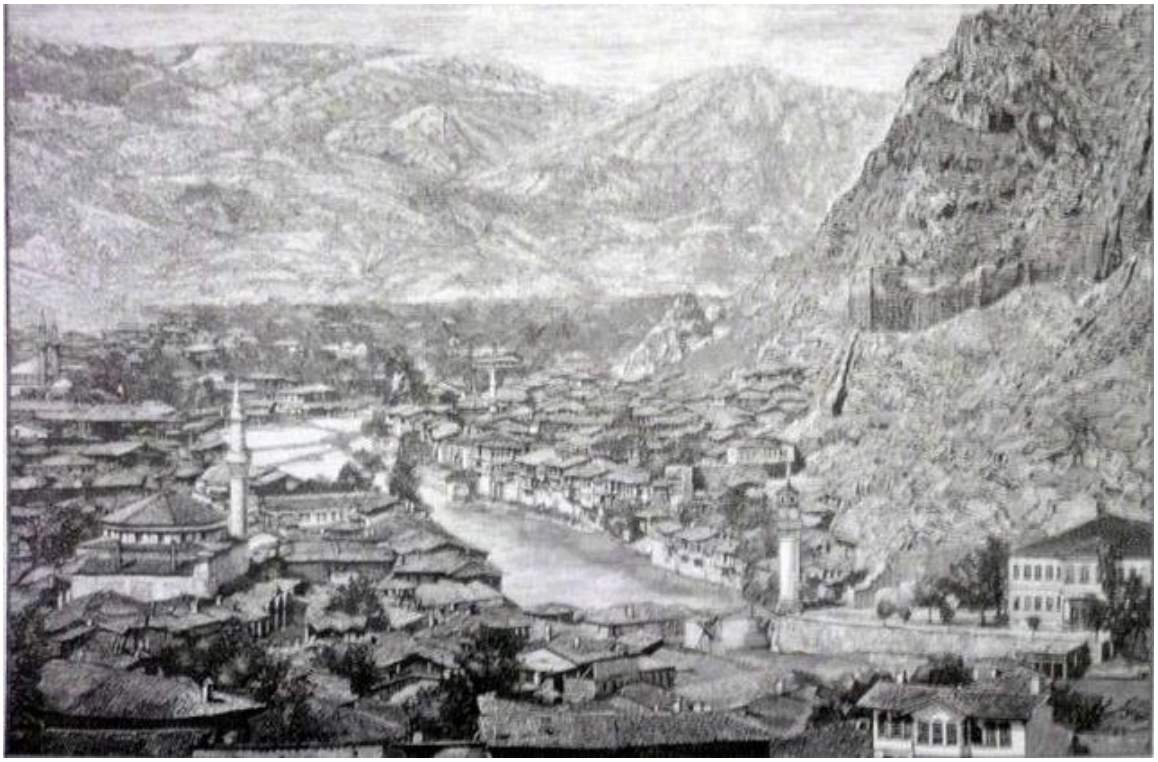

Fig. 5.22. Engraving of Hesperos. Leipsia, 1885, v.4: 305 (Menç 2007, cited in Etyemez and Altinoz, 2010).

A gravure of Amasya was published in a magazine called Hesperos in 1885 shows (Fig. 5.22), the lower castle, residential buildings, 3 mosques (Sultan Bayezid, Hatuniye, Gumuslu Mosques), Hukumet, and Magdenus Bridges are clearly visible. Hukumet bridge was depicted as a wooden structure, which was later demolished in 1938 by the governor of the city and rebuilt as concrete in 1940 (M.amasya.bel.tr, 2015). On the right side, adjacent to the Hukumet Bridge, the Clock Tower (*Saat Kulesi*), which was constructed by Governor Ziya Pasa in 1865; and the Government Office (*Hukumet Konagi*), an example of the late period ottoman architecture, were illustrated for the first time (Kultur Portalı, n.d.). Behind the Hukumet Bridge, Alcak Bridge's partially seen footing shows the bridge was not rebuilt by the time the gravure was made (Appendix 5.11)[36]. This gravure shows

[36] For more detailed visual please see the appendix.

the all-new buildings typologies with the modernization motivation by the local governor. However, the urban fabric looks unchanged.

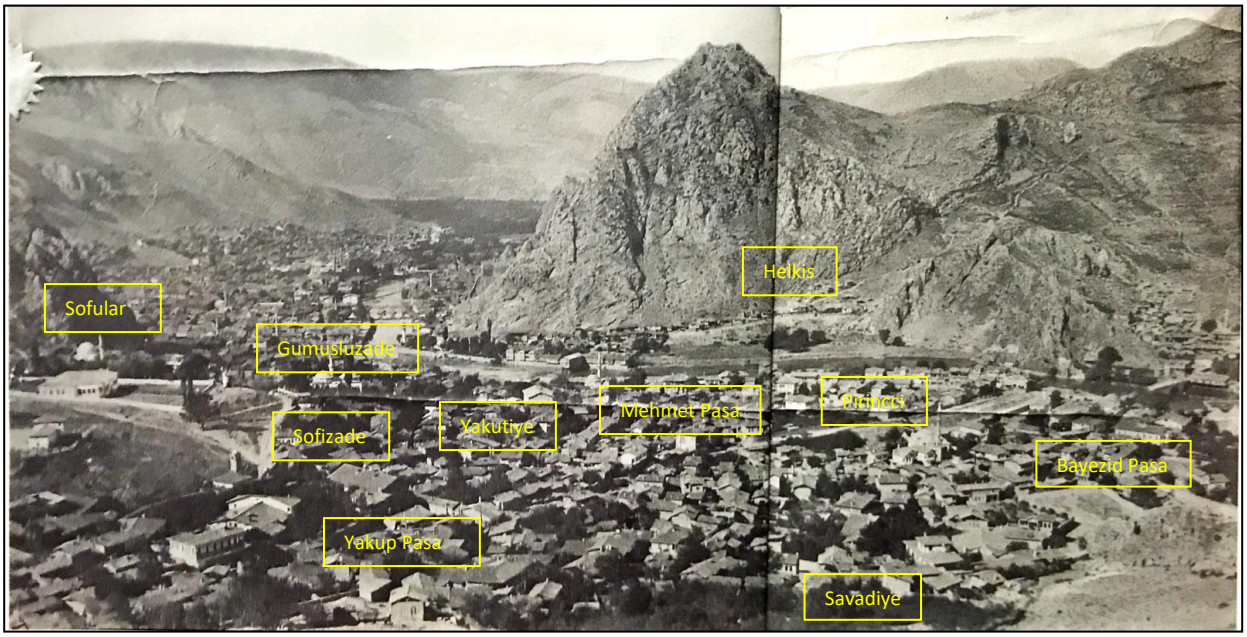

Fig. 5.23. Amasya in 1899 by Dildilyan Brothers (Menc, 2018, p. 17)

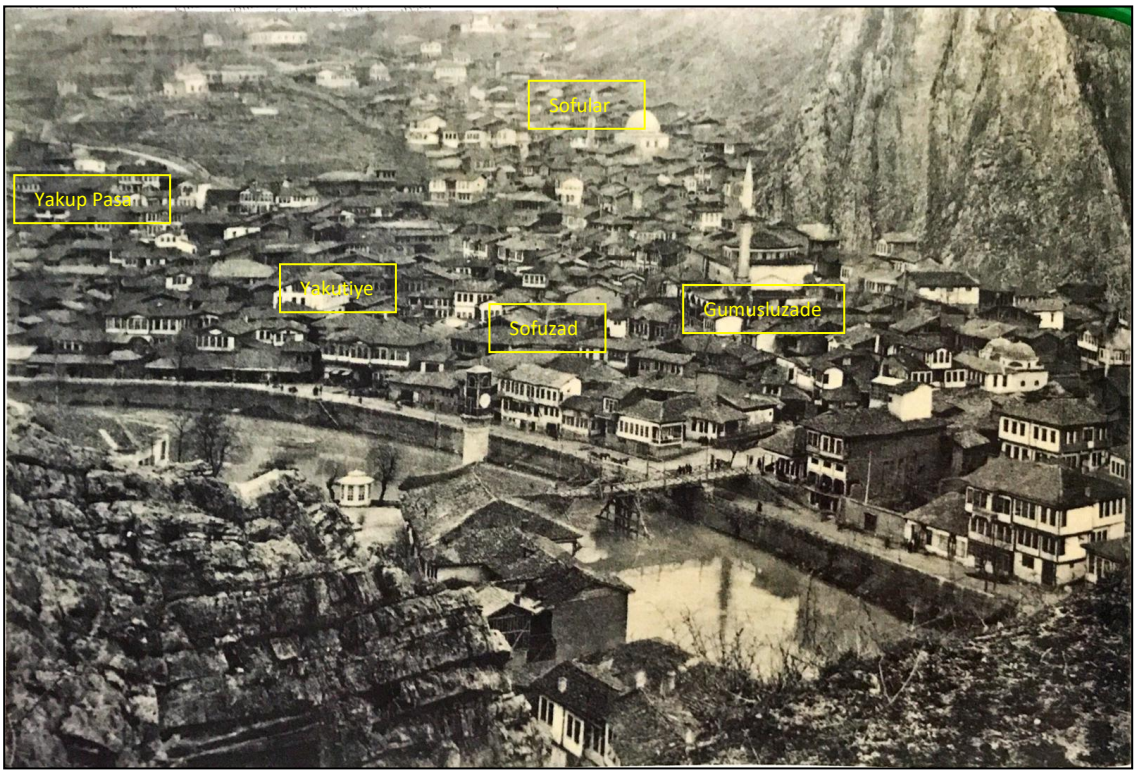

Fig. 5.24. Amasya at the beginning of the 20th century (Menc, 2018, p. 22)

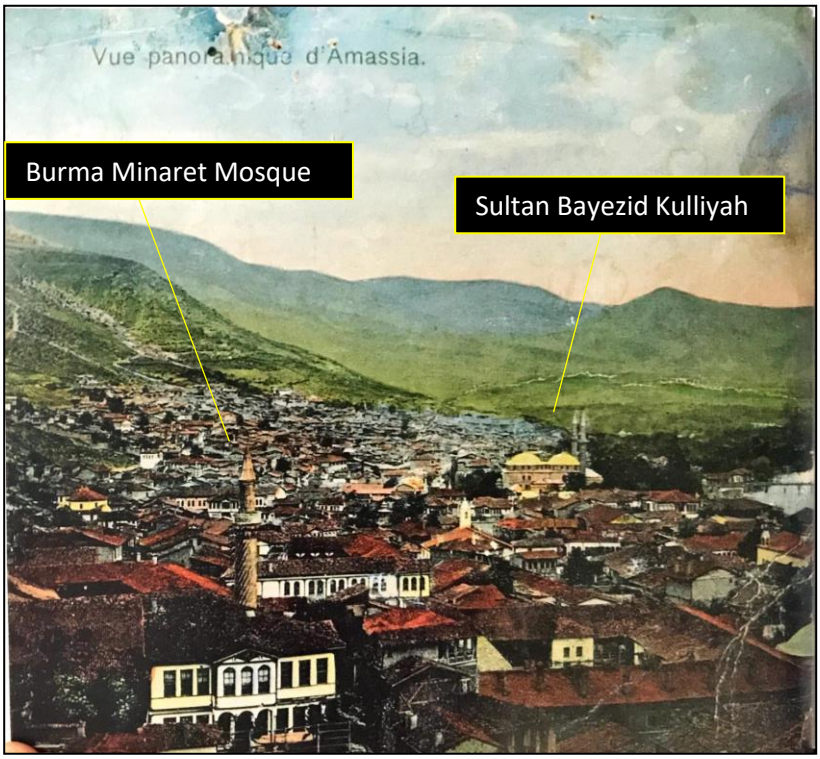

Fig. 5.25. Panoramic photo of Amasya before 1915 -1 (Menc, 2018, p. 30)

Fig. 5. 26. Panoramic photo of Amasya before 1915 -2 (Menc, 2018, p. 29)

Fig. 5. 27. Panoramic photo of Amasya before 1915 -3 (Menc, 2018, p. 29)

Fig. 5.28. Panoramic photo of Amasya before 1915 -4 (Menc, 2018, p. 28)

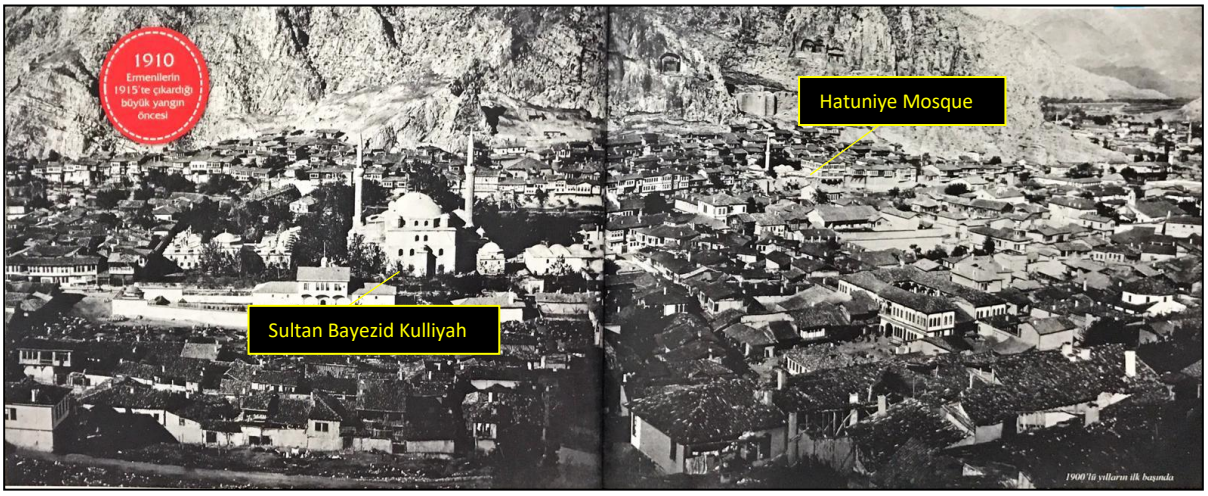

Fig. 5.29. Panoramic photo of Amasya before big fire in 1915 (Menc, 2018, p. 32-33)

All travelers managed to capture the unique geography and significant monumental structures of the city through their writings or depictions. Considering they were foreign travelers; they were more interested in the monumental structures that belonged to civilizations before the Ottomans and other Islamic civilizations. They commonly aimed to describe and depict the upper and the lower castle, the rock tombs, bridges, and the waterwheels. However, intentionally or unintentionally, they still described and depicted the urban fabric of Amasya from the Ottoman period and its characteristics as well.

The first thing in common in all images was the illustration of traditional residential architecture. Houses were one to three stories with gabled, tiled roofs. Houses were constructed with a wooden structure with adobe fillings. Some of them had balconies or cantilevering bay windows called '*cumba*'. In addition, due to the narrow valley and limited space, houses, especially in inclined areas, were built densely but coherently and efficiently with the topography. Aside from the first image, which depicts the city less dense in the 17th century, all images illustrate how densely occupied the city. This density never decreased and the same areas of mahallas are still occupied. The only change in the occupied area is the upper part of Hatuniye mahalla, which was destructed by the Amasya Municipality due to the danger of rock falling according to the city plan in 1980.

Mosques and minarets are another characteristic of the city that was captured by various artists. However, in the initial representations from Le Gouz and Hamilton, there were standalone domes or minarets. This might be the result of foreign travelers not being familiarized with Islamic architecture, therefore, even though perceiving their importance in the city fabric and silhouette; they made the mistake of illustrating them wrong or incomplete in these two specific cases. The rest depicted the mosques properly. What all of the artists perceived accurately and managed to depict precisely is that mosques were almost seemed they were sprinkled to the urban fabric and other structures formed around them, which created little focal points in the urban fabric. In addition, some of the mosques, which were illustrated in the general silhouette, were identified due to their location and details in the architecture: Sultan Bayezid Mosque and Kulliyah, Burma Minareli Mosque, Hatuniye Mosque, Gumuslu Mosque, Gokmadrasah Mosque, Sofular Mosques. All six mosques identified survived until the present day. Besides mosques and residential structures, which formed a substantial amount of the city center, there were depictions of some

other typologies. There was a depiction of a fountain on the road towards Amasya, which hints at the economic activities on the Silk Road which passes through the city. Furthermore, the bridges on the Yesilirmak River are also depicted. Hukumet, Alcak, Magdenus, and Kunc bridges can be identified, according to the perspective of the depictions. However, in the later depictions, coherent with the information from literature, Alcak Bridge cannot be seen due to a flood damaging the bridge. Due to the inclination in topography and privacy reasons, Ottoman cities did not have a clear planned street structure. Instead, there is a narrow, natural, labyrinth-like, coherent with topography, and surrounding structures formation. Besides topography, privacy had an impact on this formation process. Overall, travelers captured the fundamental characteristics of the city, which supports the written literature. Comparing today's image of the city, even though there are a few changes and loss of traditional urban fabric in the present day, some parts of residential neighborhoods and monumental structures are preserved considerably. The silhouette of the city did not change from the 17th century to the 19th century.

Even though Tanzimat's decisions did not change the urban fabric a great deal, the catastrophic fire in 1915 became a turning point for the city. Some records showed that Armenians started this fire when they were forced to leave the city. One-third of the city around the Sultan Bayezid Kulliyah was burnt down and monumental and civil architectural examples were destroyed. This disaster accelerated the change and created a new urban fabric (Aksoylu, 2009; Amasya Merkez İlçe 60 hektarlık Koruma Amaçlı İmar Planı, 2009, cited in Sari, 2010; Canik, 2011; Canitez, 2010; Er, 2009; Kozanoglu, 2006; Kuzucular, 1994; Menc, 2018; Oltulu, 2006; Sahin, 2006; Sari, 2010; Senol, 2010).

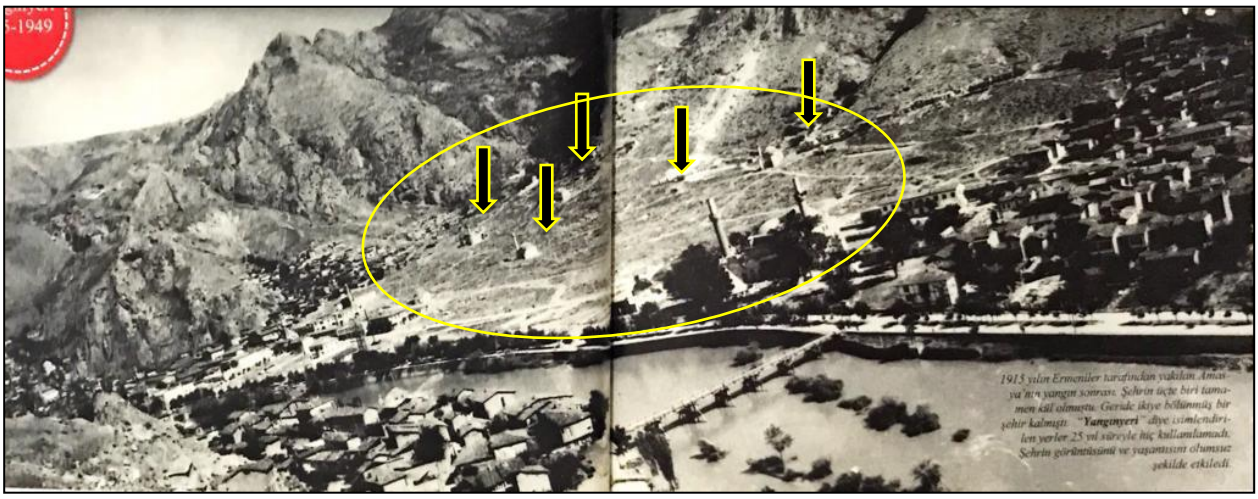

Fig. 5.30. The area that was burned in the 1915 fire (Menc, 2018, p. 74-75)

The area from Sultan Bayezid Kulliyah to the axis of Burma Minareli Mosque, Tashan, Kilari Suleyman Aga Mosque, Bedesten, and Sarachane Mosque was burned (Fig. 5.30 to Fig. 36). Also, from the pictures, it is clear that the stone mosques of upper mahallas survived this catastrophe. It also shows a pattern of cores of neighborhoods and their street network clearly.

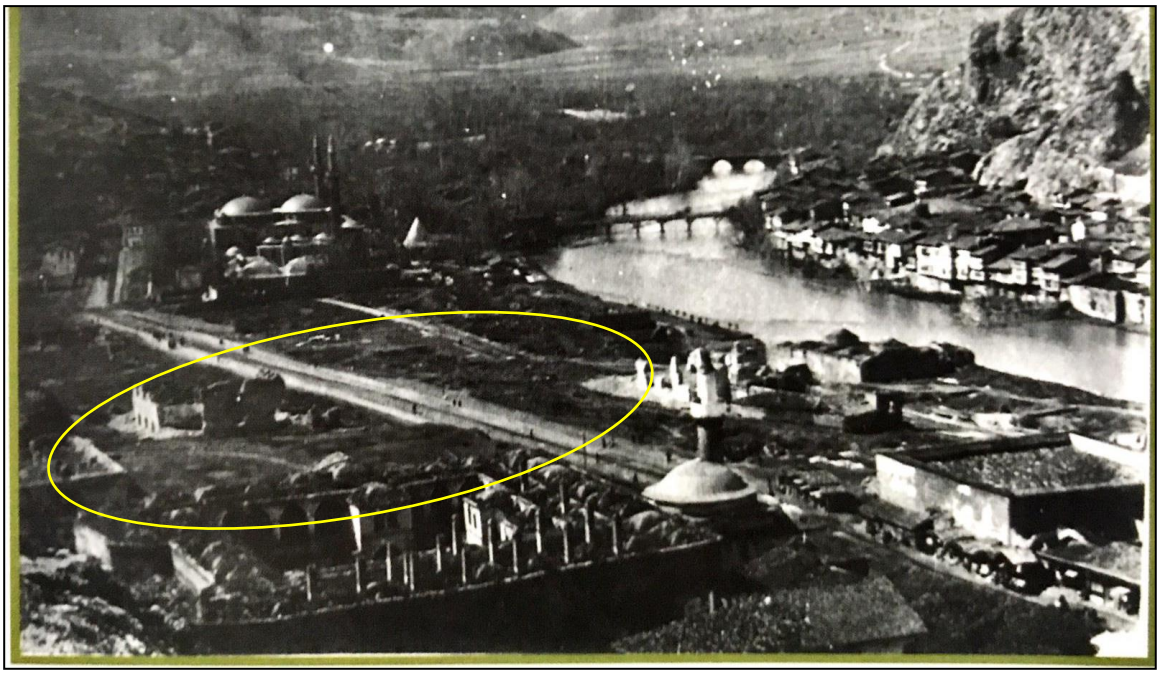

Fig. 5.31. The area that was burned in 1915 fire - 2 (Menc, 2018, p. 73)

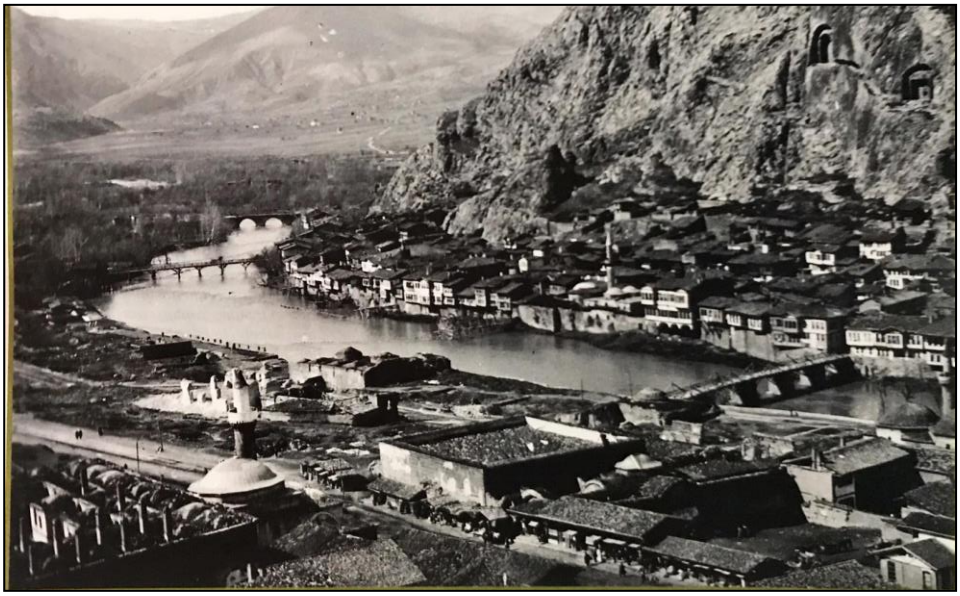

Fig. 5.32. The area that was burned in 1915 fire around 1925 by Foto Mari - 2 (Menc, 2018, p. 72)

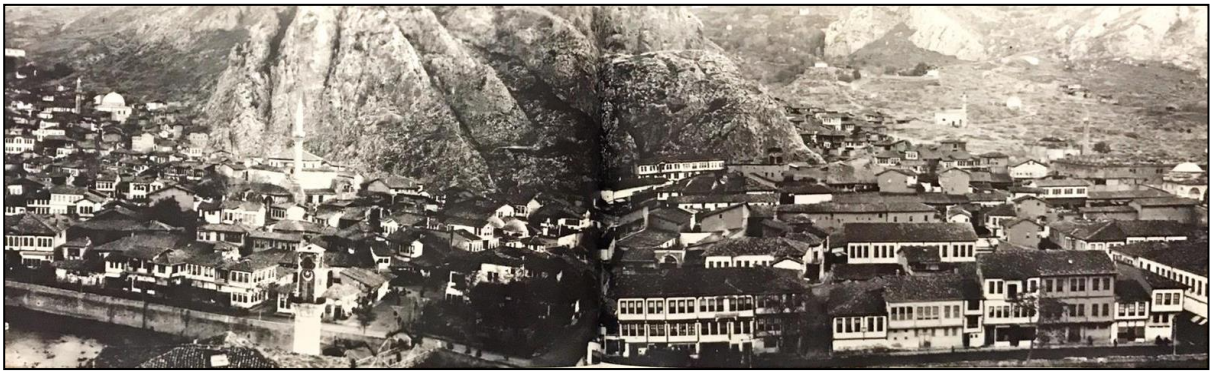

Fig. 5.33. Panorama of Sofular – Gumusluzade- Fethiye Mahallas (Menc, 2018, p. 134-135)

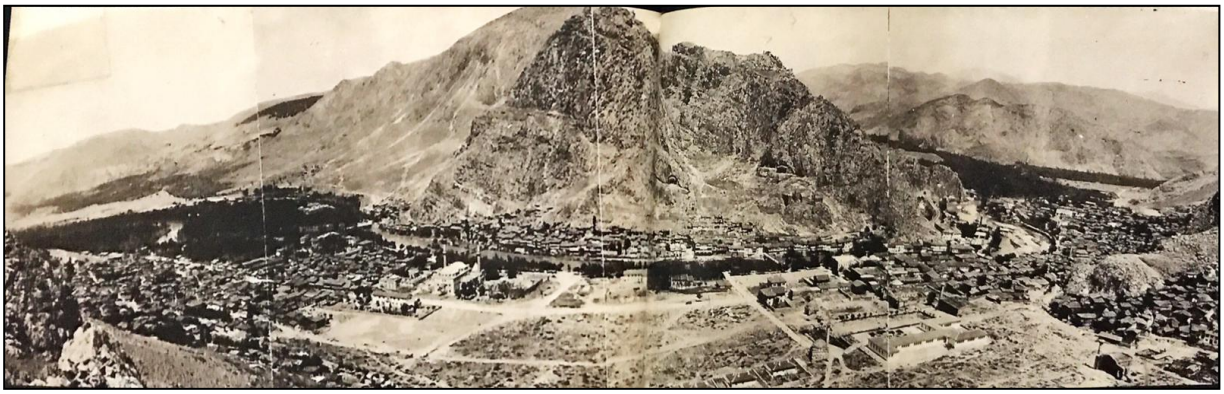

Fig. 5.34. The area that was burned in the 1915 fire (Menc, 2018, p. 282-283)

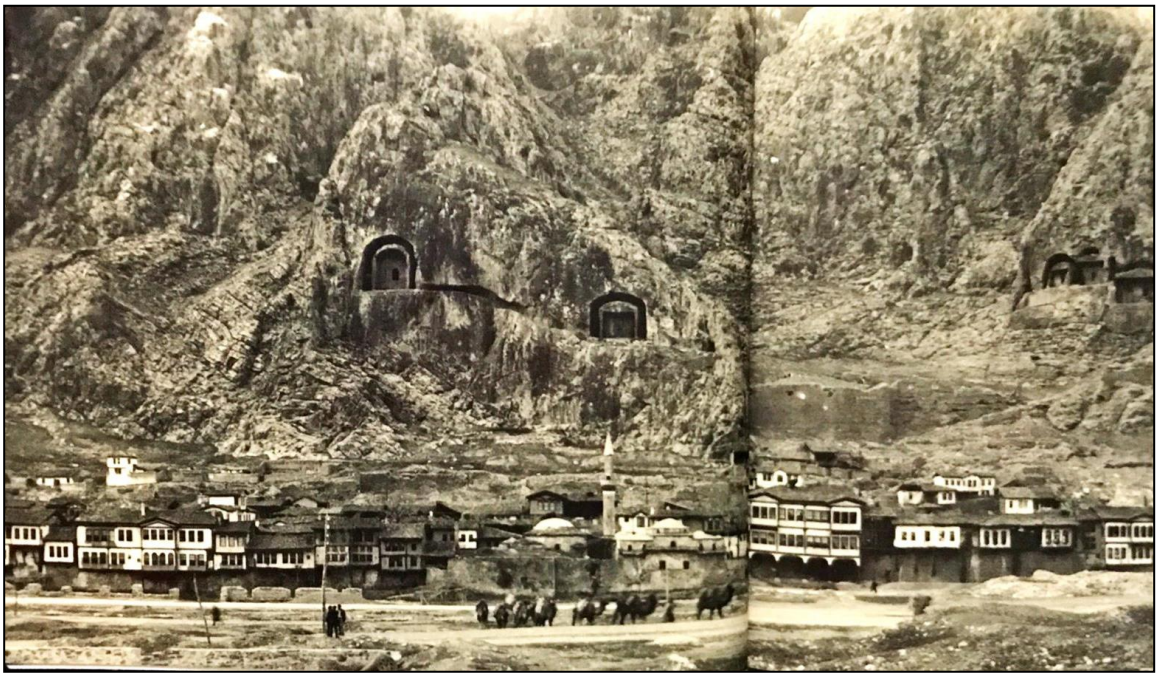

Fig. 5.35. Amasya in 1930s, Hatuniye Mahalla and Hatuniye Mosque at the back of the photo (Menc, 2018, p. 39-40)

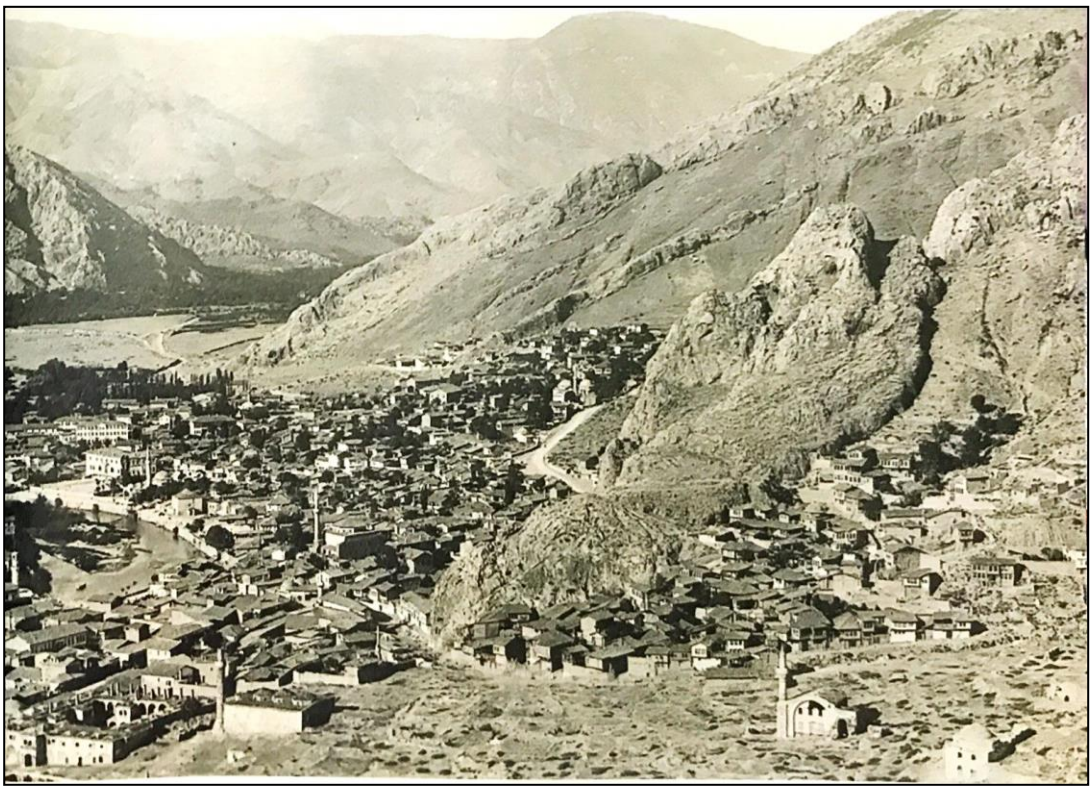

Fig. 5.36. Disappeared Fethiye Mahalla and unaffected Islam Mahallas behind (Menc, 2018, p. 245)

5.5. Details of Infrastructure and Physical Fabric of Amasya during the Ottoman Period

This section provides details of the infrastructure and physical fabric of Amasya. First, the bridges of Amasya are introduced. Bridges have high importance as an infrastructure that connects the city to the outer world as well as the two riverfronts. Five bridges are presented with general information and the actions that are taken about these structures after each stressor is presented. The second part of this section gives detailed information on all mahallas of Ottoman Amasya. The focus on this part is on the service core and its buildings. Similarly, to the bridges, these part is also focused on disasters and actions that are taken before, during, and after are presented. Due to no records on residential buildings, information on service buildings, waqfs, and community are used to draw conclusions for the whole mahallas, especially in terms of stressors mahallas faced and actions that were taken to recover and advance to a better state.

5.5.1. Bridges of Amasya

Since River *Yesilirmak* divides the city into two sides, the bridges were needed and built from the very early stages of the historical settlements. These bridges played an important role in connecting the two sides of the city as well as being an important part of the trade routes passing through Amasya. When the development of Amasya was completed during the Ottoman era, there were five bridges (Fig. 5. 37). While two of them were wooden, the other three were stone. These bridges created axes of the city and still act as an axis in the current day that connects the trade routes to the city as well as two sides of the riverfront.

Fig. 5. 37. Bridges of City Center in 2017 (Gurel, 2017).

The first bridge of the city is Alcak (Low) Bridge (Fig. 5.38), it is also called Low Bridge now built during the Greek era. It was originally built with stone however because the level of Amasya city increased over time the bridge location became low. Tozer (v. 1879) described it: ' *Near our khan,*

the river was crossed by another bridge, built of wood, but the subtractions are of stone, resting on round arches, which, from their massiveness, appear to be of the Roman period; these emerging but little from the surface of the water, and at most seasons of the year must be covered; but from between the arches there rise piers, which, though now broken, must evidently have served to support an upper bridge' (Tozer, 1881, p. 28). Low Bridge was used until 1855. In 1866, Governor Ziya Pasa tried to promote '*modernization*' and hence tried to change the traditional silhouette of the city. However, when the bridge was collapsed during the flood in 1881, by the donations of locals, the bridge was rebuilt with wood and stone recycled from collapsed churches in 1882. It was damaged again by the flood in 1965 and it was renovated in 2010 by one of the government offices (Okumus and Teselek, 2018; Sari, 2010).

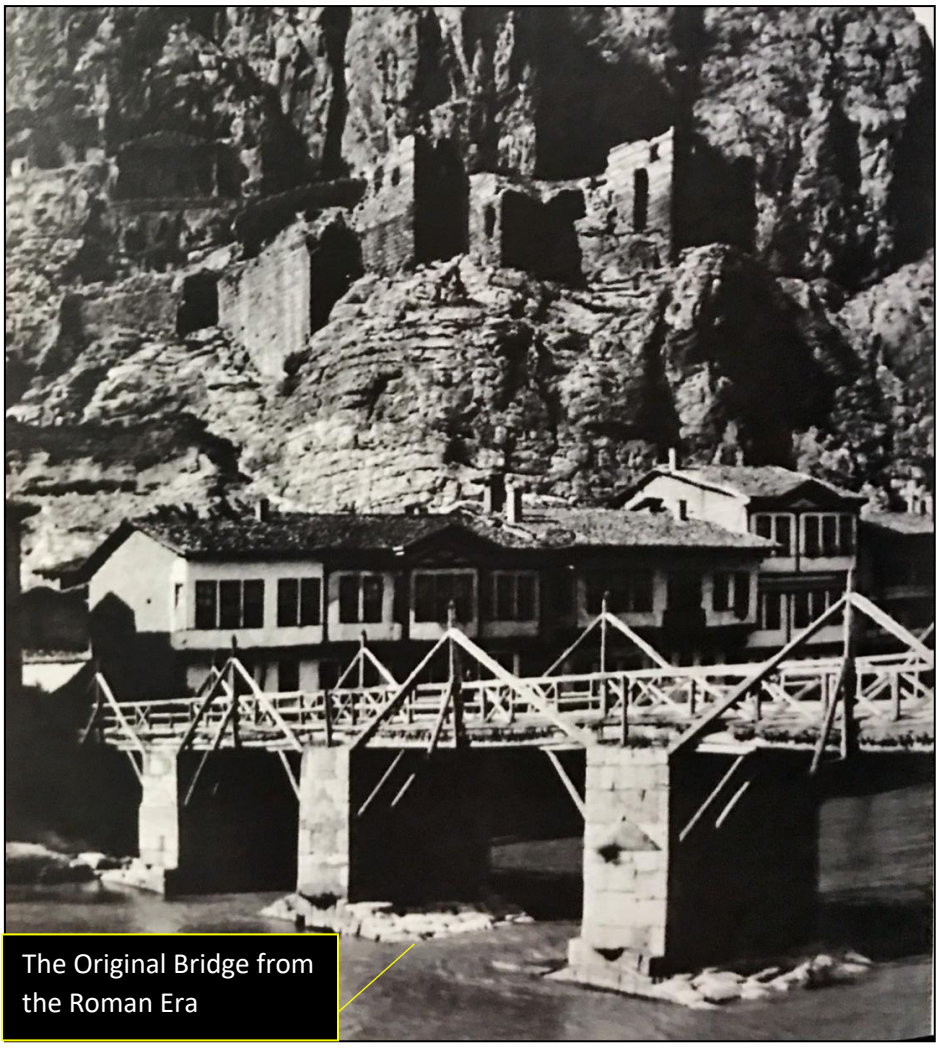

Fig. 5.38. Alcak Bridge in 1952 (Menc, 2018).

Kunc (Kus) Bridge was the second bridge that connected the city to the interstate road network during the Greek era (Fig. 5.39). During the Seljuk era, the daughter of the Sultan built a stone bridge. during the Ottoman era, it was rebuilt by Yorguc Pasa from the stones from a ministry from another city. In 1948, it was renovated (Okumus and Teselek, 2018). The first time, Strabo, in the Greek era, mentioned these two bridges of the city. They stated '*two bridges have been built over the river, one from the city to the suburbs and the other from the suburbs to the outside territory; for it is at this bridge that the mountain which lies above the rock terminates*' (Strabo and Jones, H., 1928, p. 447).

Fig. 5.39. Postcard showing Kunc Bridge (Menc, 2018, p. 125)

Helkis (Hukumet) Bridge was originally built as a wooden structure during the Roman period (Kultur Portali, n.d.). Helkis Bridge has suffered from several natural disasters and it was repaired and altered over time. The existing record showed that during the Ottoman Period, it was rebuilt and replaced with another wooden bridge (Fig. 5.40). In 1938, when the government demolished it and it was rebuilt as concrete in 1940 (Fig 5.41 & Fig. 5.42) (Sari, 2010). This bridge was to connect the northern strip of the River Yesilirmak riverfront, to the southern part of the urban fabric.

Fig. 5.40. Picture of Helkis Bridge in 1930 by Albert Gabriel (Menc, 2018, p. 113).

Fig. 5.41. Picture of a temporary bridge during the construction of a new bridge (Menc, 2018, p. 116).

Fig. 5.42. Picture of a new Helkis (Hukumet) bridge during the construction of a new bridge in 1940 (Menc, 2018, p. 117).

Meydan (Istasyon/Station or Square) Bridge was originally built in 1145 during the Seljuk period before the Ottomans however it was collapsed due to the damage from many earthquakes and floods. In 1370, the bridge was rebuilt as a replica of an original structure (Fig. 5.43). It was damaged in a flood in 1824 and an earthquake in 1823 and repaired in 1828. In 1940 it was renovated (Kultur Portali, n.d.; Okumus and Teselek, 2018; Sari, 2010). This bridge was part of the interstate road system and it was connecting northeast mahallas to the south.

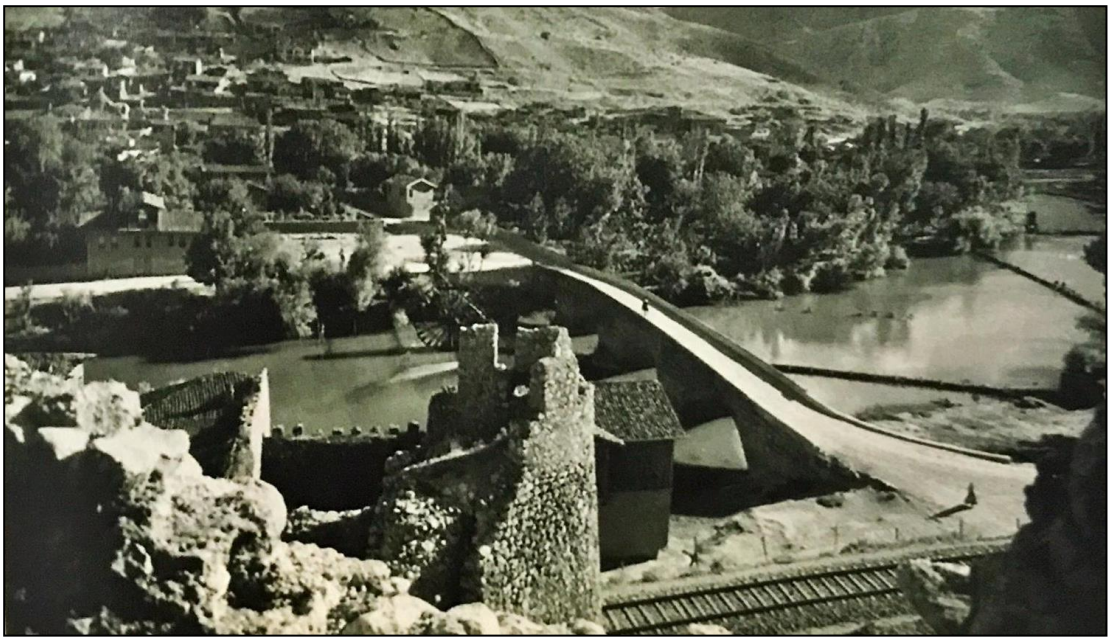

Fig. 5.43. Picture of a Meydan Bridge (Menc, 2018, p. 119).

The last of 5 bridges, Magdenus Bridge, was built in 1485 as a wooden structure. It was damaged many times by floods. It was rebuilt by locals in 1653 and 1718 and repaired in 1826 and 1865 (Fig. 44). In 1968, it was demolished by the flood and rebuilt as concrete by the municipality in 1969. Another repair was done by the municipality between 2010 and 2011 (Okumus and Teselek, 2018; Sari, 2010).

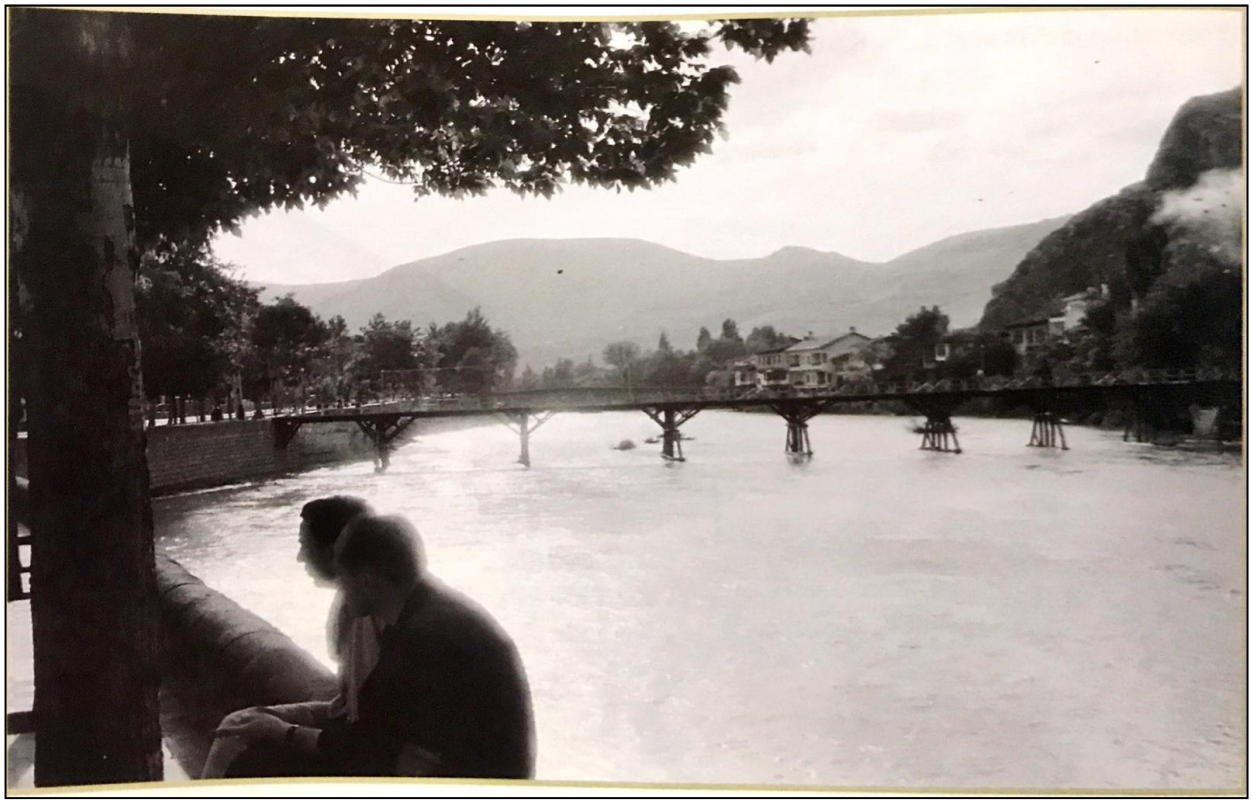

Fig. 5.44. Picture of wooden Magdenus Bridge before the 1968 flood (Menc, 2018, p. 119).

According to the records and travelers' accounts, bridges have been replaced or renovated many times due to damage from the floods of the river. Although the location of the bridges remained the same over centuries, their structure was changed several times. Especially wooden bridges are less likely to survive floods. The decision of keeping wooden bridges could be the result of wood being convenient and cheap local material for the replacement after damage. Because even though the bridge itself might be repaired or replaced with another material, the location of the bridges and the axes they created stayed the same and maintained their functions over centuries, this was probably due to geographical constraints and being part of well-established trade routes.

5.5.2. Mahallas and Residential Buildings

In Amasya, residential areas formed similar to other Turkish cities. Neighborhoods were formed around service buildings such as a mosque, masjid[37], maktab[38], madrasah[39], or zawiya[40]. These neighborhoods were generally named after the founders of these buildings, or important people who served in Amasya, or the characteristic of the neighborhood. Residential buildings were constructed in traditional Turkish architecture style, which was driven by local climate, local materials, and topography. Local materials such as adobe and wood were mainly used in the construction of these houses. However, renovation and modification such as constructing new entrances and annexes caused them to lose their original typologies. Because of the lifespan of wood, houses belong to the Early Ottoman period (14th to 18th century) are very rare. Civil architecture in the city present-day belongs to a late period of the Ottoman Empire from the 19th century. Residential buildings were adjacent to each other with one or two stories (Er, 2009; Guzelci, 2012; Kok, 2006; Kurt, 2013; Kuzucular, 1994; Simsirgil, 1996; Turkoglu, 2006).

Travelers also wrote about the materials and structural details of the houses. The main construction material was generally adobe with wood as structural support or for interior details. According to Henry John Van Lennep, the houses looked made of adobe, however, they were made of a wooden skeleton and filled with adobe (*himis*) (Fig. 5.45), and roofs were red tiles (Van Lennep, 1870) (Fig,5.46). Dernshwam mentioned even the inner and residential part of the lower castle was made of adobe. In the 16th century, houses were made of adobe with interior parts made of unfinished wood. In the city center, poor-looking adobe houses were on top of each other like birds' nests. There were 2 story houses, and the upper floor was made of wooden planks covered by earth (Busbecq, Forster, and Daniell, 1881, p. 152; Tuzcu, 2007). Locals used natural and cheap materials to build the houses, and hence these houses were more susceptible to the effects of weather and natural disasters. However, in the case of damage, those natural materials were easy and quick to replace and alter.

[37] A smaller type of mosque however communal prayer such as Friday prayer cannot be performed here.
[38] Primary school
[39] Higher level of education, equivalent of universities
[40] A building for religious orders

Fig. 5.45. Himis detail from a house in Amasya (Meryem Gurel's archive, 2017)

Another detail of residential houses was their roof and their maintenance. The roofs of the houses during the initial period of the Ottoman Era were flat. *'The thickness of the earth is half arsin (Turkish yard for 68 cm) [..] Every roof has a big cylinder rock to press the earth roof (*Tuzcu, 2007, pp. 37-38). Busbecq stated *'...They use a fragment of some ancient pillar for a roller, and when any part of the roof is damaged by rain or wind, they pull this roller backward and forwards until the roof is once more solid and smooth.[...] With this technique, locals managed to protect their houses from natural erosion through continuous maintenance'* (Busbecq, Forster, and Daniell, 1881, p. 152) (Fig. 5.47).

Fig. 5.46. A street from Hatuniye mahalla showing traditional buildings (Meryem Gurel's archive, 2017)

Fig. 5.47. A man using 'Log Tasi' for flat earth roof maintenance (Kurt, 2020).

Even though travelers mentioned flat roof houses, the existing traditional houses have a gable and hip roof, which can be seen in Fig. 5.46. While Morier, in 1809, mentions flat roof houses, the drawing from Hamilton in 1836 (Fig. 5.17) showed gable and hip roofs. Either information by Morier was not entirely correct or the residential buildings had changed in 27 years. Probably because of the lifespan of natural materials and as a result of natural disasters, these houses were rebuilt or renovated over time, which changed the appearance of the urban fabric from the beginning of the 19th century to its end.

The density of houses was mentioned as well by Fontanier, Rottiers, Porter, Texier, and Hamilton. According to their writings, the city looked like very dense housing in narrow streets looks like climbing on top of each other with cantilevering stories. Rottiers stated *'the streets were narrow and so ill paved, our horses proceeded with difficulty. The houses are high, having projecting stories, […], that the attics on each side did not possess more than twelve inches between. The air, consequently, was confined, and the stench, from accumulated filth below, almost beyond bearing'* (Tuzcu, 2007).

Density was a result of geographical restriction, however, this was the reason for fire spreading very quickly.

Fig. 5.48. Map of mahallas in Amasya (Appendix 5. 13).

Lastly, after giving details on residential buildings, this part will introduce mahallas and their details. There were no clear boundaries set by the Ottoman government. There are names of mahallas mentioned in the records not enough details to set a list. The most comprehensive list and detail were written in the 12 volumes of books called History of Amasya written between 1912 to 1928 by scholar and writer Huseyin Husameddin Yasar who was also from Amasya. They listed 55 mahallas at the beginning of the 20th century. Even though their list is used as the main guide for this research, Ziyare, Karasenir, and Kayabasi mahallas were not included due to being far away and detached from the city center. Also, Helkis mahalla, unlike the book, was considered as one mahalla. Therefore, this research focused on 51 mahallas from the traditional period where the whole development was completed. Due to records of residential buildings are absent, construction of service core, disasters they went through, actions that were taken by locals about the mahallas were listed for more in-depth analysis (Appendix. 5.12). According to this information, a map of Amasya Mahallas with service buildings in detail was created for the first time in this research (Appendix

5.13). Below will present some of the mahallas with details on forming period, maintenance decisions by locals, stressors, and the recovery process.

- **Acem Ali Mahalla**

Acem Ali Aga[41] built a fountain and a maktab[42] next to their house in this mahalla before 1468 and as a result, the mahalla was named after them. Their grandson Hace Acem Ali Aga built a stone mosque in 1511 to complete the service core. It was repaired several times, however, damaged in a fire in 1854 that burned the minaret[43] down totally. Also, there was a Sultan Hatun Daru'l Kurra[44] built in 1505 with its waqfs close to the Bali Bey[45] Mosque. Lastly, Sehir Kethudasioglu Tekke[46] was built in 1822. Overall, a fountain, a maktab, a mosque, a madrasah[47], and a tekke was built in this mahalla. A fire in the second half of the 19th century damaged the structure but was not rebuilt showing how changes in the 19th century were affecting Acem Ali mahalla negatively (Akbas, 2018; Yasar, 2004).

- **Bayezid Pasa Mahalla**

The mahalla was named after Bayezid Pasa[48] who lived in the mahalla and built Bayezid Pasa Mosque, soup house, and guesthouse which was completed in 1414, and their waqfs were founded in 1417. The structures survived until today except for a minaret of the mosque which was collapsed during an earthquake and not rebuilt. There is Kumacik Hammam[49] next to Bayezid Mosque which was built in 1495 and 8 houses were donated as a waqf property to support the kulliyah in Samlilar Mahalla. It was common for waqfs to own houses for income purposes Moreover, this example shows while these buildings were physically part of Bayezid Mahalla, they were serving the Samlilar Mahalla service core economically, which indicates the connectivity of different mahallas. Later in 1531, next to Bayezid Pasa Mosque, a masjid[50], a mosque, and a fountain were built by Gazi Bey. On

[41] Aga is title used for local big landowners
[42] Primary school
[43] Tower-like structure that is part of a mosque
[44] Daru'l Kurra is a higher level of madrasah for more extensive education on Quran
[45] Bey is a title of respect for a man.
[46] A building for religios orders.
[47] A higher level of educational institutions that is equivalent of universities
[48] General
[49] Public bath
[50] A place of worships for Muslims. The difference with Mosque is that in masjid Friday prayers cannot take place

the west side of this fountain, for a religious leader of a religious order, a stone mosque called Azeriler (Sirvanlilar) Mosque was built between 1880 to 1892 by Mahmud Efendi[51] who lives in another city (Sirvan). However total completion was in 1908 by Mehmet Efendi. When there was a problem in the construction period, locals stepped in to help and contribute. Next to these buildings, a tomb for Seyyid Mir Hamza Nigari and a wooden madrasah next to it was built. Between this building and Kumacik Hammam, Jojuyet church and maktab were built in 1883. Even though built by different people and at different times, they were built close to each other to create and advance the service core. Lastly, there was a fountain which was built in 1868 and IV Murat Caravanserai[52] built from 1634 to 1638 (Akbas, 2018; Catal, 2009; Urak; 1994; Yasar, 2004).

- **Bozahane Mahalla**

This mahalla was located around Ibadullah Carsi[53] and named after a Bozahane[54] that was built here. In 1469, Acem Ali Aga built a fountain in 1525, and Ubeydullah Efendi built a masjid and donated a han[55], 10 shops, 12 houses. Similar to the other mahallas locals with wealth collaborated to build service buildings for this mahalla. Ubeydullah Masjid was burned down in 1602 and rebuilt again later by their grandson. The masjid was burned in 1730 and all of the waqfs properties were burned as well. Therefore, Mehmed Aga rebuilt in 1734 and donated 9 shops around the masjid, however, all were damaged again in 1854. Even centuries later, locals contributed to the survival of the service core. In 1856, the masjid and the shops were renovated with the help of locals. It was burned down again in 1886 and rebuilt by the donations of locals (Yasar, 2004).

- **Cami-i Enderun Mahalla**

This mahalla was originally a part of Karatay Mahallas and detached from it eventually. Mahalla was named after Enderun Mosque with a madrasah which was built with brick walls and wooden roofs before 1238. Even though the mosque had waqf properties before, during the Ottoman period, the mother of the Sultan, Gulbahar Hatun[56] donated villages to its waqf in 1474. Also, the wife of another

[51] A title of man mostly used during the Ottoman period.
[52] An in n to accommodates caravans and travellers
[53] Market area
[54] Boza is a traditional drink. Bozahane is where it is made and served.
[55] A building for traders to sell their products.
[56] A title of woman, especially used for royal family.

Sultan, Gul Cicek Hatun, donated properties in 1505. This demonstrates the existence of shahzadahs and their family in Amasya created more resources for the waqfs. Lastly, there was also a Gulabi Tekke which was built in 1565 and was given to another religious order in 1688 and eventually disappeared (Catal, 2009; Yasar, 2004).

- **Ceribasi Mahalla**

Similar to other mahallas, this mahalla was also named after Ceribasi Mehmed Celebi[57] who lived here and built a masjid. It was built around 1391 with its waqf and in 1783, a minaret was added. Also, Ceribasi Daru'l Kurra originally was built in this mahalla with a mosque. Even though more properties were added in 1706 to its waqf, it was disappeared eventually. In 1864, Governor Ziya Pasa rebuilt this mosque and in 1891 its domes were secured by Mehmet Aga. Even though the governor damaged certain mahallas with the idea of modernization, they still contributed to the survival of some monuments. In this mahalla, there were 3 fountains built by different people in 1401, 1732, 1469. Lastly, Nuh Tekke originally was built in 1704 as a madrasah and converted to tekke in 1730. It was burned in 1818 and eventually became a cemetery (Budak, 2015; Yasar, 2004).

- **Daru's Selam Mahalla**

Esen Bey built a masjid and fountain with its waqfs in 1383, which means this mahalla was originally founded in the Turkish principalities period before the Ottoman period. Ahmed Efendi restored this masjid in 1578 during the Ottoman Era and added a maktab. The Ottomans protected and developed existing structures that are useful when they conquered a new city. Lastly, Hoca Sultan Tekke was built in 1475. It had a guesthouse and kitchen with its waqfs. It was closed by the heirs of the building in 1759 which is an unusual act by heirs (Budak, 2015; Yasar, 2004; Ipek, 2016).

- **Dere Mahalla**

Miss Masume Hatun built tekke, masjid, and a fountain in 1516. Also, Miss Fatma Hatun built a masjid with a fountain in 1544 which all disappeared. Even though it was a rather small mahalla, it had two service cores. Considering the dates of these structures, this mahalla was founded later in the 16th century and its guardians were two women. Women were active members of the community

[57] Formerly title of respect form man or title of the leader of a dervish orders

and took responsibility. Because buildings were disappeared even though they were built with a waqf, distance from the central core could play a role in this. Lastly, Atabey Madrasah was built in 1327 and suffered from many earthquakes. Eventually, the building collapsed and disappeared in 1877 (Yasar, 2004).

- **Devehane Mahalla**

The mahalla was named after a stop for camel caravans. There was a famous Kagni/Kanli Bazar[58] here. Haci Ali Aga built Aydin Hammam and a masjid in 1223. This hammam was demolished in an earthquake in 1591. In 1609, el-hacc Ali Aga rebuilt this hammam, masjid, and added a tekke. When a reconstruction happened after a stressor, funders of reconstruction added new buildings if they found necessary. El-hacc Ali Aga donated a han and many shops for this waqf to create more resources. All three buildings were demolished in the 1730 fire. In 1813, Abdullah Efendi rebuilt masjid and tekke and added a fountain. Also, next to Sultan Bayezid maktab, in 1746, Abdullatif Efendi built a library which is another example of accumulating service buildings close to each other even building in different time periods by different people. Lastly, a tekke in 1832 and a fountain in 1843 was built. There was Devehane and Kapancizade Madrasahs in this mahalla (Akbas, 2018; Catal, 2008; Yasar, 2004).

- **Eski Kethuda Mahalla**

Kethuda Mehmed Aga, who is a civil servant, built Kapisi Kible Masjid before 1432 and the mahalla was named after them. They donated 8 shops from Bedesten in Kazanci Mahalla for its waqf, which is also another example of connectivity between mahallas. After the masjid was burned in 1602, it was rebuilt in 1609, by Mehmet Efendi, and 3 more shops were donated from Bedesten[59] for its waqf. Also, Mehmet Efendi's son Sari Mehmet Aga donated 2 shops in Bedesten. Ahmed Aga who lived in mahalla built a fountain in front of this masjid and next to their home in 1760. Huseyin Bey built another fountain in front of their house in 1803. While people with opportunities could provide themselves with their own clean water resources, they decided to provide these fountains to public areas close to their homes showing the community sense among them. Also, after Kasifiye Madrasah

[58] Open market space
[59] Vaulted, freproof building where valable goods and money were kept in towns.

was built in 1762, Omer Aga built a fountain next to Kasifiye Madrasah in 1765. Moreover, Omer Aga left a will on their death bed to build a madrasah with their money. Because it was built as a wooden it was destroyed easily and rebuilt by Hasan Aga in 1828 and also in 1886 by Ms. Aise Hanim[60]. Their strong connection the religion and the idea of an afterlife was reflected in leaving a will for the construction of more service buildings and when this building was damaged locals with wealth stepped in for the recovery process a couple of times. Hasan Aga also built Ak Hasanoglu Tekke in 1829 which demonstrates continuing support from the locals of mahalla for the construction of more service buildings to serve their community. Eventually, this tekke was converted to a classroom in 1866 and then converted to a madrasah in 1886. These conversions are examples of refunctioning buildings to continue serving their community according to their needs (Akbas, 2018; Budak, 2015; Catal, 2009; Yasar, 200).

- **Fethiye Mahalla**

There is a Fethiye Mosque which was originally converted from a church in 1117. Conversion from churches to the mosque is common after the conquest in Ottoman cities. When the earthquake in 1647 damaged the building, it was repaired by Fethiyeli Mustafa Sitki Pasa and their sister founded the waqfs for the mosque. The waqf trustees repaired it in 1638, 1777, and 1883. Also, Qadi[61] of Amasya built Qadi Hammam in this mahalla, and their son built Qadi madrasah next to it in 1595 and repaired it in 1621. The hammam became a waqf property of this madrasah in 1506 (Budak, 2015; Catal, 2009; Ipek, 2016; Yasar, 2004).

- **Gokmedrese Mahalla**

This mahalla was named after Gokmadrasah Mosque and Madrasah which was built before the Ottomans in 1267. On the north of the mahalla, Ottoman commander Ismail Bey built a tekke with waqfs in 1416. Yorguc Pasa built a stone mosque, soup house, and a wooden madrasah in 1431, and its waqf was founded in 1437. The waqf owned a Cardakli Hammam. The hammam was damaged in the flood in 1879; however, it was not repaired due to lack of funding and eventually disappeared. The madrasah was demolished in 1855. Sunbul Mehmet Efendi built another tekke in 1829. Also,

[60] Hanim is a title for women meaning Miss or Mrs.
[61] Local judge

there was a Hayriye Madrasah that was built as wooden in 1795. Feyziye Madrasah was built wooden with its waqfs in 1738. It was burned in a fire in 1792 and rebuilt in 1793 and new properties were donated to its waqfs in 1794. It was disappeared after its waqfs disappeared (Catal, 2009; Duman, 2010; Inan Ocak, 2018; Seker, 2011; Yasar, 2004).

- **Gumusluzade Mahalla**

Gumusluzade Taceddin Mahmud Celebi lived in this mahalla and built Taciye Mosque in 1325 and waqfs properties were donated in 1327. Their grandson donated an orchard in Helkis Mahalla. It was damaged by the earthquake in 1415 and repaired and it was in a fire and rebuilt as stone in 1485 and waqfs properties added. When it was burned down in rebellions in 1602, recovery was done. Another repaired was done in 1688 and added new properties to its waqf. A couple of earthquakes after and fire in 1721, it was rebuilt by waqf trustee in 1722. In 1822, Ali Bey added shops to its waqf. Fatma Hatun built a madrasah with its waqf in 1745 next to the mosque. A masjid was built in 1614, a fountain in 1689, a maktab in 1510, Egri Mosque in 1803 with a fountain built with it. There was a Gumusluoglu tekke built in approximately in 1408. In 1740, a madrasah was built in its place which also disappeared. Seyhoglu Tekke was built in 1776 next to the Egri Mosque. Also, there was a wooden Fatimiye Mosque built in 1740 and its waqf properties were donated in 1745. There was a continuation of additions to the service buildings over centuries (Budak, 2015; Catal, 2009; Ipek, 2016; Yasar, 2004).

- **Haci Ilyas Mahalla**

Shahzadah Ahmed built Bayezid II Kulliyah in the name of their father, the sultan in 1481-1486. It has a mosque, ablution[62] space, soup house, madrasah, daru'l kurra, maktab, guesthouse. It survived a couple of earthquakes; however, it was damaged in 1591 which damaged the mosque and the soup house and immediately repaired. 1579 earthquake damaged the madrasah and imaret. The earthquake in 1668 damaged the mosque, minarets, and the soup house a great deal and was repaired within a year. The damages in later earthquakes were repaired immediately. In other mahallas, in some cases, recovery after facing a stressor took longer, while in this kulliyah, as a central core, there was an immediate recovery due to its importance. In 1883, it was converted to

[62] Ablution space contains fountains with running water for Muslims to clean before prayers

Ibtidai Maktab. Daru'l Kurra was abandoned in 1848 and became a house for government officers in 1879. After a will of a man, with their properties, a library and a fountain were built next to the kulliyah in 1909 and finished in 1911. Also, in this mahalla, there was a masjid (b. 1609) next to a Kutup Tekke (b. 1609), a maktab (b. 1609), with waqfs (Budak, 2015; Yasar, 2004).

- **Haci Hamza Mahalla**

Haci Hamza Mahalla was formed as an extension of Fethiye mahalla and detached and become an independent mahalla. The teacher of the Sultan, Hamza Bey, lived here and built stone masjid, maktab, and fountain. Their sons founded their waqfs. So, the family collaborated to take responsibility for different aspects of service buildings. When this masjid was damaged in the earthquake of 1647, it was renovated by Sefer Aga who also built a fountain next to it. It is again another example of another person other than the original funder stepping in for recovery, and moreover, adding extra functions to more advanced service for the community (Akbas, 2018; Catal, 2009; Yasar, 2014).

- **Helkis Mahalla**

This area was originally occupied by the Romans and named after a Roman man who lived here. Later, during the Turkish principalities period, a man lived here and built a masjid and religious research center around 1291 but it was disappeared eventually. After the Ottoman period started, in 1609, Mustafa Aga built a masjid and a maktab with its waqfs which were later renovated by their grandson. However, in 1864, the governor of Amasya Ziya Pasa demolished houses in this area to build modern structures such as governor house, municipality, prison, post office. In 1894, Ziya Pasa also built a clock tower and pharmacy (Yasar, 2004). The modernization activities by the newly founded local government in the second half of the 19th century eradicated a traditional neighborhood for what they envisioned advancing.

- **Karatay Mahalla**

Mahmud Celebi built a tekke with a guesthouse and a kitchen in 1404. Hizir Efendi built a masjid next to it in 1534 and Osman Efendi built a madrasah in 1736 next to Seyh Masjid with waqfs. Grandson of Hizir Efendi repaired the masjid in 1648. Also, in 1404, Mahmud Pasa built a Daru'l

Kurra in 1404 (Budak, 2015; Yasar, 2004). In this mahalla, various people in a big period of time continued advancing the condition of the mahalla.

- **Kazanci Mahalla**

This mahalla was originally named after Kaya Pasha who built a hammam and maktab for the mahallas in 1402. Later in 1485, Huseyin Aga built Bedesten and Firuz Aga built Tashan, and Selim Aga built a stone mosque in 1485. Properties of waqfs were donated in 1495. Also, on top of the damaged hammam, Molla Bahsi Hanife built a masjid with waqfs in 1420. (Akbas, 2018; Catal, 2009; Yasar, 2004).

- **Kocacik Mahalla**

This mahalla was named after Kocacik Ahmed Celebi who lived here and built a masjid, maktab, and a fountain in 1466. Mehmet Bey rebuilt the masjid as a mosque in 1661. When it was damaged by a fire, it was rebuilt by merchant Feyzullah Aga in 1815 and they added a madrasah and a maktab next to it, which is again another example of using damage from a stressor as an opportunity for advancing to a better state (Budak, 2015; Duman, 2010; Inan Ocak, 2018; Seker, 2011; Yasar, 2004).

- **Kuba Mahalla**

Grandson of the religious leader who named the mahalla built a madrasah, mosque, and a fountain in 1453 with its waqf. When the mosque and Husamiye Madrasah were in ruin because of fire in 1602, the mosque was rebuilt by Abdi Bey in 1669 and their son Mehmet Pasa rebuilt the madrasah in 1694. They, moreover, added a maktab. Also, the madrasah was converted to tekke in 1687 briefly and converted back to madrasah in 1713. It was deserted in 1825 and disappeared eventually (Budak, 2015; Catal, 2009; Yasar, 2004).

- **Kubcegiz Mahalla**

Before the Ottomans, Commander Bahaeddin Gokcegiz lived here until 1180 and the mahalla was named after them. Son of another commander was built Kepuk Masjid in 1270. Davud Bey repaired this masjid in 1397 with the addition of maktab. Later, waqf trustees repaired the building in 1550 and 1696 (Yasar, 2004). Locals and waqfs did not only recovered the buildings after stressors but also provided a maintenance repair for damages over time.

- **Kursunlu Mahalla**

During the Danishmend Period, Yagibasan Gazi built a han here in 1165. This han was called Kursunlu Han and named the mahalla. Ahmed bin Mesud built a masjid and a fountain next to the river in 1437. When the masjid was burned in 1637, rebuilt by Bayram Pasa and they donated more properties to the waqf. Ali Celebi Daru'l Kurra was built with waqfs in 1479. Also, there is Yukari Hammam which was build during the Seljuk period before the Ottomans (Budak, 2015; Yasar, 2004). This is another mahalla that was originally formed during the period before the Ottomans, however, continued to be maintained and developed by the Ottomans.

- **Mehmed Pasa Mahalla**

Governor of Amasya before the Ottomans built a masjid in 1234. In, 1495, Mehmet Pasa built a stone mosque next to the masjid, soup house, madrasah which is named the mahalla. There was a Mehmet Pasa Tekke next to the mosque. Mustafa Bey built a hammam next to the tekke in 437, Oruc Bey built a fountain in 1504, Hayrettin Efendi built a masjid in 1579, Mehmet Aga built a daru'l kurra in 1661 and donated 10 shops and a mill to its waqf, Ali Efendi built a madrasah in 1841, Ali Efendi's grandson Mehmet Bey built another madrasah in 1890. Also, Cevikce tekke was built in 1428 close to the Cilehane Tekke. Repaired many times after damages over time. Sheikh Suleyman Efendi repaired the tekke in 1677 and became the sheikh[63] of the tekke. After the death of the last sheikh in 1832, it was converted to madrasah (Budak, 2015; Gun, 1993; Ipek, 2016; Tunc, 2013; Yasar. 2004).

- **Pervane Bey Mahalla**

Mahalla was named after Mehmet Pervane Bey who lived in this mahalla. There is a Seljuk era mosque Burma Minare Mosque built in 1300. It was converted from a church. It was a stone structure with a wooden roof. It was affected by an earthquake in 1591 and burned in a fire in 1602. Trustee of waqf built renovated it and built a wooden minaret. When it was burned down in 1730 again it was renovated by the trustee of its waqf. In 1734, a library was built as a part of this mosque by donations. In 1687 Mustafa Aga built an ablution place for this mosque and donated 4 shops. When the shops demolished ablution, the place turned into ruins due to a lack of funding for recovery. There is also Sungurlu Madrasah which was built in 1750. Darbhaneci Tekke was built with its waqfs in 1433 here

[63] The leader of a religios order

as well. Also, Burma Minare Madrasah was built in 1909. It was originally a courthouse, which became a maktab in 1703 and later converted to a madrasah (Catal, 2009; Gun, 1993; Seker, 2011; Yasar, 2004).

- **Pirincci Mahalla**

Pirincci Mahalla was named after Pirincci Sinan Bey who built masjid and maktab with its waqf in 1506. Ya Vedud Tekke in this mahalla was built in 1453. In 1897, it was given to the Ministry of Education. A darulhadis[64] was built as a wooden structure in 1527. It was burned down in 1602 and rebuilt in 1609, burned down again in 1686 and rebuilt in 1688, and lastly burned down again in 1730 and rebuilt in 1738. There was also a Dograkiye madrasah which was built in 1495 which was converted from a maktab that was built in 1234. It was demolished by a flood in 1875. There was a hammam from the Seljuk era and it is in ruins today (Catal, 2009; Duman, 2010; Er, 2009; Oltulu, 2006; Senol, 2010; Yasar, 2004).

- **Recep Mahalla**

This mahalla was named after a royal teacher Recep Celebi who lived here and built a masjid in 1494. When this building was burned down in a fire in 1602 and it was rebuilt by the grandson of the original benefactor in 1620 with additions of a maktab and a fountain. When this masjid was burned again in 1730, it was repaired by the imam who was also a trustee of its waqf. There was a tekke built by Hizir Pasa which was disappeared with no information. The original core was made with one function of a religious building. When the fire burned down, it was rebuilt with additions of more functions. Also, even though its waqf was survived, the family of the original benefactor continued to support the reconstruction of the repair of the building as almost an inheritance of responsibility (Yasar, 2004).

- **Samice Mahalla**

Samice mahalla was named after a nickname of an architect who lived in this mahalla. They founded a waqf to build a masjid, maktab, fountain in 1443. After these buildings were burned in a fire in 1784, it was rebuilt with the addition of a madrasah by Ali Aga. Halfet Gazi Madrasah in this mahalla

[64] Daru'l Kurra is a higher level of madrasah for more extensive education on hadiths

was originally built in the Seljuk era in 1225 as the second monument of its era. Even though it was repaired many times, it was damaged a great deal in the 1602 Fire and the 1647 Earthquake and rebuilt as a wooden structure. In 1887, it was repaired again. Hizir Pasa Tekke was built in 1534 with its waqf by Hizir Pasa. It was disappeared in the 1730 fire (Catal, 2009; Duman, 2010; Er, 2009; Senol, 2010; Yasar, 2004).

- **Sarachane Mahalla**

This mahalla was named after saddlery place. There was a hammam from the Seljuk period. On the east of this hammam, Sadgeldi Pasa built a Sarachane Mosque built with stone and a bridge around 1372. During the Ottoman period, Mehmet Aga and Osman Aga donated shops in 1758. In 1730, Qadi Ahmed Efendi built an ablution place for it. On the east of mahalla, around Selagzi, Garipler Agasi Mehmet Aga built a Garipler Masjid in 1517. It was demolished by Ziya Pasa in 1864 construction of the Hukumet Bridge with modernization movements in the city (Budak, 2015; Catal, 2009; Ipek, 2016; Yasar, 2004).

- **Sofular Mahalla**

This mahalla was named after 9 Sufi (Religious men) lived in. Before the Ottoman period, a Seljuk ruler constructed a fountain and a masjid that was named after them. Later, on the higher part of this, a zawiya was built for a religious order. During the Ottoman period, a pasha (general) funded the construction of a stone mosque, madrasah, and daru'l kurra and a fountain next to each other in 1485. After their death, their son donated properties for the waqf as an income in 1502. Seyh Abdul Tekke was built in 1153 and was damaged regularly but repaired and preserved until 1854. In 1897, the land was given to the ministry of education. (Akbas, 2018; Catal, 2004; Er, 2009; Oltulu, 2006; Yasar, 2004).

- **Ucler Mahalla**

The reason it was called Ucler (threes) is that three important religious figures lived here. One of them built a wooden mosque. Because it was burned down in 1602, it was rebuilt as a stone structure with a wooden roof and minaret by Sa'di Celebi in 1609. Sa'di Celebi, moreover, built a maktab, fountain, and donated 2 houses in Ucler Mahalla, 5 shops in Ibadullah Carsi, 2 shops in Asagi Bazar, 3 shops in Bakkallar Carsi, 3 houses in Kursunlu mahalla. One service core was dependent

economically on 5 different mahallas which is an example of the network of connectivity. Also, there was an Ucler Tekke built in 1822 here (Akbas, 2018; Yasar, 2004).

- **Yakup Pasa Mahalla**

Yakup Pasa founded a waqf to build a stone mosque and Cilehane Tekke in 1412. In 1622, the tekke was converted to a madrasah in 1622. The structure was damaged by the 1939 earthquake and renovated in 1967. There were also two other tekkes called Kusbaz which were built in 1554 next to the mosque. As a tradition, the mosque and tekke were named after the benefactor and also named the neighborhood. When constructing a new building, the locals of this mahallas preferred to build it next to the service core. This mahalla had only one service core with two religious functions and the second one was utilized as an educational function two centuries later. Also, there was a Pir Ilyas Masjid which was built in 1482 and repaired in 1688. After it was demolished totally, it was reconstructed by locals in 1892 (Alaca, 2012; Budak, 2015; Catal, 2009; Ipek, 2016; Yasar, 2004).

- **Yakutiye Mahalla**

In Yakutiye Mahalla, Bimarhane (Hospital) was built before the Ottomans in 1309, which was a hospital and medical school. Later, during the Ottoman period, Yakut Pasa lived in this mahalla and founded a waqf to build tekke, masjid, and soup house in 1413 on the south of the Bimarhane. A wooden madrasah, Copluce Madrasah was built in 1819. Nuh Bey Dar'ul Kurra was built in 1520 next to the tekke and Bimarhane and burned down in 1649. Asagi Bazaar and Bayram Pasa Han were here (Yasar, 2004). This mahalla was occupied before the Ottomans, however, advanced during the Ottomans with their construction activities. Even though it was a century and a civilization later, they still accumulated service functions together by constructing close the Bimarhane (Catal, 2009; Duman, 2010; Er, 2009; Ocak Inan, 2018; Ipek, 2016; Yasar, 2004).

- **Other Mahallas.**

There are some other mahallas that are rather smaller in scale. They followed a similar pattern but due to lack of facing stressors and limited information, they are added to Appendix 5.14.

5.5.3. Details on Building Typologies and How Those Structures Dealt with Stressors

After presenting mahallas and their service cores, this gives an understanding of how the most common typologies (maktabs, madrasahs, and religious buildings) in Amasya were formed, maintained, recovered as a summary.

- **Maktabs (Primary Schools)**

Maktabs were one of the most common typologies that are observed in Amasya. First, Evliya Celebi mentioned the existence of maktabs (primary schools) in every mahalla and there were more than 200 maktabs in the city center (Appendix 5.15. Lists of Maktabs and their details). These maktabs were built from the 15th century to the 20th century, but the majority of them were built in the 15th and 16th centuries, which evidences the influence of the shahzadahs on primary education. According to descriptions of maktabs, they were scattered around the city and located closer to other service buildings in the mahalla core. Similar to the other service buildings, the construction of these maktabs was funded by the families of the Sultans, high-rank military of governmental officials, or important figures of the city. These funders generally built a mosque, a maktab, and a fountain for the mahalla they lived in and those mahallas and structures named after them. Maktabs could be built as a part of a kulliyah, as a part of a little mahalla core, or separately as a standalone building. For example, Hatuniye maktab, Hizir Pasa maktab, Sultan Bayezid maktab, Kucuk Ali maktab were a part of kulliyahs. Also, several mahallas such as Uzun Mustafa mahalla, Pirincci mahalla, and many others were built together with a fountain and a mosque or a masjid. There were some cases of just being built with a fountain. For example, a maktab in Acem Ali mahalla. There were other cases of just being built with a mosque. For example, a maktab in Tatar mahalla. In the cases of maktabs in Haci Ilyas, Kuba, Kameruddin, Kubcegiz, Helkis, they were built as standalone structures. In some rare cases, they were built with a zawiya or a hammam. In the cases of being constructed alone, they were built next to a masjid or other types of service structures. For example, a maktab in Sofuzade was built later next to a masjid and a fountain. In Hekim Celebi mahalla, a masjid, a fountain, and a maktab were built by different people, at different times, but next to each other. Even though individual funders can only pay for the construction of one building, they built structures next to each other to be able to serve better. Considering the ways, they were built together in neighborhoods, education was seen as one of the essential needs of the community with

religious services and supply of water (Alaca, 2012; Batir, 2014; Catal, 2009; Evliya Celebi, Dagli, Kahriman, 2008; Kolay, 2013; Seker, 2011; Yasar, 2004).

When there was a lack of maktab in the neighborhoods, the renovation of damaged buildings was seen as an opportunity to include educational structures in the service core of neighborhoods. For example, in Kuba mahalla, a mosque and a madrasah were rebuilt with a maktab next to them. When a mosque in Recep mahalla burnt in 1602, it was rebuilt with a maktab and a fountain in 1619. Also, when a masjid in Darusselam mahalla was burnt, it was rebuilt with a maktab and a fountain next to it. In Ucler mahalla, when the mosque was rebuilt as a stone structure after a fire burnt the wooden one, they built a maktab and a fountain next to it with its waqfs properties in different mahallas (Yasar, 2004). When disasters affected the service buildings of a mahalla, they were repaired and rebuild with stronger materials and by adding more functions. Service cores did not only manage to bounce back but also upgrade themselves for better services to the community after calamities. The reasons for the disappearance or damage of maktab buildings were given in the literature even though not very detailed. The fire was mentioned as one of the main reasons for the damage to those buildings. For example, a maktab in Kocacik mahalla was burnt and rebuilt and *Mekteb-i Ali-i idadi* was burnt and rebuilt. Another reason for the damage of maktabs was earthquakes. For example, Hatuniye maktab and Kucuk Ali maktab were renovated after an earthquake. Kilicarslan maktab was damaged from the earthquake in 1939. After being burnt from a fire, *Mekteb-i Ali-i idadi* was demolished after the earthquake in 1939. Besides disaster being the reason for the disappearance of those structures, some of the maktabs disappeared due to being deserted as in the cases of Temenna maktab, Hizir Pasa maktab, Sahbula Maktab, maktabs in Uzun Mustafa and Haci Ilyas mahallas (Alaca, 2012; Batir, 2014; Catal, 2009; Kolay, 2013; Seker, 2011; Yasar, 2004).

- **Madrasahs (Higher Education Institutions)**

Education in Amasya was given high importance during the reign of the Ottoman period. Not only people from the local government but also local figures with economic power funded the construction of each level of educational structures as a voluntary duty to serve their community. Especially, the actions of locals to serve their community this way created a sense of social unity. It provided an opportunity for education from each level of society. Not only funding the construction

of a structure but also donating immovable properties and founding their waqfs helped continue to function and maintenance of those educational organizations. Especially, after damage from disasters, waqfs were responsible for their repair or reconstruction, therefore, their long-term survival in the urban fabric.

The travelers also provided some insights into the maintenance of these educational structures. Dr. Barth (v. 1858) stated according to Mordtmann there were 38 madrasahs in the city that day. Still a huge number, however, it is not clear how many of them functioning properly (Tuzcu, 2007). Later, Perrot wrote in 1861, Amasya used to be a city of universities (*madrasah*s), a scholar and science center in the Seljuk Era. According to them, it was like Anatolian Oxford; however, those old days were behind with the development of modern positive science now because they only thought theology. In 18 madrasahs, there were 2000 mullahs and students. These madrasahs, like British universities, had vineyards, plantations, shops in *bedesten*, houses in Amasya as a property of their waqf. Madrasahs had high income from those. Also, locals donated food, clothing, and money. They explain that waqfs were under the control of *Evkaf Nazirligi*. Each waqf had a manager and board. Waqf's properties could not be sold or given to somebody. Each waqf had a certain aim, and management made good deeds according to Islamic rules in the name of the founders. They built and maintained mosques, madrasahs, *han*s, water channels, fountains; gave services to educational institutions or the poor such as providing food and clothing. Management rented their immovable possession and collected rent to have a regular income for maintenance and repair of immovable possession and continuation of services (Perrot, 1864; Tuzcu, 2007). They wrote (Perrot, 1864; Tuzcu, 2007, p. 226):

> *These days the sultan and the states need money. In order to get the government out of the situation they are in, they are making reforms. However, waqfs' aims cannot be changed. Amasya's waqfs lost its aims. Some people in the management made the waqf not properly functioning for their own gain. The services they provide stopped entirely. Mosques, madrasahs, and some other buildings' condition and maintenance are not good. Bad management is taking the money and preventing them from maintaining, not providing services and register immovable possessions to their own name.*

According to Perrot's explanations, economic and political problems that the Ottomans were facing and not being able to keep up with the modern world at the time, and mismanagement of *waqf*s

(charitable organizations which also ran schools) caused the city to lose very important characteristics of urban life and urban fabric with the decrease of the number of the madrasahs.

Madrasahs were either built from stone, wood, or combined of the two. The materials of these buildings had an impact on their resilience to certain disasters. While stone buildings have a longer lifespan, they were damaged by earthquakes and they probably cost more and took longer to reconstruct. In the wooden buildings, they were faster to build and cheaper, however, their lifespan is not as long as stone ones and they are not resilient against fire which happened in Amasya frequently. In the literature, the main reasons for damage to these buildings mentioned were earthquakes, fires, and floods. Some buildings were damaged over time due to being used for a long time. Even though waqfs managed to repair or rebuilt, with the disappearance of waqfs overtime, those buildings lacked maintenance and repair, therefore disappeared (Alaca, 2012; Batir, 2014; Catal, 2009; Duman, 2010; Er, 2009; Inan Ocak, 2018; Oltulu, 2006; Seker, 2011; Senol, 2010; Yasar, 2014).

Most of the time, madrasahs were renewed by their waqfs. Sometimes waqfs were founded when the madrasah was built. In some other cases, madrasah was built first and their waqfs were donated later. These waqfs had different types of properties to create revenue for the salaries and expenses of the education in the madrasahs, maintenance, and renovations or reconstruction after damage. The renovation after any type of damage was executed by these waqfs quite soon after the damage. However, in some other cases, they were either converted into another type of building or disappeared after damage, or simply deserted over time. Most of the cases of disappearance happened in the 19th century, which was probably due to the political and economic issues of the Ottoman Empire were dealing with and because the Ottomans entered into the modernization phase, which caused a lack of attention to religious education which was given in madrasah. Madrasahs lost their popularity. Even though there was a different reason for the damage, eventually due to this lack of interest, they were not rebuilt again (Alaca, 2012; Batir, 2014; Catal, 2009; Duman, 2010; Er, 2009; Inan Ocak, 2018; Oltulu, 2006; Seker, 2011; Senol, 2010; Yasar, 2014).

There were also some cases of conversion from another typology. For example, Yakup Pasha Madrasah was built as a tekke but converted in the 17th century. Burma Minare Madrasah was built in the place of a maktab in 1909. Tekke madrasah was built in the place of Cevikce tekke. Dograkiye

Madrasah was converted from a masjid. Also, Osmaniye Madrasah was founded by adding rooms to an existing tekke and later tekke was converted to a madrasah. Due to similarity in functions of mentioned structures, the conversion was easy and it helped the survival of those structures by refunctioning them (Alaca, 2012; Batir, 2014; Catal, 2009; Duman, 2010; Er, 2009; Inan Ocak, 2018; Oltulu, 2006; Seker, 2011; Senol, 2010; Yasar, 2014). (Appendix 5.19. List of Madrasahs).

- **Religious Buildings**

Similar to many other structures, religious structures were demolished or damaged by fires or earthquakes, however, they had waqfs and those waqfs repaired or rebuilt those structures. For example, Yakup Pasa Tekke was damaged in different earthquakes several times. It was demolished in the earthquake of 1939 but rebuilt in 1967. This shows, even in the republic era, waqfs continued functioning. In another example, Kanli tekke was repaired in 1668 but ruined after the fire in 1730, rebuilt in 1811, and called Taskoprulu Tekke. Besides disasters, sometimes they were damaged over time due to usage and then repaired again. For example, Melik Gazi Tekke was damaged regularly and repaired, in 1825. Cevikce Tekke was repaired many times after damage over time. Sheikh of the tekke repaired it in 1677. Seyh Kirik Tekke was damaged but repaired. Regular maintenance of these buildings was provided by their waqfs. Even though maintenance and repair were provided by waqfs, there were cases of disappearance from the urban fabric due to different reasons. For example, Hizir Pasa Tekke was burnt in 1730 and disappeared. Mehmet Pasa Tekke and kulliyah were burnt by fire and disappeared (Ipek, 2016). Muftuoglu Tekke was burnt down in the fire in 1688 and disappeared. Sadeddin Tekke was demolished after 1844. Sehre Kustu Tekke survived until 1826 but was demolished and became personal property. Hoca Sultan Tekke, in 1759, was inherited by heirs, and tekke was closed. Kusbaz Tekke's waqfs, after being demolished, were passed on to the Ministry of Education. Physical damage or change of functions could cause the disappearance of these religious organizations, one example is Yakup Pasha Tekke converted to a madrasah in 1622. (Budak, 2015; Ipek, 2016; Yasar, 2004).

According to Huseyin Husameddin who wrote the history of Amasya at the beginning of the 20th century, there were a total of 31 tekkes in the city. All these people who wrote about Amasya show with their writing that religion was an important character of the city from the beginning of the Ottoman Empire to the end. However, the reason that many of them could not survive was tekke

and masjids were partially wooden building, which was ruined by floods and fires (Oltulu, 2006; Toruk, 2006).

Lastly, the location of these monumental structures hints where the Ottomans entered and settled in the city. Bolukbasi claims in Amasya the initial structures such as Yakut Pasha Zawiya (built in 1407) and Bayezid Pasha Mosque (built in 1414), and Mehmet Pasha Mosque (built in 1486) were located in Mehmet Pasha Mahalla which indicates that area was the first settlement area for the Ottomans. This information helps to understand how Ottoman built the city and how the city core was formed. Besides being built a tekke, sometimes some existing structures converted to tekkes as well. For example, Nuhoglu Tekke was converted from a madrasah. In addition, there were cases of being built for one religious order and passed to another. For example, Mahmut Celebi tekke was built for the Naqshbandi order, and became the first Naqshbandi tekke in Anatolia, but became the property of the Halvetiyye order. Gulabi tekke was built for Kadiri order. After 1688, it became Naqshbandi tekke which has disappeared now (Budak, 2015; Toruk, 2005; Yasar, 2004).

5.5.4. Travelers Account on Disasters & Management of Architecture & Urban Fabric

Travelers provided information on certain events or disasters that affected the urban fabric and how those events were dealt with. They also provided information about how precaution against obstacles was taken as well as how certain elements increased the survival of the urban fabric. Various issues were mentioned by travelers for the time they visit. In this part, their insight on those issues will be presented chronologically.

The first important issue that Amasya faced during the Ottoman Era was the siege of Timur in 1393 in the very early period (Evliya Celebi, Dagli, Kahraman, 2008; Texier, 2002). '*During the reign of Sultan Yildirim Bayezid, Timur tried to invade the city 7 times and burned the city down when he failed*' (Cuinet cited in Tuzcu, 2007, p. 278). The city was attacked by Timur and the castle resisted a seven-month-long siege, the rest of the city was plundered, and people were killed. Another problem the city had faced was the rebellion of Uzun Hasan which was resolved by Sultan II Mehmet and Shahzadah Mustafa. After that, the Persian Shah tried to invade in 1472, but could not succeed (Texier, 2002; Tuzcu, 2007).

In the 15th century, as the only traveler, Merchant Basil (v. 1465) gives information on precautions against frequent floods in the River Yesilirmak. They explained that the two sides of the river were strengthened with solid stone walls (Tuzcu, 2007). As mentioned by travelers, the riverbanks were occupied by residential houses. Therefore, actions against the flood were taken.

In the 16th century, Busbecq and Dernshwam explained how locals dealt with fires. On the day Dernshwam and their committee arrived, they encountered a fire. Janissaries and *Pacha*s tried to extinguish the fire; however, they did not have the equipment to extinguish but they had a technique to use long hooks to collapse the houses in close proximity to the fire to prevent the fire from spreading around (Busbecq, Forster and Daniell, 1881; Dernshwam, 1992, cited in Tuzcu, 2007). This technique prevented further damage to the urban fabric due to fire spreading fast with adjacent wooden structures. However, Busbecq claimed that the soldiers who were responsible for firefighting wanted the fires to plunder houses. Busbecq mentioned seeing a similar arson happened in Istanbul, where the perpetrator could not be found. They claimed that these fires could be started by soldiers themselves (Busbecq, Forster, and Daniell, 1881). Even though this technique was useful, because it was used to arson houses by some soldiers, it started to damage the urban fabric indirectly. Lastly, Dernshwam wrote, "*as I mentioned before, on the 14th of April, there was a big fire, but they rebuild the houses in a very short time*". They stated, on the 17th of May, an Iranian committee came to the city and placed in the house that was survived the fire by having a quick repair (Tuzcu, 2007, p. 44). The houses damaged were repaired in 3 days, which is proof of quick recovery in residential architecture after fires.

In the 17th century, Polish Simeon traveled through Anatolia for a pilgrimage to Jerusalem and stopped in Amasya circa 1616, 8 years after the Jelali revolt that affected the safety of the Ottoman cities and travel routes (Simeon, 1964, cited in Tuzcu, 2007). Their writings did not report anything about safety issues during their travel and their stay in Amasya. This implies that the Ottoman state and Amasya, in particular, managed to bounce back from the detrimental effects of five-year-long revolts and managed to secure trade routes.

During the 19th century, Amasya was visited by 20 travelers. They all provided information on urban life, maintenance, and the change happening in the city. One of the most common issues travelers pointed out was reusing materials from previous structures. First, Morier, in 1809, after visiting the

castle, stated that their guide told them that there was no sculpture in the castle anymore and their pieces could be found in the walls of structures in the city (Morier, 1812). Even though there was some measure against foreign travelers, in which some of them turned out to be treasure hunters, locals were using materials from the castle which was damaging the structure. After them, Rottiers wrote about a caravanserai below the rock tombs which was built on the foundation of a ruined building in the name of *Khalifa* (The leader of Islamic groups and orders). The caravanserai reused stones from previous structures as evidenced by their Greek inscriptions (Tuzcu, 2007). A year after Rottiers, Porter stated, similar to the previous travelers, seeing Greek inscriptions in buildings (Porter, 1822). Also, Fontanier wrote locals took stones for construction from old ruins. Fontanier stated local builders came with chisels and hammers and got stones from here and carried them to construction sites. The traveler said says every time they walked around in the city; they saw stones from these caves. However, they also mentioned the castle and equipment in the castle were under protection against foreign treasure hunters (Tuzcu, 2007). Hamilton, in 1836, stated they saw an old madrasah whose entrance façade is made of *'ancient cornices, friezes, architraves'*, and stones with Greek inscriptions (Hamilton, 1842, p.371). According to their observation, materials from old structures were reused again in the construction of new buildings (Hamilton, 1842). In 1854, Van Lennep stated one of the mosques they saw in the city had pillars from ancient buildings. Moreover, they said that they saw locals used marbles they found from old relics to build their own homes (Tuzcu, 2007). In 1858, Dr. Barth stated *Imarethane,* which was a Seljuk era philanthropic organization had a Greek *kitabe* (inscription panel). This information indicates the recycling of building materials from previous era buildings in the area; however, this could be also the reason for the damage inflicted on structures from the previous eras. Also, the Ottomans' priority was to protect Islamic era structures first and locals had no problem with using materials from previous era structures which resulted in damaging those while building an Ottoman identity on top. For quick construction or recovery from stresses, locals used the most efficient option as a source for the construction.

First, Rottiers wrote about seeing workers who were renovating a caravanserai outside of the city which was in a bad condition. They explained that local wealthy residents provided funding for the rehabilitation of this caravanserai for it to continue to serve poor locals and pilgrims (Tuzcu, 2007,

p. 97). Through their writings, for the first time, direct observation was provided by a traveler on how society helped to protect the urban fabric and donated money to serve back to their community.

In 1827, Fontanier wrote at the time they visited, the economy of the Ottomans was not in a good shape because of uneducated accountants. When the Ottomans issued banknotes, but people did not want to use them even though it became compulsory and this caused bigger economic problems. They mentioned the wrong actions of administers and some corrupt officials in the Ottoman state caused a lot of economic problems in the Empire. Their writings show how the economic problems of the Ottoman Empire had an impact on the local level. Monetary problems on a local scale could result in less funding for the maintenance and renovation of the urban fabric (Tuzcu, 2007).

After Fontanier, Hamilton, in 1836, stated they saw little dams to slow down the speed of water where water wheels are located, which could be a precaution to control the flow of the river. After that, Hamilton also stated that the entrances of the caves shifted due to an earthquake, possibly an earthquake in 1825 or 1828 (Hamilton, 1842). This is the only damage to the earthquake mentioned in architecture. Two years later, Moltke stated the castle and the rock tombs were as perfect as the first day they were built, however, some part was in ruins, which could be the damage Fontanier mentioned (Moltke, 1999, cited in Tuzcu, 2007).

In 1841, Stevens made a point of improvement in infrastructure and its positive effect on the economy. They claimed how dangerous traveling was and it was taking a long time to travel to trade centers, like Istanbul, at the beginning of the 19th century, but now with the invention of steam trains, and safer roads, trade interests moved to Istanbul, which positively affected the economy of Amasya, they stated in December 1841 (Tuzcu, 2007).

Carl Ritter (v. 1856 or 1857) wrote that '*the city looks beautiful from afar. However, when you are inside, it looks like in ruins. Because the city planning was done without aesthetics concerns and plan, the streets were narrow and twisted. Houses were surrounded by high walls, the streets were not clean, and we got lost from time to time in the streets'* (Ritter, 1858; Ritter, 1858, cited in Tuzcu, 2007, pp. 185-186). As a European who was familiar with different city designs, they did not understand the

idea behind the city structure of the streets were made like a maze due to being coherent with topography and on purpose to filter strangers for privacy and security purposes.

In the mid-19th century, Mordtmann witnessed a rebellion in 1858. They wrote about the death of Dr. Bartoletti as a result of a rebellion, and 5000 Albanian (soldiers) were sent to the city to quell the rebellion. On their second visit, they wrote about the problems of seeing many abandoned villages on important trade roads because they were plundered by undisciplined soldiers or bandits. According to their writings, there were security issues generally in the Ottoman Empire and as well as in Amasya which affected the lives of locals negatively. Finally, they wrote that the governor of the city was exiled to Amasya and claiming there is no public service can be expected from the governor since they did not come to Amasya voluntarily (Mordtmann, 1925, cited in Tuzcu, 2007).

Also, in 1858, Dr. Barth wrote about the railroad construction plans mentioned by travelers finally started. Dr. Barth stated the railroad for Samsun-Amasya-Sivas had started to be built; however, the railways were not yet installed, and some areas of the town mainly by the river were damaged by floods which might be possibly due to the floor in 1855. In 1861, Perrot wrote that the central government questioned the acts of crooked local administrators on their corruption and their neglect of natural disasters, however, these claims were denied (Perrot, 1864; Perrot, 1864, cited in Tuzcu, 2007). Floods in 1848 and 1855 probably damaged the city in such a huge deal that even the central government had to question the local government which did not happen many times

In 1879, Tozer wrote about the climate of Amasya and its effect. They stated: '*but Amasia suffers greatly, as might be supposed, from extremes of temperature, and in summer resembles a furnace, so that the heat would be intolerable, were it not moderated towards evening by the breeze that draws up the valley'* (Tozer, 1881, p. 28). Tozer continued after entering the city they met with the Pasha[65] to secure their travel. During this meeting, Pasha mentioned there was a great flood in River *Yesilirmak* 4 years ago in March. When the river overflowed its banks, which were sixteen feet above the water, and cased with stone, it carried away half of the wooden bridge and it was left under the water. The ruins of those were still visible, for they had never been repaired (Tozer, 1881, p. 390). Also, Tozer talked with Pasha about the Russo-Ottoman war and Pasha said 15000 men went to war, however,

[65] A high rank soldier in the Ottoman army

only 1 in every 10 could return. Therefore, the industry in the city was damaged remarkably. Tozer wrote about meeting with the protestant community and they said they believed this traveler came for investigation of railroad construction. This railroad, local expected, would connect them to ports and ease their commercial activities. Tozer stated *'locals said that they understood we were surveying for a railway, which would connect them with the sea, and would be a great advantage to their trade'* after talking to Armenian Protestants (Tozer, 1881, p. 390). So, since 1858, when Barth reported about the damage of the railway construction had, now development happened in the matter. Tozer. Moreover, wrote that *'when we said we were surprised when we couldn't see a church in villages, locals said there are some old churches. Until 5 years ago, building a church would cause a rebellion, locals said'* (Tozer, 1881, p. 390). Tozer's writings show even though time to time there were problems within the community, and it caused rebellions against the government, there were still social cohesion and unity that they shared similar values and lifestyle which reflected similarly on a neighborhood and residential design.

In 1887, another traveler, Cuinet wrote their observations: '*because the new settlement was not built at the same place, old settlement preserved very well. Back streets were narrow and shadowed. Pavements are not in good condition*' (Tuzcu, 2007, p. 277). '*Most of the historic buildings are preserved well and just some are in ruins, which are in the Acropolis. The artifacts taken from here are well preserved*' (Tuzcu, 2007, p. 278). They continued that madrasahs were built in the Seljuk and Ottoman Era were built on top of a church from the Kingdom of Trebizond era. Big Bazaar and *carsi* which were built by *Sofu Bayezid* were in ruins as a result of a fire in 1885 (Tuzcu, 2007). Travelers' observations in the 19th century show that damages from the stressors are less like to be recovered or recover in a longer period. During the 19th century, the economic state, modernization movement, and changes in the urban system of the city slowly reflected on the urban fabric and its slow decay.

Von der Nahmer, in circa 1898, stated that in the middle of the city, there was a mosque and *kulliyah* by Sultan Bayezid. They said during the most powerful era of the Ottoman Empire, the city had 250 mosques, 48 madrasahs, and 40 tekkes. When von der Nahmer visited the city, Amasya was like a construction site. The roads were about to be completed. Also, a little dam in the *Yesilirmak* was about to be completed (Nahmer, 1904, cited in Tuzcu, 2007). After Cuinet's writing on the negative

effect of fire in 1885, reconstruction in the city started again. Similar to Mordtmann's observation in 1858, Von der Nahmer also stated that the governor of the city was exiled to here, but they genuinely worked for the development of the city. Von der Nahmer also wrote about disaster management by the local government in the 19th century. Unlike the negative experience, locals had with the local government after disasters, Von der Nahmer stated when they visited the city, heavy rain and hail happened which damaged locals' houses, vineyards, and gardens. Representatives of unplaced immigrants and representatives of owners of damaged houses and vineyards and gardens and Dr. Zimmer from the German community came to the governor. The governor assured reconstruction, delay of tax collection, and construction of houses for immigrants in the shortest time (Tuzcu, 2007). Their writings show how problems of the community after disasters were dealt with by the local government by the end of the 19th century. Self-organization and collaboration among locals for recovery were no longer in place in Amasya.

The last traveler of Amasya and the first traveler in the republic era, Gabriel visited the city in 1927. They stated the styles of Turkish monuments were architecturally coherent with each other mosques, madrasah, tombs, hans, bazaars, mahallas created beautiful Ottoman-Turkish city characteristics. The city developed over the centuries with the characteristics and patterns of a Turkish city. They stated the ancient fabric; the walls of the castle were mostly disappeared. However, ancient castles and rock tombs were exactly how Strabo described. Amasya is a city that was built on ancient roots with Turkish architecture that gave a city its unique aesthetic. Lastly, they wrote about the biggest fire the city face in 1913 (or in 1915 in some other resources). The fire started on the west side of the city and ruined most of the monuments. Even though the city suffered from earthquakes and fires, many monuments from different periods were still standing (Tuzcu, 2007) (Appendix 5.16)[66].

5.6. Characteristics of Amasya and Their Reflection on the Urban Fabric

Besides architectural elements, there are other certain factors that made the city of Amasya culturally, historically, economically, rich, and unique throughout history which also became a reason for selection for this study. These characteristics of the city brought more opportunities to

[66] See the appendix for an image by Gabriel.

the city which helped the city's formation, development, and maintenance process. This section of the chapter will present the effects of these characteristics. Moreover, explain what happens to the structures related to the presented characteristics.

5.6.1. Amasya's Economic Character & Trade Routes

Economic activities were one of the factors that helped the formation and development of the city as well as its maintenance. Even though the city faced troubles and lost certain other characteristics over time, economic strength was preserved and helped the city to preserve its identity even in the times of economic struggles of the Ottoman Empire.

From the beginning of the history of Amasya, the city was at the crossroads of many trade routes: ancient trade routes, Roman-era interstate roads, and Byzantine-era trade routes, to name but a few, the full list can be found in Appendix 5.17. These roads passed through the city and Amasya was always a trade and transit center. During the Seljuk era, the road network that stayed the same started to be developed more, which increased the construction of caravanserais on the road network. After the conquest of the Ottomans, Amasya continued to be at the location on important trade routes between the Black Sea ports and the Persian ports during the Ottoman era. This has contributed to the city and preserved its important economic role. With the influence of the Ottoman Empire in geography, the silk road passed through Istanbul which increased the importance of Amasya as a stop on the route to Istanbul. Being a trade center was not only due to its location on the trade routes but also the fertility of its lands and the product they produce. Despite being damaged by many wars in times of Pontus, *'it did not lose its title of capital of Pontus, due to its strategic location as a transit center and the fertility of its territory, as it continued to prosper'* (Hamdi, Launay, Sebah, 1873, pp. 282-283).

Many products were grown, produced, and sold including silk which made the city one of the important silk trade centers on the silk road especially during the Ottoman Era. In the 19th century, as one of two main silk trade centers in Anatolia, even though during the economic problems the Ottoman Empire faced, high tax and inefficiency of old production methods affected locals, they still survived the harsh economic conditions of the 19th century with their main resources of income. Another change the 19th century brought was the invention of the steam train. Especially foreigner

travelers found travel safer and faster which attracted more tourists to the Ottoman Empire. According to traveler Tozer, locals of Amasya expressed their anticipation of railroad construction when they visited in 1879. In 1887 during Tanzimat Period, railway construction started to connect the city railway network which had a positive effect on the economy of the city (Catal, 2009; Hamdi, Launay, Sebah, 1873; Oltulu, 2006; Ozbucak, 2005; Porter, 1822; Sahin, 2006; Texier, 2002; Tozer, 1881; Tuzcu, 2007). Having natural resources and producing a variety of natural and other products brought economic strength to the city on a local level regardless of the general economic problems of its times.

How did this economic role and power reflect on the city? One of the biggest reasons for the development of Amasya is the city's trade activities and its location on trade routes. Even though the city lost its identity as a shahzadah city, due to advanced silk production and trade, the city's economic level continued to improve which was reflected in the construction of many *konaks* (Turkish-style mansion size houses) in the city center. According to Rapaport, vernacular architecture is shaped by different elements and the economy is one of those elements. Kuban also claimed that monumental architecture depends on economic power. Therefore, the city's economic importance became the factor of the development of Amasya. Besides a regular pattern of Ottoman city foundation, and economic role on the trade route contributed to the urban fabric of Amasya. Amasya, as an Ottoman city founded by considering economic functions[67] in the service cores. Tanyeli explained that in Ottoman cities main interstate roads do not pass through the city whenever possible due to mahalla organization and privacy, however, according to Senol, Amasya had the main arteries passing through the city center due to the limitation of the geography. The initial formation and development of the city before the Ottomans also influence by the trade routes which were later reflected in the Ottoman-era urban fabric as well. On the south of the Yesilirmak, there were commercial buildings and commercial areas where the Silk Road passed through in the city. Moreover, similar to many other Ottoman cities, Amasya had bazaars on Fridays until prayer time where local silk producers sold their products. Amasya had one *bedesten* which was built in

[67] Around the Friday mosque, areas of commerce such as *carsi* and bazaar, bedesten, hans located. *Bedesten*s are commercial structures which are the focal point of the city and commercial areas. As a stone structure, they resist fire and theft, therefore, act as a city safe. It was a place where expensive products sold and secured. Cities generally had only one bedestens except for a couple of cities (Celik, 2008; Duman, 2012; Eldem, 1987; Er, 2009; Sahin, 2006).

1485. The *bedesten* was located on a historical axis where other important structures such as mosques and hans were located. There were various bazaars[68] that show advanced trade activities. Moreover, there used to be a mahalla called Asagi Bazaar Mahalla which no longer existed; however, this showed, important economic activities and structures named neighborhood, which showed their importance to the city (Celik, 2008; Er, 2009; Kuban, 1982, cited in Oltulu, 2006; Sari, 2010; Senol, 2010; Rapaport, 1969, cited in Guzelci, 2012; Tuzcu, 2007). After facing economic problems in the 18th century, the Ottomans started to build commercial buildings on the trade route to increase economic activities. *'Most significant edifice from this period of time is the Taşhan. Therefore, this trade route constituted a commercial linear axis on the south side of the river where we can see Taşhan and Bedesten now as the physical evidence of this period'* (Etyemez, 2011, p. 84). In 1890, in the city center, there were 1122 shops, 29 *han*s, 14 hammams, 19 ovens, 9 factories, 67 mills which shows continuing economic activities and power in the city center. (Catal, 2009; Emekci, 2011; Fontanier, 1829, cited in Tuzcu, 2007) (Appendix 5.18. List of Hans and Market Areas). Even though present-day among many commercial structures mentioned in the literature, only Bedesten and Tashan survived, during the Ottoman period all of the hans survived. Also, the main axis which was a part of the silk road is still used to this day over centuries after various stressors the city faced.

Overall, many trade routes from the early civilization to the end of the Ottoman Empire passed through Amasya. Their existence brought financial benefit to the city, even though the civilization that ruled Amasya went through financial problems. This financial strength is reflected in the urban fabric as commercial structures and areas, and also, maintenance of the rest of the urban fabric. Therefore, trade routes and the economic power it brings had an impact on the formation, development, and survival of the urban fabric of Amasya.

5.6.2. Administrative Importance of Amasya

Amasya had administrative roles during different reigns of different civilizations. During the pre-Ottoman era, it was either the capital of an empire or the capital of a state. Travelers of Amasya explain that this was due to its location on trade routes, fertile lands, and economic power. During the Seljuk period, the city was known as *'Dar'ul Izz'*, which means *'center of dignity'*, as an important

[68] Yukari Bazaar, Asagi Bazaar, Sigir Bazaar, Kagni Bazaar, Ibadullah Carsi, Bakkallar Carsi (Er, 2009; Etyemez, 2011).

center for the Seljuk Empire where their shahzadahs ruled (Etyemez, 2011; Gur and Kahriman, 2012; Hamdi, Launay, Sebah, 1873; Oltulu, 2006; Pliny and Rackham, 1942; Porter, 1822; Sari, 2010; Texier, 2002). Having these important roles helped the city continue to develop and prosper throughout the centuries, even though the city faced many wars, natural disasters, and troubles over time which damaged the city fabric from time to time.

Amasya continued to have administrative importance since the Ottoman Empire conquered the city. It became an Ottoman sanjak[69] and capital of *Rum* state (*Eyalet-i Rum)* (until 1518) after it was taken by the son of Sultan I *Murad*, Shahzadah *Bayezid* in 1386. Amasya, as a sanjak where many shahzadahs were also born, was governed by shahzadahs for 182 years. Until the mid-16th century, it was a city where strong candidates of thrones were sent to gain governing experience, therefore, the city was known as a *'city of shahzadahs'*. This importance for ascending to a throne was due to the city's location on the east border. It was a way for shahzadahs to show and prove their talents and ambitions by protecting lands and attacking foreign lands (Tunc, 2013). Even though the city was not continuously governed by shahzadahs, they were brought to the governance position when an important event happened in the city. For example, Shahzadah *Murat* was sent as a governor of the city in 1415 after the rebellion and then the earthquake hit the city. This showed during the time of emergency, shahzadahs were considered as trusted governors and sent to the important cities that were in trouble. Shahzadah era ended, after the execution of Shahzadah Mehmed due to treason[70], the importance of sanjaks which are closer to the capital Istanbul increased, therefore, Amasya's importance started to decline from the mid-16th century (Catal, 2009; Celik, 2008; Gur and Kahriman, 2012, p.14; Oltulu, 2006; Unal, 2012; Tunc, 2013; Tuzcu, 2007).

Many scholars stated in their studies that as a shahzadah sanjak, which had a vital role in their education, Amasya developed spatially, culturally, politically, economically during the Ottoman era,

[69] Sanjaks were administrative units under the states and they are of a similar size of a city today. Ottoman Empire was divided into states which were consisted of sanjaks. Sanjak were governed by *Sancak Beyi* which could be statesmen or sons of the Sultans, shahzadahs. Some sanjaks such as *Saruhan (Manisa), Menteşe, Germiyan (Kütahya), Konya, Amasya, Kastamonu, Trabzon* and *Kefe* were governed by shahzadahs to gain experience in governing after their initial education (Sahin, 2019; Yoluk, 2010).

[70] After 'the death of Shahzadah Mustafa because of high treason charges, in 1553, Sultan Suleiman I enacted the law, which has ever since been adhered to, that the sons of emperors should not in future hold any governments, and from that period Amasiyeh became a mere *pashalik*, whose local history is never distinct from that of the remainder of the empire' (Ainsworth, 1842, p. 28).

and created its own identity. Even though the glorious days of Shahzadah city ended in the 16th century, during their governance, shahzadahs worked on the development and maintenance of the city. They helped to improve and to develop the city fabric by renovating the old structures and building the new structures. The Sultan Bayezid Kulliyah, which creates the central core, was funded by Shahzadah Ahmed and their family. In another example, Shahzadah *Ahmed* repaired the castle of Amasya in 1511 while they were governing the city. Besides shahzadahs themselves, their families and entourage donated money to build structures in the city during their stay with shahzadah. According to Oltulu, viziers, and teachers of shahzadahs built many monuments to show the power and prestige of the Empire. For instance, *Mehmed Pasa* Mosque was built by the teacher of Shahzadah *Ahmed* and the vizier of the sultan, *Mehmet Pasha* in 1486. From Sultan Bayezid's entourage, *Kapi Agasi Huseyin Aga* built the *bedesten* (closed bazaar) of the city (Celik, 2008). *Bulbul Hatun* Mosque and maktab were built by the wife of Sultan *Bayezid* and the mother of Shahzadah *Ahmed* in 1510. According to literature, the development of the city accelerated the development of the city especially as an educational center for shahzadahs, and religious, cultural, commercial, and administrative buildings were constructed mostly during the initial 150 years of the Empire. According to the official website of the Ministry of Culture and Tourism records, 17 out of 58 monumental buildings were built in the 15th century and 4 out of 58 were built in the 16th century where the rest of the structures belonged to different centuries. From the second half of the 19th century, travelers reported that the city governors were government officials who were in exile in Amasya one of them was inexperienced, some of them were crooked and corrupted, but some of them genuinely worked for the city. Yet, the Amasya *sanjak* was still described as one of the most important ones in Turkey, despite its declining importance (Catal, 2009; Etyemez, 2011; Kok, 2006; Kozanoglu, 2006; Kulturportali.gov.tr, 2019; Oltulu, 2006; Ozbucak, 2005; Sari, 2010; Toruk, 2008; Tozer, 1881; Tunc, 2013; Tuzcu, 2009).

Overall, as a shahzadah city, Amasya was developed immensely by the effort of sultans, shahzadah, and their families and entourages. Also being an educational center for shahzadahs attracted people from all social statuses to migrate to the city as well as religious leaders, which resulted in the construction of the different types of service buildings. When this role was stripped away from the

city, the development of the city was slowed down, however, with its strong foundation and other characteristics that contributed to the development of the city, it managed to survive.

5.6.3. Educational Importance of Amasya

Education at each level was very advanced and prevalent in the city. Due to the importance of the education of shahzadahs, Amasya was famous for its madrasahs which were higher education institutions that could be considered equivalent to universities in the modern-day. According to the literature, 55 madrasahs, daru'l kurras, and daru'l hadis in the city center were mentioned (Appendix 5.19. List of Madrasahs). Overall, due to the important role on shahzadah education, many madrasahs were built in Amasya which helped urban fabric continue developing as well as bringing many resources and economic power to the city. Because of a detailed explanation under building typologies and mahallas, this part is kept brief.

5.6.4. Religious Character of Amasya and Religious Buildings

Religious importance does not directly come from the city itself. It is actually a result of being shahzadah city. However, it had an impact on the formation, development, and maintenance of the city. In the Ottoman empire, religion and education were intertwined, when there is an advanced level of education, it is also reflected in religious structures. Travelers from the period before the Ottoman mentions various religious importance and being a religious center (Tuzcu, 2007). There is no evidence of why and how important the city was in that sense. There is more evidence of religious importance during the Ottoman period. As explained in the literature review in Chapter 2, dervishes are one the first group arrives at the conquered city. Initial service structures were built a mosque, a masjid, a madrasah, a zawiya[71], and an imaret. These were general action that was taken in any ottoman cities. The question is how different Amasya was which had a more special character that also contributed to the formation, development, and maintenance of the city.

Because Ottoman sultans had an interest in religious orders and religious figures that have been seen as spiritual guides, therefore these groups had a political role. At the beginning of the Ottoman

[71] A special type of structure for religious orders, zawiyas, were built. They have been called by different names such as zawiya, tekke, dargah, or hankah. They were managed by various religious orders and funded by waqfs. Besides proving religious support and education for all, they also supported society by providing food for dervishes lives there, travellers and people in need in the community (Bolukbasi, 2018 ; Budak, 2015; Okudan, 2018; Tuzcu, 2007)

reign in Amasya, because of the shahzadah governance, many religious orders, and their followers came to the city, such as *Halvetiyye and Naqshbandi*, built tekkes, zawiyas, imarets, tombs, and madrasahs (Appendix 5.20. List of Tekkes and Tombs). Shahzadahs existence in the city became a reason for many sheiks and their followers to the city. Especially Shahzadah Bayezid's interest in art, religion, poetry, caused many important figures to come and live in Amasya, which, according to Budak caused the city to live its best era. However, at the end of the 17th century, because shahzadahs no longer were sent to the city, tekkes' influence on administration was weakened. Also, because they attracted followers from different geographies, they increased the population in Amasya as well (Budak, 2015; Toruk, 2006; Erdogan, 1996; Ipek, 2016).

These religious orders affected the shape of the urban fabric in the same way that education does by creating focal points to mahallas and affect the accumulation of services. The religious figures and tekkes were becoming an important characters of the city. In the 15th and 16th centuries, there was an increase in the number of tekke and masjid in the city. According to Evliya Celebi when they visited the city, there were 40 religious orders[72]. The religious leaders became an important character in the city which resulted in naming 15 mahallas and certain buildings in Amasya after sheiks, dervishes, Islamic scholars. In the literature, 37 tekkes were mentioned by their name and their details were given. Even though there were a couple of tekkes, such as Seyh Kirik Tekke (b. 1150), which were built before the Ottomans, most of the tekkes were built during the Ottoman period which was spread through the city and mahallas. While some of the tekkes such, as Gokmadrasah and Mehmet Pasa Tekkes, were built as a part of a kulliyah, they were generally built as a stand-alone buildings. These tekke buildings provided functions of guesthouses, kitchens, dining halls beside the religious functions. For example, Hoca Sultan Tekke, Mahmut Celebi Tekke, Yakutiye Tekke, Saadeddin Tekke (Budak, 2015; Evliya Celebi, Dagli, Kahraman, 2008; Oltulu, 2006; Toruk, 2005; Yasar, 2004).

[72] Evliya Celebi named some of the tekkes were Celaleddin Rumi Tekke, Hizir Ilyas Tekke, Gokmadrasah Tekke, Pirler Tekke, Samiler Tekke, Gulabizade Tekke, Muftizade Ahmet Efendi, Kadiri Tekke in Kagnipazari, Miskinler Tekke (Evliya Celebi, Dagli, Kahraman, 2008, p. 217).

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CHAPTER 6: Resilience of Amasya against Disasters

TABLE OF CONTENTS

6.1. Introduction

This chapter analyzed how resilient Amasya was against the disasters it had undergone between 1515 to 1919 from the lens of resilience by addressing 4 questions of the conceptual framework. After presenting the types of resilience and characteristics of resilience that are observed in Amasya, the urban system that made Amasya resilient will be presented. Each step of the conceptual framework was investigated for the case study Amasya. The four main questions that are aforementioned in Chapter 4: Conceptual Framework: Resilience in Vernacular & Traditional Ottoman Cities were investigated in the context of the city of Amasya. The results from the data of the case study are tabulated in Table 6.1. Each result is presented in detail individually. The urban fabric of Amasya which consisted of 51 mahallas investigated by focusing on natural disasters (flooding, earthquake, and fire). Four types of resilience (infrastructural, institutional, social, and economic) and 10 characteristics (Independence, Robustness, Resourcefulness, Adaptability, Creativity, and Self-Organization) that are attributed to resilience in the literature are observed with the addition of one new character this study proposes: Usefulness/Relevance.

Resilience of What	*Resilience against What*	*Types of Resilience*	*Characteristics of Resilience*
Urban Fabric • City • Mahalla • Building • Infrastructure Society Waqf	Natural Disaster • Earthquake • Fire • Flood Man-made Disasters • Arson • Rebellions Administrative Decisions • Change of Regime • Change of Regulation Time	Infrastructural Institutional Social Economic	• Redundancy and Diversity • Interdependence and Independence • Robustness • Resourcefulness • Adaptability and Creativity • Collaboration • Self-organization • **Usefulness/ Relevance**

Table. 6.1. Results of Application of Conceptual Framework to the case study Amasya

6.2. Resilience of Amasya's Urban Fabric

As explained in detail in previous chapters, this thesis explored the theme of resiliency in the traditional and vernacular fabric of the Ottoman city and used Amasya as a case study. Even though vernacular architecture may contain layers of cultures and civilizations, this research is mainly focused on the traditional Ottoman period from the end of the 14th century up to the foundation of the Republic of Turkey in 1923 in Amasya. Even though the 19th century is a period where the modernization movement started, the change in urban fabric did not start until the damage of the fire in 1915; therefore, the 19th and the beginning of the 20th century is also included in the scope. There are tangible and intangible components in an Ottoman City. Physically, the urban fabric of an Ottoman city consists of infrastructures, residential buildings, and monumental buildings that formed mahallas which together also formed a city. There were 51 mahallas at the end of the 20th century. The whole urban network that consisted of many mahallas, their service cores, and residential buildings managed to become a part of a resilient system during the Ottoman period. Apart from the physical components, there were non-physical components that were a part of the city and had an impact on the urban fabric: the society and the waqfs. In the Ottoman city Amasya, during the period of this study, locals founded waqfs and these waqfs were responsible for the construction and maintenance of all 51 mahalla and their service cores and other buildings. So overall, 51 mahallas, locals, and their actions reflected on the urban fabric, and waqfs they founded were investigated for this research.

6.3. Resilience against Disasters in Amasya

In chapter 3, stressors were defined as a negative force that triggers a change or failure. In the cases of the traditional Ottoman urban fabric, these stressors are natural disasters, man-made disasters, and administrative decisions. Timeline of events of Amasya presented in the previous chapter. According to data available from the period, the biggest stressors to the city fabric were natural disasters such as fires, earthquakes, and floods. Rebellions and arson which were man-made were also common reasons for fires. Regardless of the reason for the fire, all fires damaged the urban fabric of Amasya on various levels. The main stressors investigated for the resilience of Amasya for this research were mainly fire, earthquake, and flood which occurred due to various reasons.

6.4. Infrastructural Resilience

Infrastructural resilience refers to reactions of the built environment such as service buildings, transportation systems, and their network to the stressors and how well these structures would recover and advance. The more these elements manage to mitigate, adapt to, and restore from stressors, the more resilient they are. Infrastructural elements are responsible for serving the urban fabric and any disruption in the system may fail to function the urban system properly and may cause a cascading effect for the whole urban network to fail. For example, in Amasya due to geographical constraints, there is one entrance and one exit. Especially the road system is key for Amasya to stay connected to trade routes that provide locals economic power. If the main road is closed due to a flood, it would prevent caravans to enter the city and complete trading activities, which, causes the local economy to be disrupted. Where the local economy is disrupted, resources for the recovery are disrupted as well, which would result in delaying the whole process of bouncing forward to overcome problems and obstruct the resilience process. Therefore, locals managed to create this physical urban network to respond to problems and recover quickly. The system of the mahalla network with a service core that contains fundamental functions is the key for infrastructural resilience in Amasya which was due to their traditional characteristic.

- **Redundancy and Diversity**

Redundancy is to contain multiple components of the same function instead of having one central function that serves the whole system, in the case of failure of one component, the system continues working and the rest of the components would compensate for the failed one. Redundancy in the Ottoman urban context of Amasya is observed as a network of mahallas with individual service cores. Instead of relying on one central service core, all functions were spread around the city and constructed by the decision of locals (Fig.6.1). Redundancy was a characteristic that was implemented in the formation process and it increased the preparedness against stressors, helped the recovery process, mitigated the effect of disasters.

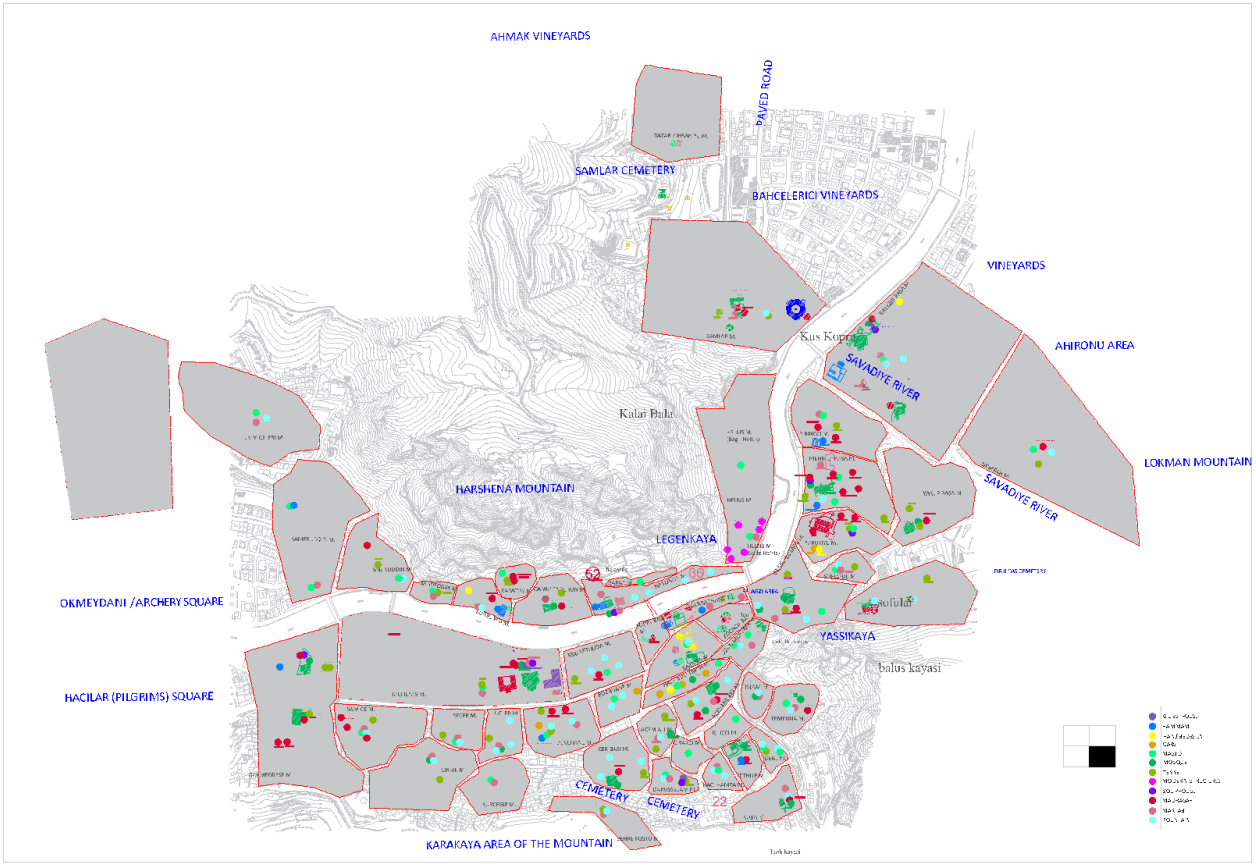

Fig. 6.1. Map of mahallas with various functions mahallas had

Function	Number of Mahalla
Mosque/Masjid	51 (all)
Fountain	36
Maktab	32
Tekke	31
Madrasah	27
Hammam	12
Han/Bedesten/Carsi/Bazaar	7
Souphouse	5
Library	3

Table 6.2. Quantity of functions that are observed in mahalla service cores

Table 6.2. shows that some fundamental building typologies such as masjid/mosque, fountain, maktab, tekke, and madrasah existed in high numbers and were located in different mahallas. As most of the population in Amasya were Muslim, religion was the center of locals' life, therefore, the

number of masjid and mosques was the highest and every mahalla had at least one masjid or/and mosque. Moreover, in 12 mahallas there were 2 masjids/mosques and in 7 mahallas there were 3 mosques/masjids (Fig.6.2). The second most common structure was a fountain. There were fountains in 36 mahallas (Fig. 6.3). While 16 mahallas had one fountain, 16 other mahallas had 2 fountains, 2 mahallas have 3 fountains, and 2 mahallas had 5 fountains. Even though there are no fountains in every mahalla, it shows mahallas with more than one fountain could provide its neighbors which also connects redundancy to interdependence. Evliya Celebi stated that *'there are 200 maktabs teaching literacy to kids. Other than those, each neighborhood has always at least one child maktabs'* (Evliya Celebi, Dagli, Kahraman, 2008). However, available records showed there were 39 maktabs in 31 mahallas (Fig. 6.4). Also, there were records of 51 madrasahs in 31 mahallas (Fig. 6.5). Lastly, 51 tekkes were observed in 31 mahallas (Fig. 6.6). The other typologies observed less and therefore in fewer mahallas such as a library, guesthouse, soup house, hans. However, considering functions were built according to the need, fewer numbers do not imply any less redundancy. As seen in Fig. 6.1., this number of functions scattered around all mahallas all over the urban fabric provides redundancy. Damage in one building or cluster of buildings does not affect the rest of the urban fabric and does cause any cascading effect. Moreover, in the case of damage in one area, neighboring mahallas could support the damaged areas which contributes to disaster recovery. Both redundancy and diversity are characteristics that belong to the traditional Ottoman period of Amasya.

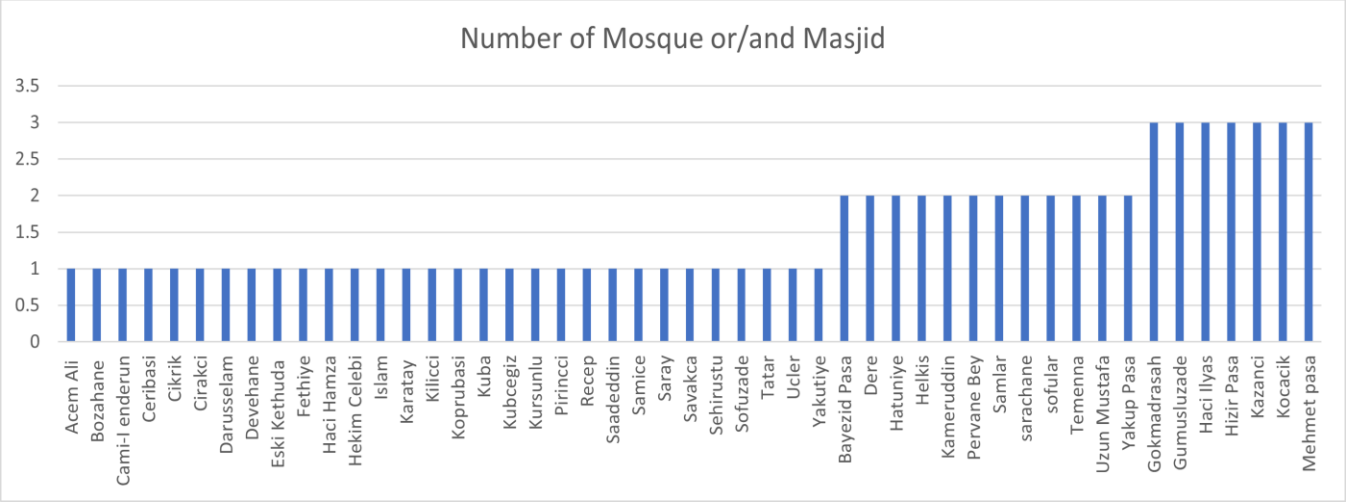

Fig. 6.2. Number of Mosques or/and Masjids in Mahallas

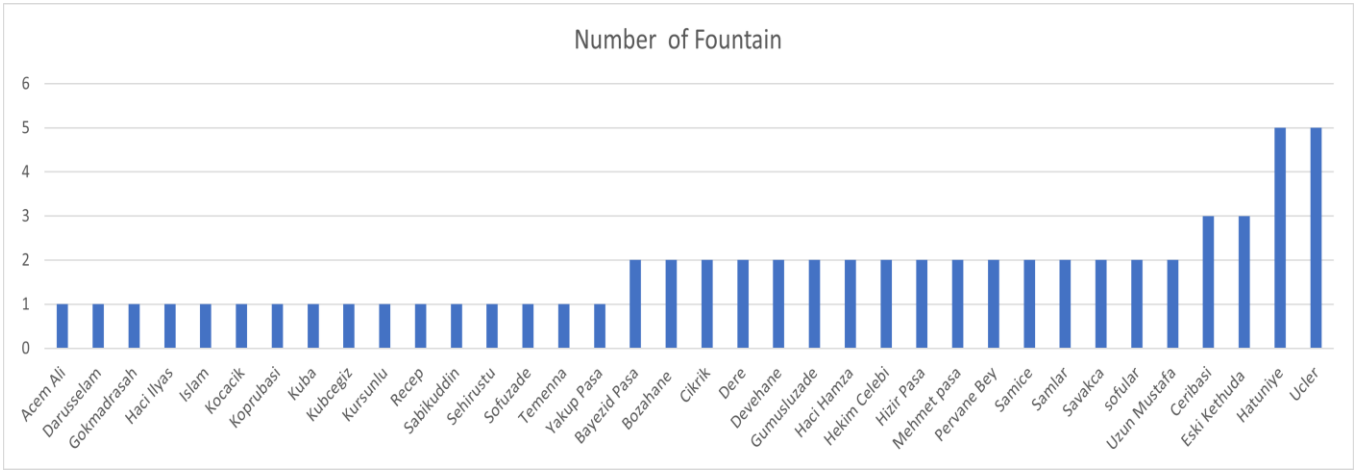

Fig. 6.3. Number of Fountains in Mahallas

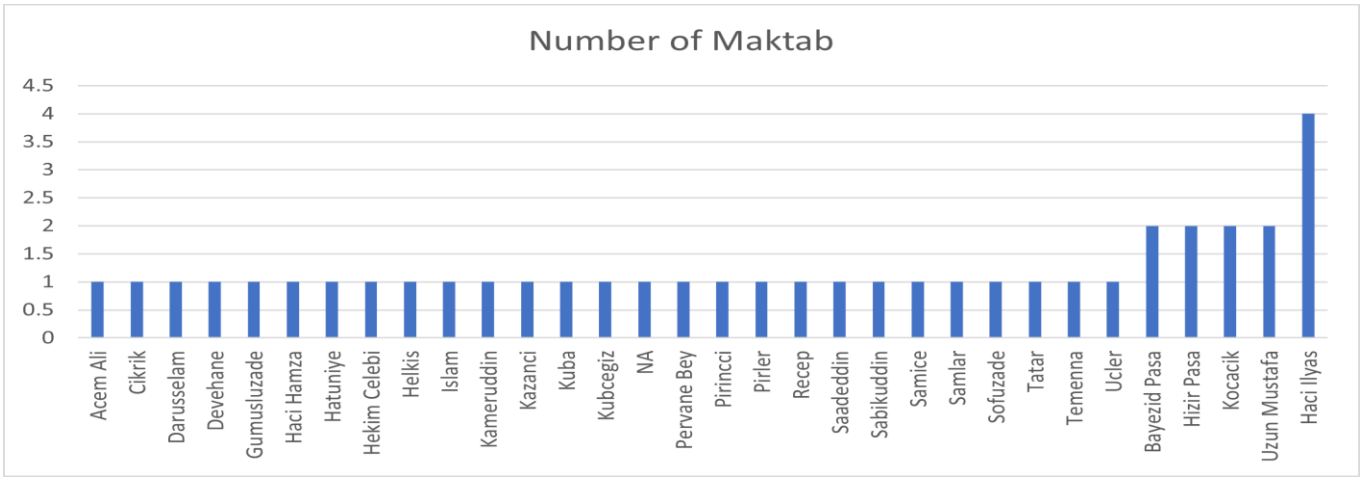

Fig. 6.4. Number of Maktabs in Mahallas

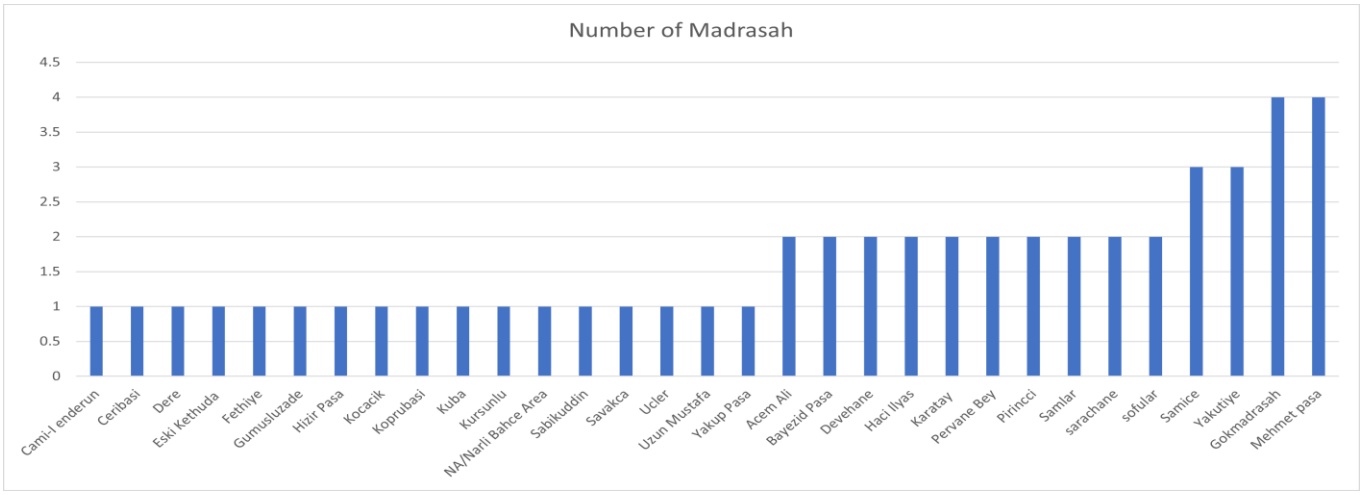

Fig. 6.5. Number of Madrasahs in Mahallas

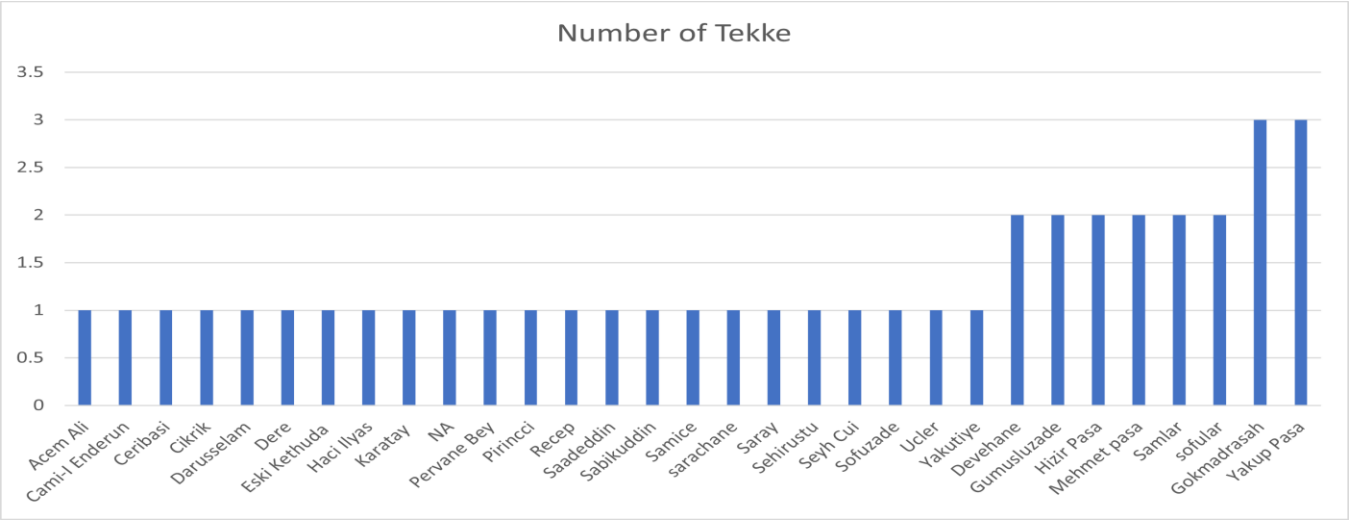

Fig. 6.6. Number of Tekkes in Mahallas

Redundancy in functions helped in the cases of disaster by supporting the mahalla that lost a function by providing the same function from the immediate surrounding. For example, rebels set fire on various mahallas in 1602. The fire burned down various timber structures from Samice Mahalla to Eski Kethuda Mahalla, Ibadullah Masjid in Bozahane Mahallas was burned down. However, Bozahane mahalla citizens were approximately 100 meters away from Sultan Bayezid Kulliyah and its mosque in Haci Ilyas Mahalla and approximately 150 m away from Ceribasi Mosque which was not affected by this fire. Considering they were able to get these services in close proximity, the damage of fire did not obstruct the religious services in those mahallas or in the city, since every citizen was able to get the service from an immediate surrounding. Fig. 6.7 shows some of the mahallas affected by the riot fires in 1602 and it also shows how many possible close locations for mosques or masjids are in service for those who are affected. In another example, when Nuhoglu Tekke in Ceribasi Mahallas was burned in a fire of 1808, there were 5 other tekkes within a 250 perimeter. Also, the other functions of Ceribasi Mahalla which was unaffected by the fire continued serving. This example applies to the other main services in cases of damage by any type of stressors. So, in the case of damage by a stressor in mahalla, citizens of Amasya were able to receive the service from close proximity while the recovery process. Therefore, redundancy in the urban fabric of Amasya helped locals face impact and mitigate the damage and contributed to the recovery process by taking the pressure from the damaged structure and supported the people by providing service.

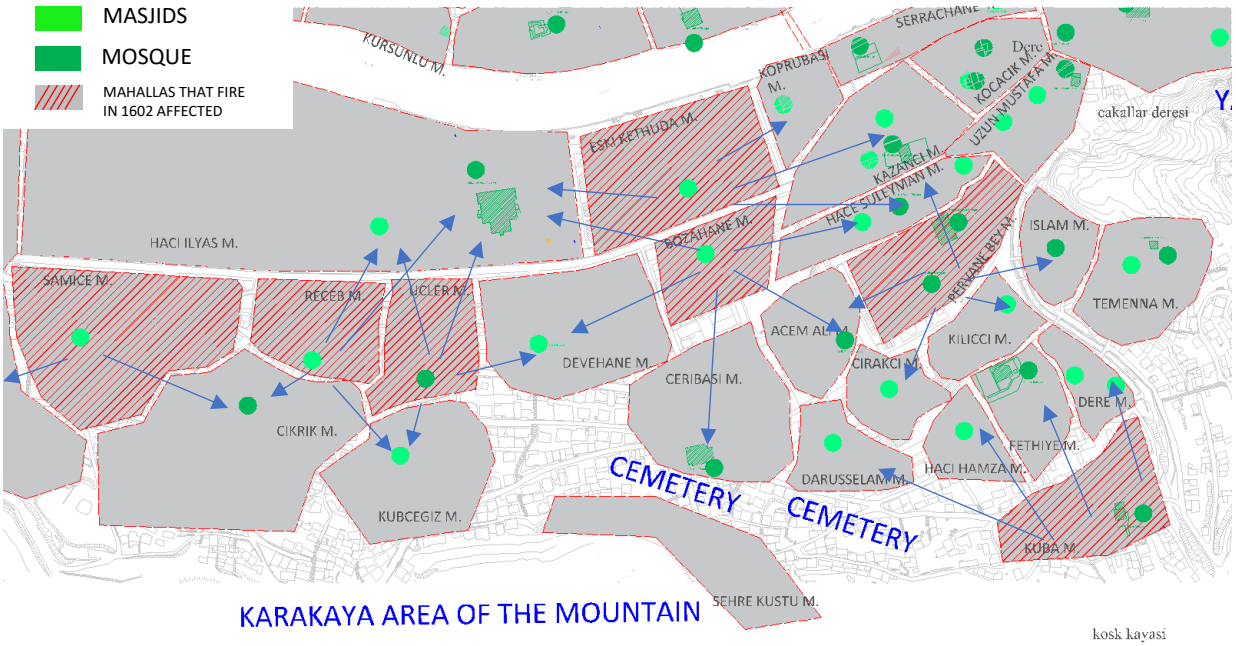

Fig. 6.7. A diagram to show close proximity masjids and mosques for the mahallas affected by fire in 1602.

Related to redundancy, while redundancy is about quantity, diversity is how diverse those quantities were. Containing various functions against a stressor can increase resilience. It is a fundamental characteristic of the physical fabric that helps to mitigate the damage and help the recovery process, so the urban system continues to function. Mahallas of Amasya contained many typologies such as mosques, fountains, madrasah, tekke, hammam, guesthouses, soup houses, hans, carsis, libraries. While 5 mahallas had 2 or fewer functions, the rest had at least 3 functions which may rise up to 10 functions (Fig. 6.8). Moreover, even though functions were in different numbers depending on the need, 29 different typologies existed in Amasya during the Ottoman period (Fig. 6.9).

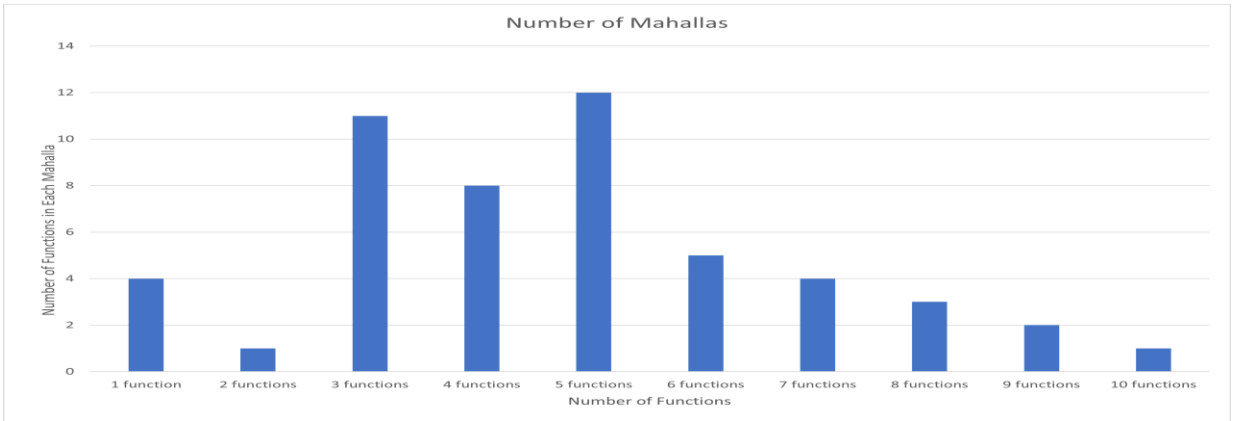

Fig. 6.8. Number of functions in mahallas

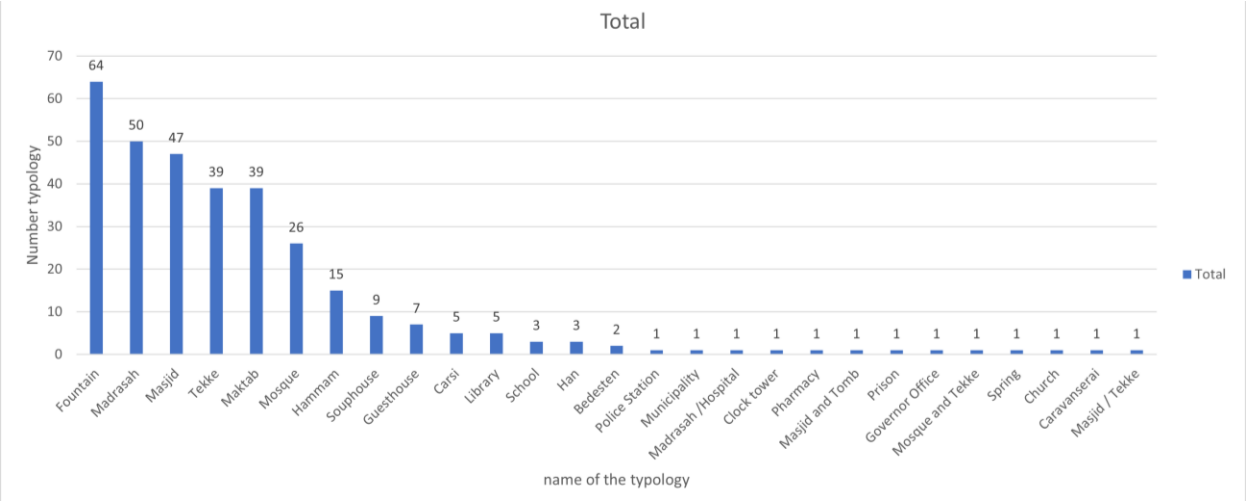

Fig. 6.9. Number of Typologies in Amasya during the Ottoman period

- ## Independence and Interdependence

Independence and interdependence are the other two characteristics of resilience that are relevant to each other. Independence is being able to continue functioning without exterior help especially in the cases of facing stressors. Interdependence in connectivity among components of the network to support each other. The interdependence should be created between independent components to prevent cascading failure within the system. In the case of each disaster, locals took control and started the recovery process without exterior help from the central government which shows their independence. Physically, all 51 mahallas were independent units with various service structures they contain. Due to being a rather small unit compared to the urban fabric, individual mahallas can assess the damage and make the recovery process faster according to their needs. However, when a stressor damaged a function in a mahalla, that mahalla was dependent on services in surrounding mahallas until the recovery, as explained in redundancy and shown in the example of fire in 1602 (Fig. 6.7). Yet, their dependencies in those cases were a limited period of time. Due to the mahalla network, support could be provided by many mahallas which decreases high interdependence that can result in negative. Overall, the vernacular and traditional Amasya consisted of independent mahallas that were interlinked. However, this dependency did not cause any cascading failure effect, but only supported each other. Similar to previous characteristics, independence and interdependence are belong to the traditional Ottoman period of Amasya.

- **Robustness**

Robustness is the ability to withstand stressors without a decline from the initial state. This trait is attributed to the physicality in the literature and is observed in building scale. Considering the overall survival of the urban fabric of Amasya, after facing many floods, earthquakes, and fires over centuries, the city withstands stressors until 1915. Until 1915, earthquakes affected the whole city fabric, and floods affected mostly mahallas on the riverfront. Fire generally affected individual buildings and mahallas. The only fire in 1602 affected 9, fire in 1730 affected 9, and 1854 affected 2 mahallas. However, the waqf records and visuals from the 19th century until 1915 presented in Chapter 5 shows all mahallas managed to recover by the decisions and actions of locals of waqfs. So, robustness was also dependent on the resilience of waqfs and society. However, the fire in 1915 burned down 1/3 of the whole Amasya, and where 26 mahallas were totally burned down or damaged in a great deal. So, as long as the stressors are not too big and their damage destroys most of the network system of various traits that supports resilience, Amasya continued to withstand stressors.

Robustness was also evident in the building scale. The most common stressor was the fire. Therefore, for structures that had high importance stone was chosen as a construction material that was unfortunately affected by earthquakes, but the damage was mostly minor, and repair was supported by waqfs. Also, these stone structures were robust against floods. Most residential buildings were initially adobe which was susceptible to floods and earthquakes and hard to maintain generally. Therefore, wood was combined with adobe in order to create robustness for earthquakes and they were easily and cheaply replaceable if fire struck them. Even though the robustness of construction materials has its weaknesses, they still showed robustness. While all the 65 surviving service buildings are stone, all residential buildings that managed to survive until today are either wooden or wooden and adobe. Also, when the images after the 1915 fire were examined, it can be seen that Sultan Bayezid on the west and Saman Pazari Mosque, Kilari Suleyman Aga Mosque, Tashan, Bedesten, and Sarachane Mosque resisted the fire and prevented it from spreading furthermore. Those stone service buildings created a barrier for fire from spreading even further (Fig 6.10 and Fig. 6.11). Robustness is a characteristic based on material and construction techniques therefore related to the traditional and vernacular characteristics of Amasya.

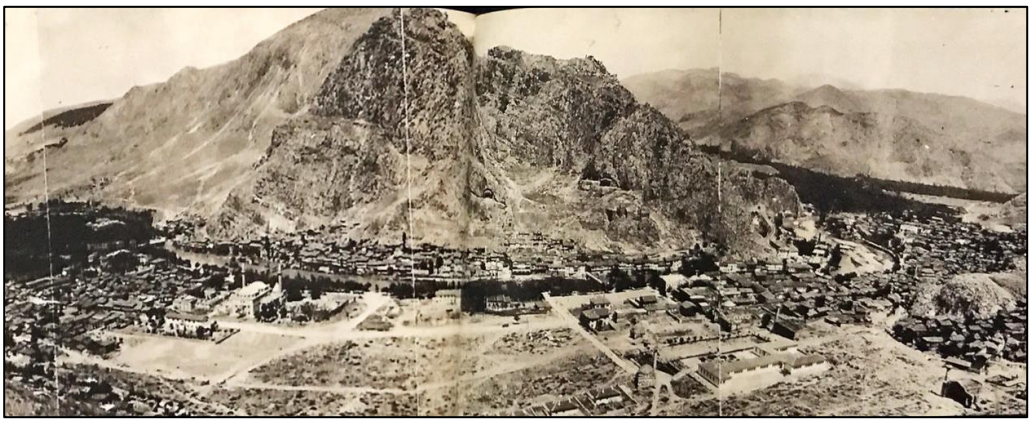

Fig. 6.10. Picture of Amasya after the fire in 1915 (Menc, 2018)

Fig. 6.11. The area between Sultan Bayezid Kulliyah and Saman Pazari Mosque, Kilari Suleyman Aga Mosque, Tashan, Bedesten, and Sarachane Mosque after the fire in 1915 (Menc, 2018)

Another point highlighted previously was the robustness of functions where functions resisted the change. The first evidence of this is the bridge and the main axis of Amasya. Five bridges have existed since the Ottoman Era, even though they were constantly damaged by floods and earthquakes, they were replaced by new bridges, but the location of the bridges stayed the same. Also, the main axis that connected trade routes to the city center of Amasya from the ancient period has never changed.

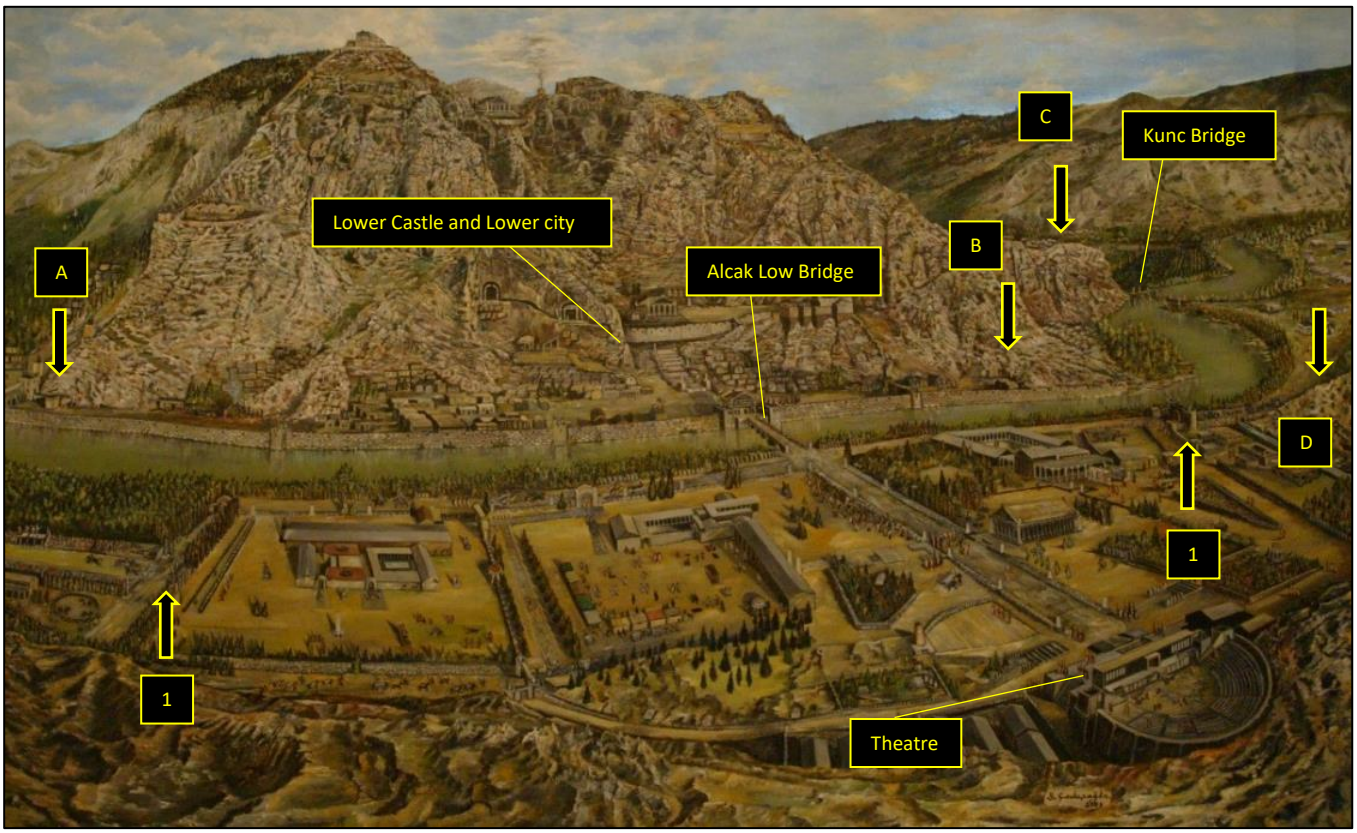

Fig. 6.12. Depiction of Amasya during the Pontus Empire period (Amasya Municipality Archive, NA)

The oldest infrastructural elements, the main road and the bridges of the city, started to form before the Ottomans and continued to be a part of the Ottoman urban fabric by recovering from stressors and also kept developing. The oldest infrastructure is the Alcak (Low) Bridge which connected the lower castle and lower city to the southern strip of Amasya (Fig. 6.12). Due to the lower city is naturally protected by the rock formation as shown in points A, B, and C in Fig. 6.10, and also theatre on the southern part sits natural elevation, the location of Alcak Bridge was possibly selected between points A and B, directing to the theatre. The bridge was originally built stone, however, due to time, it started to sink. As shown in Fig. 6.13 by Zeybek (1998), the soil around the river Yesilirmak is alluvium which created weakness for the bridge, and more alluvium that the stream of the river Yesilirmak brought caused the first bridge to sink slowly. During the Ottoman period, it was so low that another wooden structure needed to be built on top of it which had to be replaced many times due to damage from floods. Due to the established axis from the Greek and Roman period to the Ottoman Era, the location of the bridge needed to be protected instead of moving the sank bridge to another area. Moreover, due to resources and practicability, instead of removing the

sank bridge, the Ottomans used the existing structure as a foundation and rebuilt a wooden bridge on top of it. When the 1881 flood washed away the wooden bridge, locals rebuilt it with wood and stone from collapsed churches. This shows that even though the wooden structures were more susceptible to flood, wood was more available and faster to construct which made wood the first choice of fast recovery in order to continue functioning. However, if there is a stone available, then it is used during the recovery process. As a result, the established axis of vernacular Amasya is preserved and continued functioning for over 2000 years. So, after assessing pros and cons, locals sometimes preferred robustness in function over robustness in materials. Function in robustness is a characteristic that was applicable before the Ottoman period considering the long survival of the locations of infrastructures therefore can be concluded as a vernacular characteristic of Amasya.

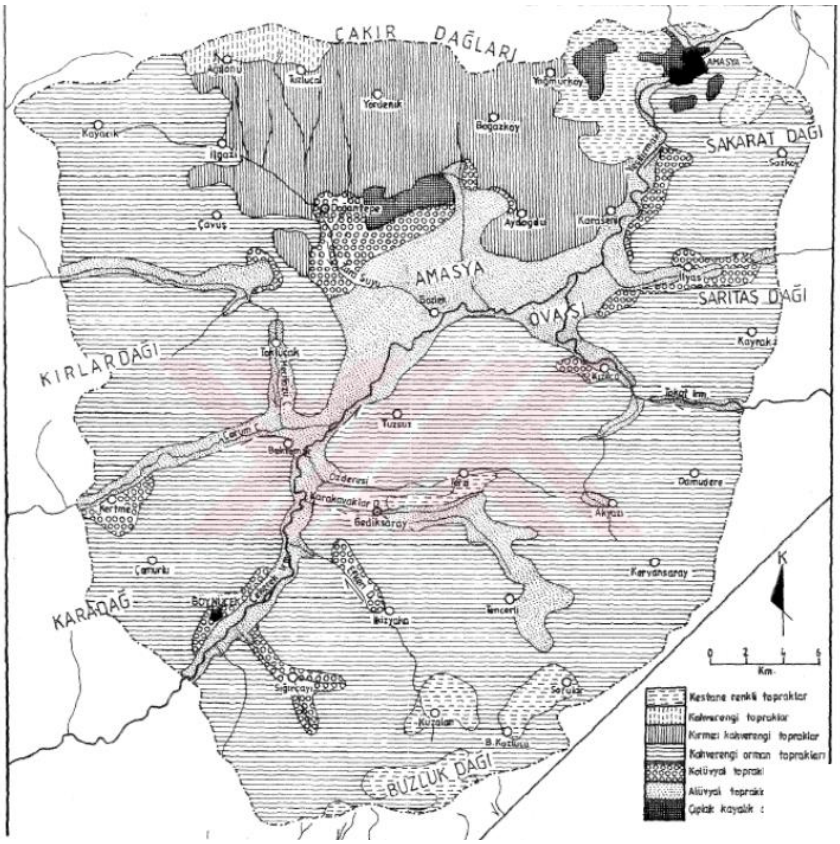

Fig. 6.13. Soil Map of Amasya plain by Zeybek (1988)

Alluvium Soil

The second and third infrastructure was the main road that connected the city to trade routes. Due to geographical constraints, the main road had to go through Amasya. Also, the Kunc bridge needed to be constructed for connecting the trade route to the city center. From the Roman Era until today the bridge was replaced many times however the location was preserved. As explained previously,

alluvium soil, streams that brought more alluviums, also constant floods damaged not only Kunc Bridge but all bridges many times, therefore the bridges needed to be recovered and rebuilt many times. During the Seljuk era, the daughter of a Sultan built the Kunc Bridge as a stone structure. To the side of that face stream, old sarcophagus stones were used to divide the stream and minimize the damage (Fig. 6.14). With renovations over time, the bridge from Seljuk Era stands still. Even though the Alcak Bridge sank over time, the reason for selecting stone as a construction material again was due to the importance of the function of the bridge as a part of trade routes and stone is more robust against strong streams especially when there is a flood. Seljuk architects also applied a technique to minimize the effect of strong streams. So, in bridges that connect two riverfronts cheap and accessible materials with quick applications were chosen. However, for the bridge that is essential to the connection of the city to the outer world which is also essential for the economy of the city, more robust material against flood was chosen.

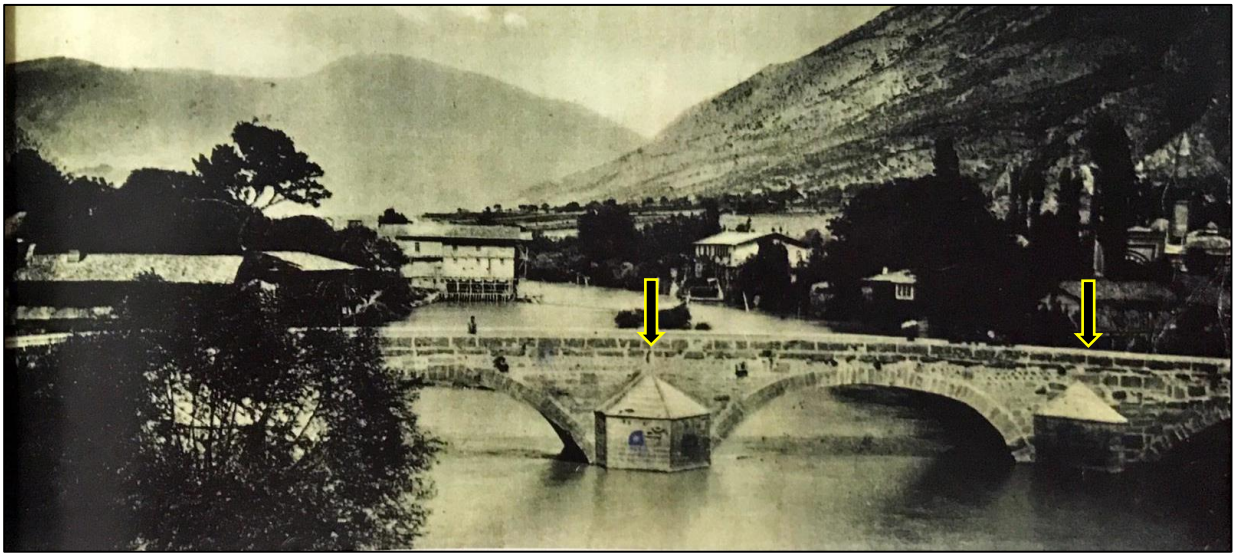

Fig. 6.14. Postcard showing Kunc Bridge (Menc, 2018, p. 125)

The main road mentioned above managed to stay at the same locations despite all the stressors of Amasya for centuries. This was due to geographical constraints. Due to being in a narrow valley surrounded by mountains, the possible location of the main road was limited. Therefore, even though the flood from time to time damaged the road, considering it still exists today, it has undergone recovery many times to continue functioning and connecting Amasya to the rest of the world. Due to the technology of previous centuries was being limited, there is no evidence on mitigation activities by the Ottoman to the effect of the flood on the road, therefore the survival of

this main road solely depended on the recovery process. Also, for example, in another Ottoman city that was part of the Roman road and Silk road, Adrianople (Edirne), which was also next to a river that flooded the area many times, the location of the trade road has not changed (Fig. 6.15). Therefore, especially established trade routes locations managed to stay in the same location due to their economic importance even though stressors they might face.

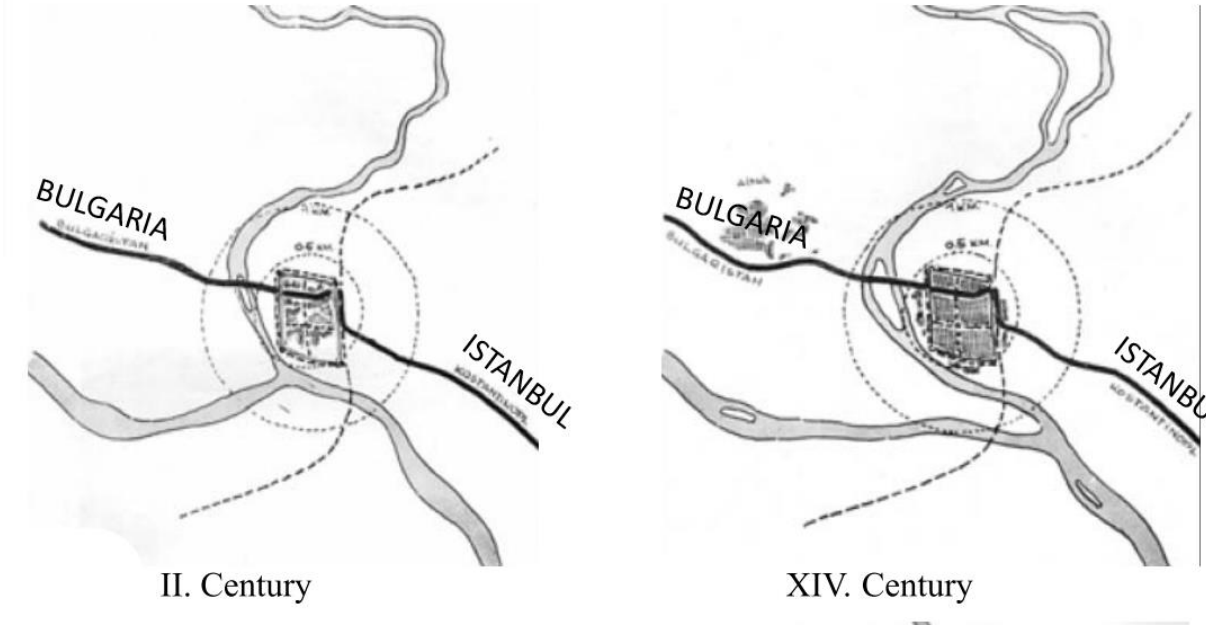

Fig. 6.15. Maps of Edirne showing the trade route in II. Century and XIV century (Emekci, 2011, p.6)

The third bridge Hukumet (Helkis) Bridge which was originally built in the Roman Era as a wooden structure and during the Ottoman period, it was reconstructed as wooden again. The connectivity of the two strips is important for better functioning for locals. Therefore, there was a need for the second bridge, they chose the area where two riverfronts got closest and the area that can serve the Helkis Mahalla area more conveniently. Due to being a pedestrian bridge, it was not in high priority and not needed more robustness, therefore, it was built with convenient, cheap, and fast constructible material, wood. However, due to constant damage, it was rebuilt as concrete reinforced in 1940 which was due to being a motorized bridge during the republic period, also, due to technology and resources available for reconstruction at the time.

The 4th bridge was Meydan (Istasyon/Station or Square) bridge that was built as a stone bridge mid-14th century and even though damaged from floods and earthquakes, it was renovated and stands still. It was connecting the mahallas formed on the northwest of Amasya and towns towards

that direction. Similar to previous cases, due to established connections and roads on the location of bridges, reconstruction if preferred at the same locations. Due to not wasting resources and quick recovery, the damaged structures preferred to be restored if possible and only rebuilt if they were washed away.

Lastly, Magdenus Bridge was constructed as wooden during the Byzantium period and was damaged from the flood many times and reconstructed by wooden again due to probably similar reason to Helkis Bridge. The Sultan Bayezid Kulliyah is located between these two bridges between the two axes. As the most important complex of the city, it needed to be located where connections of two riverfronts are located. Therefore, the bridges became a determining factor for shaping the urban fabric. Moreover, their survival was vital for the locals who live in northern mahallas who can reach the Kulliyah easily.

So, all these 5 bridges and the main road, at least in terms of location, managed to survive, yet, due to the weaknesses in materials, they had to be replaced sometimes, especially the wooden ones. Due to the Amasya river soil is alluvium, the stone bridges were suffered from natural degradation or earthquakes. However, a stone was preferred for being more robust against flood in order to preserve connections of the city to other towns and cities, as well as preventing disruption in trade route activities. For the bridges that were part of a local road network, wooden was chosen. The decision of keeping wooden bridges could be a result of the wood is a convenient and cheap local material for a quick replacement to prevent disruptions in functioning.

Lastly, even though there are contradictory ideas on decentralized or centralized urban systems, Amasya as a decentralized, multiple node mahalla system, managed to overcome stressors. Until the case of recovery, all service structures from the surrounding mahallas were available for locals of mahalla that suffered from a stressor. Also, when the urban fabric of Amasya is considered as a system, multiple node systems helped to reduce the impact of disasters when the pieces, which are mahallas, are damaged from stressors. Overall, the bridges, road network, and mahallas of Amasya, even though they faced stressors and damaged, managed to recover as soon as possible, and while the recovery process, the whole urban network system supported the weak part in order to continue functioning and surviving as a whole. Therefore, this study, according to the data analyzed, claims, that Amasya infrastructurally showed resilience during the Ottoman period.

- **Usefulness/Relevance**

Usefulness or relevance is a trait that this research detects for the resilience of traditional Amasya. What is meant by that is when the structures are still useful and relevant to the lifestyle of the day we assess resilience, they are more likely to continue surviving. When the data on structures survived up to the present day (Fig. 6.16), typologies that disappeared more than 30 buildings were fountains, madrasahs, tekkes, and masjids. After Amasya was no longer a Shahzadah city from the 16th century, interest in religious orders and their residence, tekkes, was started to decrease. Even though there are cases of construction of new tekkes for religious orders, data show from the 19th century, they started to be deserted more often. Tekkes and religious orders were no longer relevant to urban life probably also with the effect of modernization movements from the second half of the 19th century. Madrasahs were universities of the Ottoman period, however, due to a lack of modern education that helps students find jobs, interest in madrasahs decreased which reflected on their survival. After the republic period and with the advancement of modern life, plumbing in the apartments provided clean water that created no need for fountains anymore which reflected in the survival rate. The only exception is masjids. They disappeared and were replaced many times which increased their disappearance rate. When people renovated structures, they preferred ones they feel more attached to emotionally and religiously, which is possibly reflected in their survival rate. Data shows the typology that survived the most is mosques. In any period and any circumstances, the most important structures which alone started urbanization were saved and continued to be a part of locals' life regardless of the time of period and still is. Therefore, it could be concluded that the more useful the structures were and the more they are relevant to the lifestyle of locals, they are more like to overcome stressors. This characteristic is directly related to the traditional characteristic of Amasya however it could be also argued that this characteristic could be applied to any local built environment and community with limited resources, therefore, it is also a vernacular characteristic.

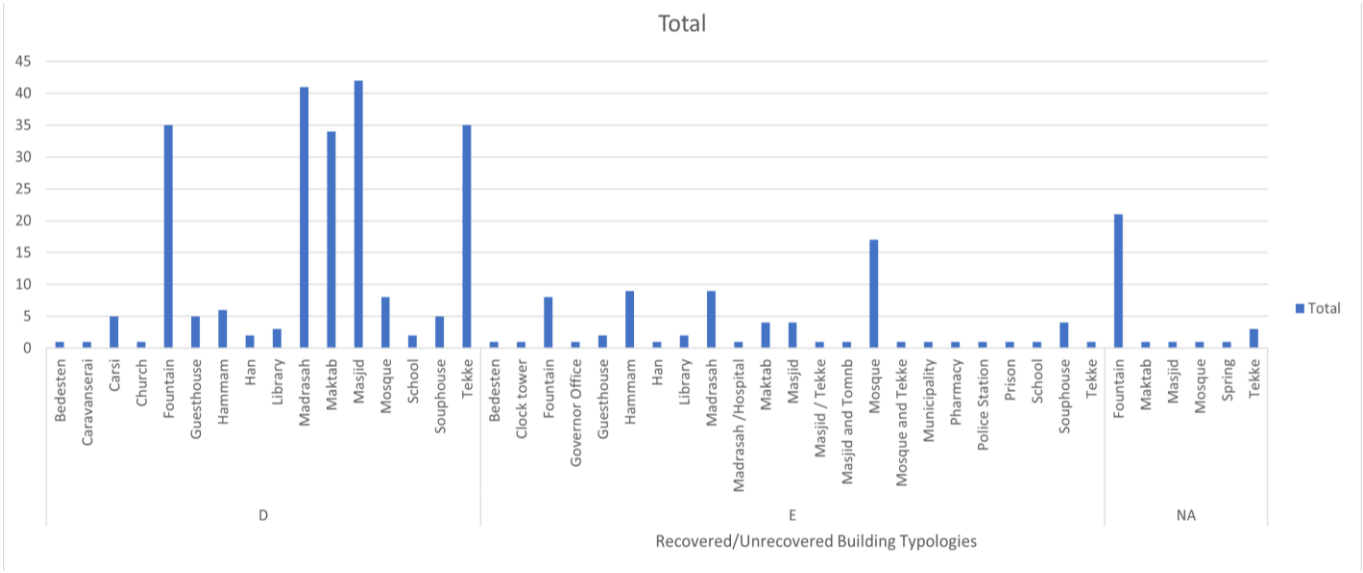

Fig. 6.16. Number of buildings typologies that disappeared or still exist

- ## Adaptability and Creativity

Adaptability and creativity are two traits that are very close to each other. Adaptability is learning from stressors and being able to adapt to change. Creativity is not only adapting and recovering but also advancing to a better state of functioning than before after facing a stressor. The difference between creativity than adaptability is using adversity as an opportunity for achieving a better state than the original.

Typology	Change of Function	Change of Function date
Madrasah	Ibtidai maktab; rustiye maktab	1893; 1910
Tekke	Madrasah	1622
Tekke	Fetvahane; Maktab	1864;1882
Madrasah	Tekke; madrasah	NA;1713
Tekke	Given to Ministry of Education	1897
Masjid	Mosque	1661
Tekke	Residence for immigrants	1879
Maktab	Ibtidai maktab	1909
Masjid	Madrasah	NA
Maktab	Ibtidai maktab	1889
Madrasah	Shops	1891

Table. 6.3. Table of Change of Functions in Buildings

Adaptability in Amasya is observed in functions and materials. For the first one, when the buildings faced any type or level of stressors, and if the function that was damaged was not relevant to the lifestyle of the locals anymore, functions of those buildings were changed to another in order to make service buildings continue functioning. Amasya had 11 buildings and 14 cases of adapting to a new function when needed, instead of abandoning the building and losing an existing infrastructure (Table. 6.3). Similar to usefulness/relevance, adaptability in functions is observed in traditional buildings, however, it could be argued it could be applied to any local built environment, therefore, it is also a vernacular characteristic.

Adaptability is observed in traditional Amasya in building materials as well. After mainly suffering from earthquakes and fires, or for little stressors of nature such as heavy rains, locals of Amasya made changes in their choice of material and therefore construction style. The initial first change was in residential houses. They adapted from adobe to adobe and wooden structures. Also, in order to deal with heavy rains, instead of flat earth roofs that constantly needed maintenance, as travelers point out, the roof became a gable roof with tiles in the 19th century which is visible from the initial visuals of Amasya as well as from surviving residential buildings present day. Also, the materials of service buildings were changed after a disaster when resources were available. In 5 cases 5 different wooden mosques were rebuilt as a stone structures after being struck by fire. Through these changes in materials and construction styles, locals aimed to mitigate the effect of stressors with more robust materials and construction styles. Adaptability also contributed to the increase of robustness in structures. Also, considering materials and their relevance to the locality, adaptability in building materials was observed in the vernacular characteristic of Amasya.

Similar to adaptability, creativity is observed in two different scales in Amasya: the building scale and the mahalla scale. In building scale, the traveler's accounts from the initial years of the Ottoman period highlights that the houses of the city were built in adobe, and they had flat earth roofs that needed to be constantly maintained. However, in the 19th century, the first depictions of Amasya show that gabled roofs and cantilevering floors show woods became a part of the construction. It can be claimed that the urban fabric of residential parts was replaced over time and this study assumes that disasters were used as an opportunity for these replacements. Also, when service buildings recovered from the fire, a stone was used as a replacement sometimes. This is not observed

in all cases which were possibly due to the resources available. Therefore, in buildings scale, materials, and construction style were replaced when the stressor happened.

However, the visuals from the 19th century and the surviving residential buildings are built with a new technique called himis which is a timber structure filled with adobe, which increased the resilience of structures against earthquakes. Also, another common change of the building material and therefore construction type is common with timber structure for service building. Service buildings are aimed to survive and serve as long as possible. Due to frequent fires, when a fire burned down wooden service buildings in service core, sometimes they were built as stone. However, this was not the case all the time after recoveries, which was possibly due to available materials and money available for reconstruction. The second scale that creativity was observed in Amasya was in service cores. When a service core is burned down during reconstruction new functions were added to reconstruction. However similar to the previous point made on resourcefulness, creativity was not observed in every recovery, which was possibly due to resources available.

Original Structure	Added Structure	Reason
Masjid	Waqfs properties	Fire
Mosque	Maktab+Fountain+Waqf properties	Fire
Masjid	Waqf properties	Fire
Mosque	Waqf properties	Maintenance
Masjid	Fountain	Earthquake
Masjid	Maktab	Maintenance
Hammam+Masjid	Tekke+Waqf	Earthquake
Hammam+Tekke+Masjid*	Fountain	Fire
Masjid	Maktab+Fountain	Fire
Masjid+Maktab+Fountain*	Tekke	Fire
Masjid+Maktab+Fountain	Madrasah	Fire
Mosque	Waqf properties	Earthquake
Mosque	Minaret	Earthquake
Madrasah+Mosque+Fountain	Maktab	Earthquake
Masjid+Maktab+Fountain	Maktab+Madrasah	Fire
Masjid+Fountain	Waqf properties	Fire
Masjid	Waqf properties+Maktab	Maintenance
Mosque	Waqf properties	Maintenance
Mosque*	Minaret	Earthquake

Table 6.4. Examples of recovery with advancement from the original state in mahallas

Moving to an advanced state is not always about being resilient but simply functioning and serving the people better. Therefore, in the mahalla scale, creativity was observed when the recovery of

service cores took place. Eleven service cores and individual service buildings were affected by a fire, 11 service cores and individual service buildings were affected by the fire and 3 service cores and individual service buildings were affected by the flood. Among 15 cases the structures were recovered with the addition of waqfs and more functions such as maktab, fountain, tekke, madrasah (Table 5.4). Sometimes a case of enhancing building by adding structures such as adding minaret to mosques. Also, 4 other cases show, sometimes maintenance activities that can be considered from small stressors took place. Locals of Amasya used stressors for advancing to better physical functioning. Creativity happened in the mahallas scale and comes from the traditional aspect of Amasya.

- **Resourcefulness**

Resourcefulness was observed in building materials. The residential buildings of Amasya initially were made of adobe which is naturally available. Due to suffering from earthquakes, construction materials for the residence of some of the service buildings became a combination of wood and adobe. Due climate and nature of the Black Sea region where Amasya is located, woodlands are frequent. These local materials that are cheap and readily available at any time helped the recovery process go faster and cheaper. Some of the buildings were made of stone. Travelers' accounts give evidence of reusing stones from previous structures for construction purposes. Locals of Amasya were recycling stone from deserted buildings. So, the locals of Amasya were using all possible resources at their dispense for construction, repair, or reconstruction after facing stressors. Resources available are all about the local aspect of the city, therefore, Amasya owes this characteristic mostly to its vernacular character.

6.5. Social Resilience

Social resilience is about a group of people's ability to cope with, overcome, and adapt to stressors. As highlighted in Chapter 3, social cohesion, sense of community, community involvement, attachment to a place, trust, leaderships are characteristics that create social resilience, and these traits correlate with the social aspect of mahalla and Ottoman city urban life as explained in Chapter 2. In an Ottoman city, a person who is seen as the leader started the formation of the service core of the mahallas, which they also tend to live in. Also, in the cases of needs and recoveries, different

people with resources stepped in to help the recovery process. Since the locals of Amasya were in control of forming their mahallas, there was a sense of attachment to a place. There are many cases that children or grandchildren of first benefactors stepped in for the recovery and maintenance process of service buildings. Families in Amasya continued to live in the same mahallas for generations, and therefore, due to attachment to their mahallas, sense of community, they give back to their mahallas. In each century under the control of the Ottomans, locals continued to found waqfs which took the for service to their mahallas and their city. Amasya, through being built, maintained, and recovered by locals and their waqfs, showed an ability to overcome stressors and by continue evolving and advancing showed the ability to advance, which shows their resilience. Social resilience and the characteristics that come with it depend on the Ottoman period, therefore, the traditional aspect of Amasya is unlike the vernacular character.

- **Independence and Interdependence**

In Amasya, every mahalla was independent as long as they followed certain rules. The inhabitants of each mahalla where they live were free to make a decision and made the addition of service buildings depending on their own needs. Mahalla as a community was self-reliant, had the authority to make changes, developments, and recovery. All examples presented in the Case Study chapter shows, locals founded their mahallas and created all functions in their mahallas freely. Because as a self-reliant community, inhabitants stepped up and either made a donation, recovered waqfs, or improved waqfs which is presented in many cases. Yet, when a disaster struck a mahalla, that mahalla received donations from other mahallas. This community collaboration created a level of interdependence during times of need.

- **Collaboration**

Collaboration among stakeholders of a system contributes to resilience and it helps to prepare against, deal with disasters. In Amasya urban fabric, two main stakeholders are the community and the waqfs. There is no collaboration among waqfs are detected for this research, however, the cases of collaboration between the individuals of the community and the collaboration of individuals and waqfs are common. So, collaboration was a trait dependent on institutional and social resilience. Locals of Amasya collaborated when the support from the waqfs to any damaged property was insufficient. For example, when the properties of Ibadullah masjid and its waqfs were burned in a

fire, Mehmet Aga rebuilt in it 1734 and donated 9 shops around the masjid, however, all were damaged in 1854. In 1856, the masjid and the shops of the waqfs were renovated with the help of locals. When the masjid was burned down again in 1886, it was rebuilt one more time by the donations of locals. In another case, when the waqf of the preexisting Sarachane Mosque was in need, Mehmet Aga and Osman Aga donated shops together for the waqf in 1758. Collaboration among people to recover from stressors was also common. For example, when traveler Busbecq came to the city on the 14th of April 1555, they wrote seeing a fire. Then, on the 17th of May, just over a month, they stated the houses were rebuilt in a very short period of time and they were fully functioning. It means the houses damaged were repaired in 3 days, which is proof of quick recovery in residential architecture after fires. however, this was not only by collaboration but also by resources and robustness of function.

Moreover, there is a type of collaboration that this research called delayed-collaboration that occurred in Amasya. Collaboration refers to the actions of stakeholders for a purpose at the same time. In the cases of mahallas, service cores were built up within different time frames by people who might not be even in the same generation. For instance, when one person built two main functions for a mahalla, another person can take the responsibility for the third when they see a need. However, these two people do not always act at the same time. Locals of a mahalla continue to contribute and advance their mahalla within a wider time period. For example, in Yakutiye mahalla, Bimarhane (hospital and medical school) was built by previous Turkish principalities before the Ottomans in 1309. During the Ottoman period, Yakut Pasa built tekke, masjid, and a soup house on the south of this mahalla and created its service core next to an existing service structure in 1413. In 1520, Nuh Bey Dar'ul Kurra was built next to the tekke and Bimarhane. Thus, a local of this mahalla formed and improved the service core of this mahalla within 3 centuries. Overall, collaboration is a trait that comes within the values of Islamic and Turkish society. It reflected on the way the mahallas are formed but are mainly useful when there is a recovery needed from disasters. Unlike the descriptions from the literature, instead of preparedness or mitigation of disasters, collaboration in Amasya is only observed in the formation, maintenance, or recovery process of the urban fabric.

- **Self-Organization**

Self-organization is an independent action from a component of the system that affects macroscale patterns and contributes to the whole system. In the literature, it was linked to citizen initiatives and participation. In Ottoman cities, as well as in Amasya, citizens are the decision-makers of their mahallas, and they initiate various actions. As presented in the case study Amasya chapter, among 51 mahallas, 36 are named after a guardian with influence, power, and money, and 4 are named after the group of people (Table. 6.5). Even this number alone shows how locals are at the center of life in mahallas and they are the decision-makers.

The origin of the names comes from	**Number**
Name/Nickname/Profession of Person	36
Group of People/Ethnicity	4
Place/ Building	11
	51 Total

Table. 6.5. Origin of the names of the mahallas

As explained in the mahalla section of Chapter 5, locals of each mahalla with the patronage of a couple of wealthy people made a decision on how they shaped the mahallas and which service buildings to build. Locals with money and land made a decision of what is needed for mahalla and started construction of service buildings and generally, waqfs were founded from the beginning or right after completion of construction. Waqfs and locals took the responsibility of maintenance at regular times as well as when stressors struck. All the cases of recovery in traditional Amasya were done by waqfs and locals. After natural disasters, locals of each mahalla with resources organized for recovery. In the case of income of waqfs are impeded, then locals stepped in and either provided property of income or money to waqfs or undertake the expenses of recovery or reconstruction. For instance, a madrasah was built by the will of Omar Aga in Eski Kethuda Mahalla. When it was destroyed by fires due to being a wooden structure, Hasan Aga in 1828 and Ms. Aise Hanim in 1886 rebuilt the madrasah. So, instead of relying on any type of external governing body, recovery was done through locals who took initiative or waqfs that is an initiative started by locals. Moreover, each recovery in a mahalla contributed to the survival of the whole urban fabric as pieces that bring it together individually survive.

6.6. Institutional Resilience

Institutional resilience refers to institutions that take an active role in resisting and fighting with the stressors before, during, and after in the urban context. In the Ottoman city context, the institution refers to the waqfs. As highlighted in Chapter 3, the resilience of institutions is about 'h*ow effective they are in oiling the wheels of society' c*ontinuously and their long history with inclusivity. As highlighted in Chapter 2, there was no local governing body until the 19th century in Ottoman cities as well as in Amasya. However, similar to other Ottoman cities, in Amasya, waqfs were the institutions that were serving the community and the city. The waqfs' objective of Ottoman Cities was about Islam. Rules of Islam that stipulate donations and hadiths encourage donations for Muslims. Moreover, founding waqfs and constructing a service building were considered as a way to continue earning deeds after one dies. A hadith in At-Tirmidhi[73] states that *'the Messenger of Allah said: "When a person dies, his deeds are cut off except for three: Continuing charity, knowledge that others benefited from, and a righteous son who supplicates for him"'* (p. 168). At-Tirmidhi comments on the hadith and explains that *'continuing charity is charity the benefit and reward of which continues even after the death of the person. For example, if someone gives property in charity to please Allah, or does some other deed of charity, like construction of a mosque, or establishes a school, or digs a well for the use of people, it is all continuing charity. Knowledge means preaching, teaching or writing of books for the guidance of people etc., are all deeds of continuing charity'* (p. 168). Therefore, founding waqfs and continue providing services to people is a way for Muslims to continue earning good deeds to enter heaven which made them more eager to found instead of individual one-time donations. The longer these waqfs served the longer good deeds are earned for the founders. Therefore, this concept also made founders of waqfs to assure continuous income by donating properties which contributed to the survival of these institutions over centuries. When the operations of waqfs were disrupted, descendants of founders recovered the waqfs by further donations in Amasya. Therefore, the resilience of these institutions helped the resilience of the urban fabric of Amasya. The idea of waqf comes from Islam and the Ottomans, therefore, similar

[73] Jami' At-Tirmidhi is an Islamic scholar and collector of Prophet Muhammad's (PBUH) saying, hadiths.theywrote 6 volumes of hadith collections on various subject of Islam.

to social resilience, institutional resilience and the characteristics related to it are based on the traditional Ottoman period of Amasya.

What is known from the data about Amasya's waqfs is that they formed and maintained the urban fabric from the beginning of the Ottoman period until the end. Due to the economic power coming from properties, they managed to recover their properties that suffered from a stressor. In the case of stressors affecting the income of waqfs, while many times descendants of founders continued supporting the waqfs their family founded for generations, there were many cases of individuals donating further in order to gain a good deed of their own. There were many cases when the properties of income were damaged, locals stepped in to provide more income for these waqfs in order to keep their properties survive. Waqfs were one of the biggest elements for preservation, recovery, and advancing to a better state. Also, when the waqfs became a part of central government control and lost their independence in the 19th century, the urban fabric of Amasya also started to decline. This is particularly obvious to those service buildings, this implies the importance of the independence of waqfs.

Lastly, while waqfs mainly played a role in disaster recovery, data shows there are some cases of disaster prevention. Part of the responsibilities of waqfs is to prevent floods, preventing erosion, and cleaning rivers, to name but a few. However, there is only one example of such waqf in the case study Amasya in 1496, Sultan II Bayezid founded a waqf that hired a man to go on a bridge and clean branches and stones that floods bring in order to prevent damage (Bulus, 2009; Tuncer, 2005; Yoruk, 2016). This example from the sources shows, there are possibly other waqfs that were responsible for disaster management in Amasya.

- **Redundancy**

All of the 322 structures in 51 mahallas were constructed and managed by their waqfs. All these waqfs continued to be supported by society. So, the physical fabric of Amasya was not dependent on one institution instead they were managed by many. The case of a problem in one waqf did not affect the rest.

- **Independence and Interdependence**

Each waqf in Amasya, similar to all other waqfs in the Ottoman Empire was independent and only was bound by the rules made by the founder on how to operate. Interdependence came from the properties each waqf own in various mahallas. Mahallas were not only a part of the physical network but also social, and institutional networks they had interdependency on each other. For example, when Sa'di Celebi recovered the mosque in Ucler Mahalla after a fire in 1602, after making the addition of more functions to the city core, they donated 2 houses in Ucler Mahalla, 5 shops in Ibadullah Carsi, 2 shops in Asagi Bazar, 3 shops in Bakkallar Carsi, 3 houses in Kursunlu Mahalla. In another case when Kumacik Hammam was built in Bayezid Pasa mahalla, 8 houses for Samlilar Mahalla were donated for its waqf. So, if a stressor struck Kumacik Hammam, it was depended on the income coming from the houses in Samlar Mahalla. However, losing this support from buildings in different mahallas would not necessarily mean problems in the recovery. However, it is clear that waqfs were dependent on structures in different mahallas.

6.7. Economic Resilience

Economic resilience depends on various factors such as individuals' behavior of firms or organizations, economic sectors, and their diversity, employment, income, individual markets. Amasya as a city on trade routes for centuries preserved its economic importance. Being a stop on the trade route provided economic power to the city continuously. The city is located in a valley that is known for its fertility and abundance. The valley had many natural resources, vineyards, fruit gardens, and mulberry plantations. Locals produced their silk which was famous in Anatolia as one of the best. Besides silk, the city cultivated various vegetables and raised livestock. Also, there were factories of textile production, fabric dyeing, and match. As a trade center located at the intersection of trade routes, there were many types of trade in the city, moreover, silk production and silk trade were prevalent. Although the Ottoman Empire was facing economically difficult times in the 19th century, various travelers' accounts revealed that that silk production helped the city stay as an important economic focal point in Asia minor. According to the city book, in 1890, in the city center, there were more than 1000 shops in the city, the diversity of business in Amasya had provided employment and income to locals. According to observation from various travelers, the economic welfare of the locals was high even if the Ottoman Empire faced problems in the 19th century. This

economic power is reflected in the donation done by the locals to found waqfs or improve the income of waqfs. Among 251 service buildings and structures built by locals in the Ottoman Era, there is a record of 125 waqfs. For the rest 132, there is no information on waqf. However, waqfs are the backbone of the urban fabric and life, and there is no contradictory information on no waqf, it can be assumed that all of them had waqf. Moreover, besides construction and maintenance of the physical structure, there were other waqfs for other services, which can be evidence of how economically powerful the locals of Amasya were through problems and how its economic power was reflected in the formation and maintenance of the urban fabric of Amasya.

Considering the data available, that shows individuals' economic behavior, economic sector, and their diversity, employment, income, and how economic power locale preserved over centuries and overcome economic crises and how those traits were reflected on the urban fabric, it could be claimed that there is a certain level of economic resilience.

- **Resourcefulness**

Resourcefulness is related to resources at the disposal of decision-makers which helps to prepare for, respond to, and recover from a stressor. The more resources are available, the more resilient the urban fabric is, and the less it suffers from a stressor. In terms of economy, there were certain factors, that were linked to each other, contributed to available resources. First of all, being a city that continued to be governed by shahzadahs for two centuries of Ottoman governance, shahzadahs and their entourage brought founded many waqfs in order to construct service buildings and prepare maintenance for them. Since Shahzadahs were sent to Amasya for education as well, the importance of education was increased and there were 46 madrasahs founded and maintained during the Ottoman Period. Also, the existence of shahzadahs in the city attracted many religious orders 37 Tekke was founded by various religious leaders and their followers. Both for madrasah and tekkes many properties were donated to the waqf to provide money for maintenance and recovery of a stressor. Also, this system of waqfs created a local economy that created income for property owners and jobs for locals which was given back to the city of Amasya as more waqf and more service buildings to build. Also, being located on trade routes, trading activities, producing various products reflected on the income of locals which again reflected the fountain of waqfs and service buildings and helping each other for any need in the case of any type of stressor. Overall, characteristics that

are unique to Amasya provided rich resources for preparing, responding, and recovering from stressors. These are natural construction materials, being shahzadah city, having religious and educational importance, being a trade city, and being located on trade routes. Unlike all other characteristics, the economic resilience, and especially resourcefulness of Amasya was based on the vernacular character the city had a pre-Ottoman period and continued to have during the Ottoman period based on trade routes, trade activities, and natural resources the city had. Therefore this characteristic is based on vernacular Amasya.

6.8. What made Amasya Resilient?

This thesis explored the theme of resiliency in the traditional and vernacular urban fabric of Amasya by mainly focusing on the traditional Ottoman period from the end of the 15th century up to the foundation of the Republic of Turkey in 1923. Even though, 19th century is a century where the modernization movement started, the change in urban fabric started after the damage of the fire in 1915; therefore, the 19th and the beginning of the 20th century is also included in the scope. Physical and non-physical components of the urban fabric of Amasya from the traditional Ottoman period are investigated. As a result, 3 main elements created a resilient urban system for Amasya that managed to overcome various stressors over centuries and not only continue existing but also advancing over time. These 3 elements mentioned above are the traditional and vernacular built environment, the community, and the waqfs. These three elements of the urban system are intertwined, supports, and feeds each other. At the various stages of forming and maintaining an urban fabric, these different elements played various roles and when their cycle is completed, they continued supporting each other for resilient urban fabric.

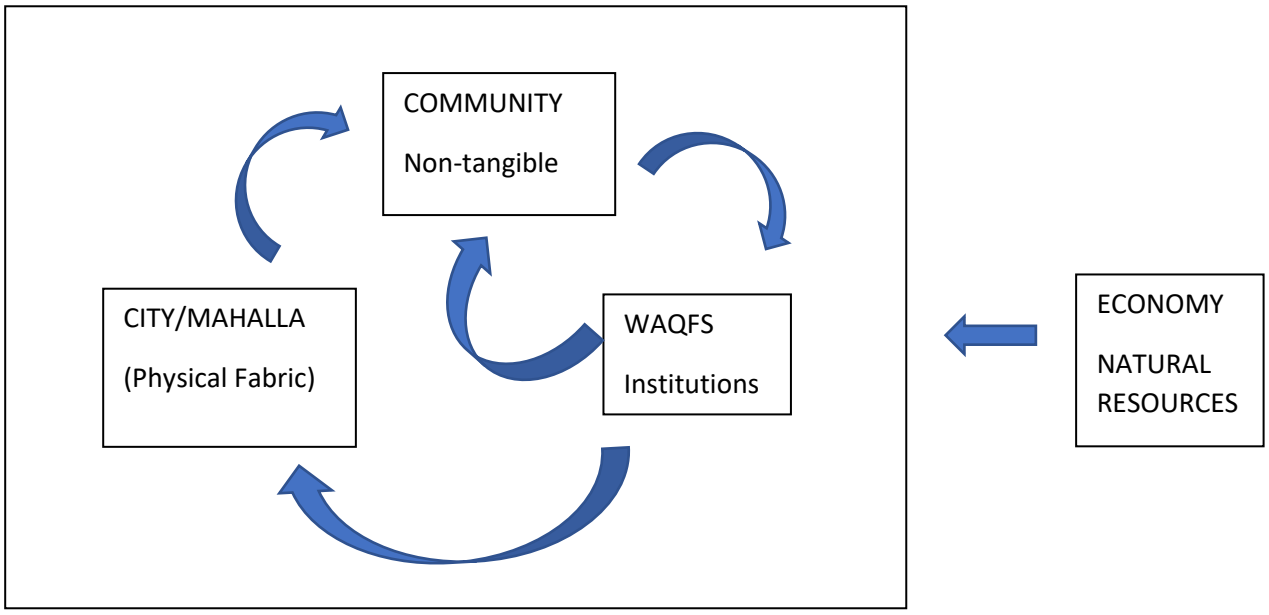

Fig. 6.17. Ottoman urban system

The first element of the resilient urban system is the traditional and vernacular built environment. The case study showed that the Ottomans followed a similar pattern of forming their cities in Amasya. Amasya, as a city with a long history, already had infrastructures such as Alcak Bridge and Helkis Bridge and established main roads. Also, it had mosques and other service buildings left by previous Turkish governance such as Gokmadrasah Kulliyah, Burma Minareli Mosque, and Bimarhane (Medical schools and Hospital) which are scattered on the south of the riverbank. The Ottomans continued developing within the existing structures. The 15th century became a period of forming city cores such as Sultan Bayezid Kulliyah, mahalla cores, and mahallas. When the built environment was completed, there were approximately 51 neighborhoods. Each neighborhood had service cores that consisted of different services according to their needs. Also, there were some kulliyahs such as Sultan Bayezid Kulliyah and Hatuniye Kulliyah that served the whole city with more functions. This network of independent mahallas contained characteristics of resilience such as redundancy, diversity, independence, interdependence, robustness, usefulness/relevance, adaptability, and creativity. When any type of stressors that could affect the built environment struck, these built in characteristics mitigated aftermath and accelerated the recovery process as shown previously in this chapter. Because Amasya's urban system consisted of multiple nodes, destruction in one or a couple of structures did not prevent the whole urban system continue functioning. Because the surviving part of the system supported the recovery process and the failed

elements of the system did not cause a cascading effect to full failure. Also, another characteristic robustness in the urban fabric of Amasya that played a role during the instant of a disaster comes from the vernacular knowledge. Locals over time and experience changed their construction material and style to create more robust structures to the most common disaster, fire. Instead of the common timber structure, they started to use a *himis* (wooden structure filled with adobe bricks) construction system with increased usage of adobe. Lastly, adaptability and creativity, which is also highly related to the community element of the urban system, helped the built environment advance to a better state of functioning than before. Member of mahallas in Amasya used disasters to improve the core functions by addition according to their available resources. Overall, the built environment of Amasya especially due to the traditional urban network managed to overcome various stressors over centuries. Moreover, as explained previously that all types and characteristics of resilience are intertwined. So, even though economic, social, and institutional resilience is based on different elements of the urban fabric, their resilience is reflected in the survival of the built environment. The collaboration of the community, waqfs, and resources, are behind the formation and maintenance, and resilience of the built environment of Amasya.

The second element of the urban system was the community. As highlighted in Chapter 2, as Alver described, '*mahallas are a place and a human. It is not only a place, nor only a human. It is a stage of life that was woven by human and place together' (Alver, 2011, cited in Baday, 2011).* Through the process of forming mahallas and making a decision together, the locals of each mahalla created their community. Initially, due to the high influence of Islam, locals with more resources and power not only started to form mahallas but also took the responsibility of maintaining it by their donations. Every service building was constructed by the waqfs that were founded through the donations of wealthy members of each community. After each stressor, locals alone or together put their money and effort into recovery so their community can be served without disruption and served better with the additions of new functions. Also, considering the many generations living in the same mahalla, there was a sense of responsibility, duty, attachment towards their mahalla as a place, and as a community. Descendants of the founders of waqfs continued supporting the waqfs, therefore their community, with more donations. Moreover, over centuries, locals always stepped in for helping their community when in need. The community of Amasya had the characteristics of

independence, interdependence, self-organization, and collaboration. Through these characteristics, they not only formed their built environment and the community but also maintained them through stressors. The unique aspect is while the urban fabric helped the creation of a community, that community worked on the survival of their physical fabric they inhabit in Amasya over time and stressors.

The third element that completes the resilient urban system of Amasya was waqfs. Waqfs were the initial administrative, economic, and resource providers of forming the built environment. As mentioned above wealthy members of the community founded waqfs with religious intentions. These waqfs were not only responsible for construction but also operating and maintaining those functions in every service buildings of 51 mahallas of Amasya. After any disasters, as long as the income of the waqfs was not obstructed, the waqfs recovered damaged properties. Especially by bringing resourcefulness to the urban fabric, they became a vital element of responding and recovering from disasters. Also, through creating economic independence, collaboration, self-organization, waqfs contribute to the resiliency of Amasya. As a vital element for urban fabric and life, waqfs did not only help to form an urban fabric but also provided any social, economic, and architectural support and maintenance to urban fabric as well as to the community. Therefore, waqfs were supporting two elements of the urban system: the physical fabric and the community.

How did this urban system react to stressors specifically? While the system is based on forming and maintaining, through the resilient characteristics built in, the urban system helped absorption, mitigation, preparedness, and recovery. For this, various characteristics of resilience that Amasya had played a role. When the stressor struck the city, the characteristic that absorbed the stressor was robustness to withstand. After some parts of the mahallas were damaged through a stressor, recovery was observed through collaboration, self-organization, resourcefulness, usefulness/relevance, interdependence, adaptability, and creativity. Mitigation of stressors in the urban fabric of Amasya came through redundancy, diversity, independence, adaptability, creativity, self-organization, and collaboration. Lastly, to prepare against a stressor, adaptability, creativity, self-organization, collaboration played a role. The weakness of this system was that it was mostly based on recovery while mitigation, preparedness, and absorption came second after recovery which caused waste in resources and delay in the process. Regardless, even though picking a harder way

to deal with stressors, the fact is Amasya faced various types and levels of stressors and managed to be resilient by absorbing, recovering, surviving, and advancing against a stressor continuously.

Even though this urban system can be observed in all Ottoman cities, there were some other factors that contributed to the urban system of Amasya. First of all, natural resources helped the city becoming economically strong as well as easier to get natural construction materials. Also, as a city that was part of various trade roads over centuries, especially the silk road, through silk production the city became an important stop for Silk road which increased the economic power of the city that reflected in the community founding waqfs, developing urban fabric and easily funding recovery process if struck by any stressors. Another factor was being a shahzadah city. Shahzadahs did not only bring power and money by founding waqf individually. Due to the governance process was part of their education, the number of madrasahs increased. Also, the religious orders who want to influence the shahzadahs through religious education and interaction and gain political power started to move to the city. This interest in the educational and religious role, brought resources to the city, developed urban fabric, founded waqfs. This factor mentioned made the urban system of Amasya stronger. Through this development and resources brought, Amasya managed to not only advance but recover all types of stressors over 500 years.

Another proof of why the urban system of Amasya was resilient is looking at the period that Amasya lost its resilience. First, through the modernization movement, the governor Ziya Pasa started to build new typologies, creating a boulevard, and demolishing mahallas. The governor took the decision-maker role from the community and enforced the central government's modernization ideas that contradicted the urban system of Amasya. Later, in the 19th century, the central government took the independence of waqfs by centralizing them and using their resources which resulted in the decay of the urban fabric gradually. Yet, the city managed to preserve its urban fabric to a level. However, when the biggest stressor, a fire in 1915, struck the city, it wiped out 1/3 of the urban fabric. Due to its size, waqfs being interdependent to the central and the local government, World War 1, the fall of the Ottoman Empire in 1919 and the rise of the Republic of Turkey in 1923, and an earthquake in 1939 made the recovery process the urban system of Amasya obstructed. So, as long as the Ottoman urban network consisted of the urban fabric, the community, and waqfs that are interlinked, are protected, the city managed to recover from any levels of stressors. From

the point the system started to change or dissolve, the weaknesses in the system appeared, and Amasya could not manage to recover and lost the system it owns.

Overall, first of all, waqfs by the Sultans and statesmen and the initial group of people started the physical formation of the city. When physical formation developed, it created micro-communities in the neighborhoods and macro communities in the city that supported one another. In that community, well-off citizens founded more waqfs to help the development and maintenance of the city as well as give back to and support the community. So, these created an Ottoman urban system with an endless cycle that supports and feeds each other (Fig. 6.17). This system had to face various stressors over the centuries. Unless the cycle is broken, they managed to overcome and adapt to problems and survive. Even though there is no evidence that this system was created for resiliency[74] purposes, this research claims, it created an inherently resilient urban fabric in vernacular and traditional Amasya of the Ottomans.

[74] Even though the term resilience is a new concept, this research uses the term considering what the term represents is not new.

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CHAPTER 7: Discussion and Conclusion

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7.1. Introduction

The purpose of the thesis was, in line with the historical and current context of Turkish-Ottoman cities and the concept of resilience, to establish a new framework of resilience to bring a new understanding of the historical formation, maintenance, and development of the Ottoman cities. The previous chapter has demonstrated Amasya, as a typical Ottoman city, has been resilient against external stressors. The results showed that the 4 themes of urban resilience: (a) infrastructure, (b) institutional, (c) economic, and (d) social are evident in a traditional and vernacular Ottoman city. Moreover, the characteristics of resilience in traditional and vernacular Ottoman cities are comprised of 10 characteristics: (a) Redundancy and Diversity, (b) Independence and Interdependence, (c) Robustness, (d) Resourcefulness, (e) Adaptability and Creativity, (f) Collaboration, (g) Self-organization. This chapter includes a discussion of major findings related to the literature on urban resilience, its types, and characteristics in traditional and vernacular Ottoman contexts. Also included is a discussion on which factors create resiliency for the traditional and vernacular Ottoman cities. Lastly, the conclusion and areas of further research are presented.

7.2. Ottoman Cities as a Resilient Urban System

The literature on urban resilience defines resilience as the ability to function against the stressors through 4 components of urban: institutions, economy, built environment and infrastructure, and social (Jha et al., 2013; Shinde, 2017). The resiliency of these 4 components creates a resilient urban system. Similarly, the results chapter concluded 4 dimensions that created an urban system in the Ottoman cities: Spatial Organization, Waqfs, The Community. Lastly, natural resources, economic conditions of individual case studies were mentioned as a last contributor to the resilient Ottoman urban network. Through this urban system, the Ottomans founded their cities, maintained, and moreover, became resilient against disasters. Centuries before the concept of resilience and their components invented, the Ottomans created an urban network that consists of similar components and as a result, managed to exist over centuries after dealing with various stressors (Fig. 7.1.)

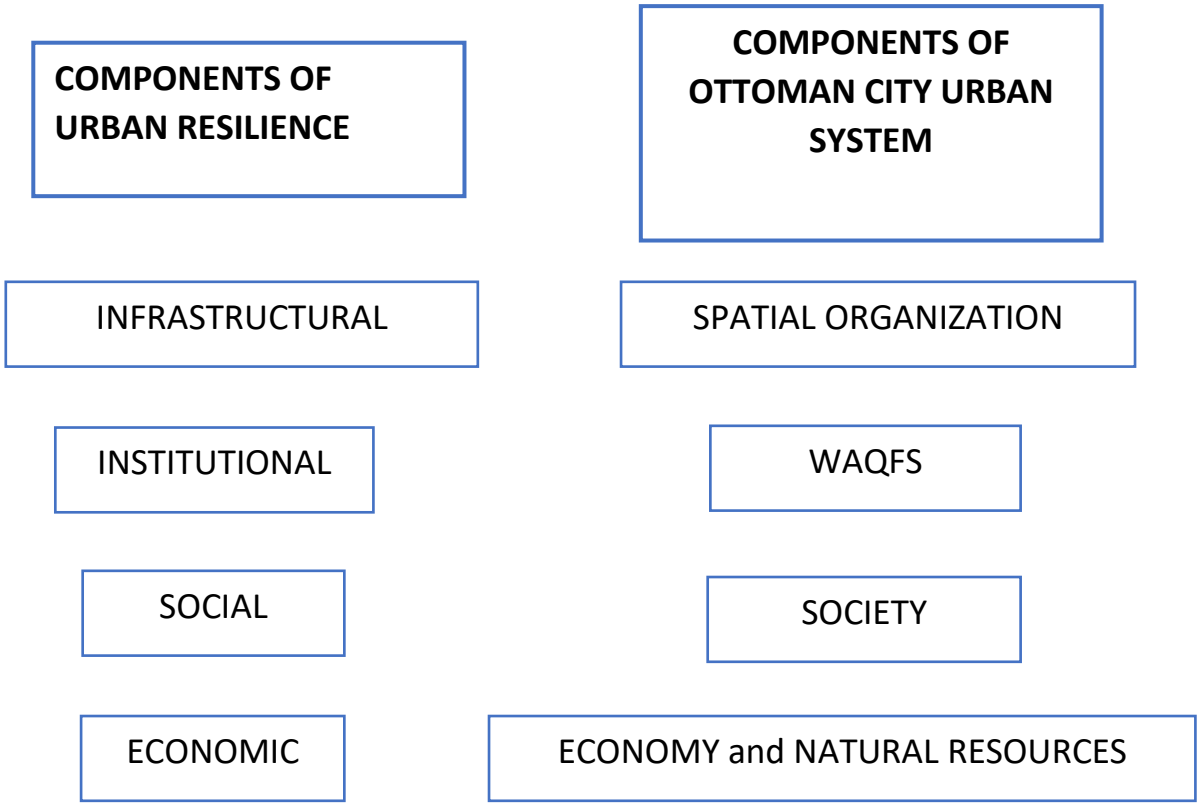

Fig. 7.1. Correlation between components of urban resilience and components of Ottoman city urban system.

The first element of the urban network of the Ottoman cities is the spatial and infrastructural organization. The studies of present-day urban fabric point out the importance of centralized infrastructure due to their less complicated and more efficient systems (Sharifi et al., 2017). Present-day urban systems are connected by modern-day communication methods which are faster and more feasible. In the case of facing a stressor, one control center for the towns can make the recovery management process faster. As recent studies claim that decentralized systems are not less resilient because (a) decentralized infrastructure affects diversity, redundancy, and modularity in a positive way, (b) it plays and critical role in preventing cascading failure (Sharifi and Yamagata, 2014). The results of this study align with the second view of the decentralized urban network for better resilience. Multiple mahallas with their service cores were responsible for their own management. During the times of the Ottoman era modern-day fast communication methods were not available, and therefore, the reason for present-day studies that suggest centralized infrastructure works better for especially disaster management is not applicable for the context. The second view of decentralized urban fabric preventing cascading failure especially through diversity, redundancy,

and modularity what made the Ottoman urban network work better especially for disaster management. The results showed when the most common functions scattered around the city, damage to individual buildings did not stop the whole urban network from working properly by supporting one another. Also, infrastructural resilience in the literature suggests that it is a *'reduction in the vulnerability of built structures such as buildings and transportation systems' (Jha et al. 2013, p.11).* The urban network is constantly supported by a huge number of waqfs that are responsible for the maintenance of all buildings and infrastructure constantly. When these structures are in better conditions, they are more likely to be less vulnerable and more robust against unexpected stressors.

The second element of the urban network of the Ottoman cities is the waqfs. Even though the waqf and its relationship to urban resilience have not been investigated before, the role of NGOs in general for creating resiliency is explored in the institutional resilience literature. Institutions are categorized into governmental and non-governmental institutions (Jha *et al.*, 2013). The literature, in general, governmental institutions such as a municipality or other types of local governments as the main decisionmaker, and NGOs are considered as supporting agents for creating urban resilience (Jha et al., 2013, Shaw and IEDM Team, 2009). These institutions contribute to disaster mitigation, planning, engaging residents to take action and protect the social system (Cutter *et al.*, 2010). Simply, institutions contribute to the urban system's continue functioning and be resilient. This study showed the waqfs, as the NGOs of their time, were the sole institutions in the urban network in the lack of local governmental institutions. Unlike present-day urban governance systems, the Ottomans solely relied on the waqfs, the NGO of its time.

The idea of waqfs comes from the holy book of Islam and the sayings of Prophet Muhammad (PBUH) as explained in detail in Chapter 2. Since the idea comes from Islam which influences many cultures, waqfs were observed in many Islamic cultures. The importance of waqf for the construction of public buildings and owning a big ratio of the towns and cities under Islamic influence is emphasized in the literature (Luz, 2014). Moreover, many scholars have agreed that waqfs helped the city recover from many problems. Due to the high importance given by the Ottomans, even though the contribution of waqfs to the urban resilience in Islamic cities is an undeniable fact, waqfs became the key actor in the urban context only under the Ottoman power.

Waqfs were, as an only institution, responsible for all of the public building construction, maintenance, and recovery, aside from other duties. After each stressor struck a city, locals supported waqfs to instigate the recovery process. The importance of waqfs for urban resilience can be deduced from changes that happened when their operation method was changed, or they disappeared. When the waqfs were centralized in the 19th century because of the modernization movements, and their independent character was taken away, and also their resources were used for different needs by the central government. This led to the structures that waqfs owned to decay or disappear. Moreover, when the municipalities founded and became an actor in the cities that can rule over waqfs, decisions of municipalities under the influence of modernization damaged the vernacular and traditional fabric. Instead of seeing waqfs as the key actor in the urban context and a decision-maker in the urban fabric, waqfs' power was taken away from them which resulted in losing their traditional and vernacular characteristics, as well as a strong contribution to urban resilience. As mentioned in Chapter 3, Paul Oliver criticized local authorities for ignoring indigenous values and the original pattern of settlements during post-disaster construction, and moreover, criticized the architects who are responsible for reconstruction never visit sites or talk to locals to understand their needs and use modern materials and forms (Oliver, 2006). Supporting the criticism of Oliver, in the context of Ottoman cities, the initial decision of municipalities damaged the urban fabric, while waqfs worked on urban resilience. Therefore, unlike the literature on institutions that put local government bodies as a center of urban resilience, these results also show that waqfs, as NGOs, with effective application on the urban fabric, can be solely dependent on urban resilience without the support from other local governments.

The community and its resilience were considered one of the 4 components of urban resilience. The literature emphasized certain characteristics of the community in the discourse of resilience. Studies highlighted factors such a culture of cooperation, social cohesion, self-organization, sense of community, attachment to a place, trust, leadership, community involvement (Cohen et al., 2017; Cutter, Burton, and Emrich 2010, cited in Jha *et al*. 2013, p. 11; Maguire and Hagan, 2007; Sharifi and Yamagata, 2014). The case study showed all these factors were part of the Ottoman mahallas. There was always a leader or a couple of leaders that founded the mahallas, founded waqfs to construct mahalla service cores, and took the responsibility of the inhabitants of each mahalla, and people

trusted these social figures. The community formed their own mahallas, made additions to service buildings to serve their community for their needs which attribute to self-organization, community involvement, the culture of cooperation. Also, in the time of facing stressors, the community of each mahalla worked in cooperation to recover their mahallas. Since the families lived in the same mahallas for generations, there was a sense of attachment to the place which resulted in giving back to their communities especially when in need.

Religions clearly played a key role in the community sense in Islamic cities. Examples from the Arabic cities show neighborhoods divided with the ethnic and tribal sense (Antoniou, 2002; Bianca, 2000; O'Meare, 2007), which can be useful within the neighborhoods, however, might impact negatively the whole city due to not feeling as affiliated and connected as others. In the Ottoman cities, even though initially this sense of ethnicity was used to start neighborhoods, eventually abandoned, and different social, economic, and religious groups were mixed over time. Each individual was supported by their community as a human being, which implies a stronger community.

Lastly, the community made the largest contribution to the urban fabric and its resilience, by founding waqfs and continue supporting the waqfs, therefore, maintenance of the urban fabric, disaster management, and recovery. The results of this study align with what present-day studies anticipate, and the community plays a critical role in resilience and becomes one of the main components of urban resilience.

The fourth element of the urban network of the Ottoman cities is natural resources and the local economy, this corresponds to urban resilience's fourth component, economic resilience. Economic resilience as a part of urban resilience is defined as *'the inherent and adaptive responses to disasters that enable individuals and communities to avoid some potential losses'* (Rose, 2004, p. 307). In the context of the Ottoman cities, economic power directly reflects on the waqfs. The Ottomans did not have the habit of using the money and resources individually. They legalized and created a self-supporting continuous system of waqfs that founded, maintained, recovered, advanced the urban fabric over centuries. However, natural resources and economic power depend on many factors. The case study, Amasya, was located on important trade roads over centuries such as the Silk Road. The city, moreover, produced and sold its own silk. Besides silk, due to being located on a fertile

plain, the city produced and sold many products. Also, as mentioned previously, being a shahzadah city, educational and religious center brought many opportunities to the city which reflected on the development of the physical fabric as well as the maintenance of it. Economic power supported the urban network and mostly affects the number of waqf and their actions. The results of the case study clearly align with the literature and show that economic power is vital for disaster management and the resilience of the city. However, not every Ottoman city had the same opportunities that reflected on the local economy, therefore, economic resilience or its lack of became a vulnerable point of the Ottoman urban system and cannot be generalized to all and should be assessed individually.

7.3. What is Urban Resilience in the Ottoman Cities?

Three main theory on resilience is presented in detail in 3.3.1. While the initial engineering theory focused on '*the stability of materials and their resistance to external shocks'*, Holling brought a new ecological perspective by stating resilience is *'the ability of a system to return to an equilibrium state after a temporary disturbance'* and in their second attempt to define, Holling focused on how much of a disturbance a system can absorb without changing its structure (Davoudi et al., 2012, p. 300; Holling, 1996, cited in Davoudi, 20102; Holling, 1973, p. 17). According to the last of three theories, evolutional, or socio-ecological resilience, *'resilience is not conceived of as a return to normality, but rather as the ability of complex socio-ecological systems to change, adapt, and, crucially, transform in response to stresses and strains'* (Carpenter et al., 2005, cited in Davoudi, 2012, p. 302). Moreover, Goncalves *et al.* (2013) added that when the systems are exposed to the stressors, through their ability of absorption and adaption, the systems will keep improving themselves. The results of this study showed the traditional and vernacular Ottoman cities' conditions align with evolutionary resilience which supports modern-day urban resilience theory as well. The Ottoman cities were constantly tested by the stressors, they managed to retain continuous functioning, adapted, and transformed after stressor as Chapter 6: Resilience of Amasya against Disasters demonstrated. Moreover, when a stressor struck a mahalla, city service core if the resources were available, locals used this as an opportunity for advancing better by adding new functions. Also, because time itself is a constant internal stressor that is affecting the structure on a small scale but constantly, through their waqfs, the Ottomans keep maintaining all the structures regularly to provide a longer service

period. For Ottoman cities, *urban resilience is maintaining their physical and infrastructural, institutional, social, and economic functioning continuously and, retaining throughout the stressors and continue maintaining, adapting, transforming, and advancing when/ if necessary, through stressors.*

Resilience, in the present day, is seen as a concept that should be applied to existing built environments through actions and strategies while the Ottoman cities managed to have a resilient urban network by containing 4 resilience types and 10 resilience characteristics without prior planning and strategies. In Chapter 3, the expected correlation between vernacular architecture and resilience was presented. Unlike many resilience studies which are only interested in present-day and do not consider vernacular architecture as an example to learn from, the Ottoman cities clearly are an example of the resilient urban system. Ottomans used a human-centric approach of making locals the decision-makers and made all non-residential structures to the use of locals. Ottoman let the community start building their own living environments. When the formation process is completed, the architecture unites the community that in return the community becomes responsible for the architecture, and as a result, this becomes a self-feeding cycle. Locals (a) used resources and materials for their construction process, (b) considered natural and geographical conditions before the construction, (c) created continuous maintenance system through their waqfs, (d) followed a decentralized urban pattern consists of small communities called mahallas, (e) created systems of multiple nodes wherein the loss of one node the rest continued supporting the whole system. This system was built in the first century of each city under Ottoman control and through this system until the second half of the 19th century where the modernization movements started to be changing the traditional urban network which eventually affected the resiliency. Even though each component of the urban system individually contributed to the urban resilience, the system works efficiently when all 4 elements are in function and supporting each other. Overall, even though, there is a criticism against vernacular studies in the literature, the traditional and vernacular urban system of Ottoman cities that consists of mahallas, the community, natural resources, and economic power and waqfs implies that the Ottoman cities followed a similar pattern of what modern-day resilience studies called urban resilience.

7.4. A New Characteristic of Resilience in Ottoman Cities: Usefulness/Relevance

Usefulness/Relevance is a characteristic that has never been discussed in the literature, it is about elements of urban fabric being relevant in the lifestyle and culture of the investigated society after facing the stressors. When people renovated structures, they preferred ones they feel more attached to emotionally and religiously and they can still continue using after the recovery. For example, at the end of the 19th century, madrasahs, maktabs were not useful anymore due to modern changes in the education system. So, these structures recovered less and less due to the loss of interest by the locals. However, the mosques, as the most important function of Islamic societies in every century, were recovered by locals at any time. Overall, the more useful the structures are and the more they are relevant to the lifestyle of locals, they are more like to overcome stressors and continue existing.

7.5. Conclusion

While there is a clear connection with the concepts of resilience and vernacular architecture, this connection was under-examined, yet promising. Both concepts were based on a system, which is a built environment that consists of 4 components (infrastructure, institutions, society, economy) and according to both concepts they face and overcome problems, survive, and advance. This correlation between the two concepts was a starting point for this research. After selecting the Ottoman Cities for geographical context, there was no previous study about Ottoman cities, and their resilience was detected. Due to there is no universal method of analyzing and assessing resilience and no previous study about Ottoman cities and their resilience, a novel framework for assessing resilience in the traditional and vernacular Ottoman cities was created. For this, a literature review was conducted on resilience studies and assessment methods. By combining two main approaches to the resilience studies, the framework was shaped by investigating in 4 steps: (a) Resilience of What? (2) Resilience against What?, (3) Characteristics of Resilience, (4) Types of Resilience (Table 7.1).

Resilience of What	*Resilience against What*	*Types of Resilience*	*Characteristics of Resilience*
Urban Fabric • City • Mahalla • Building • Infrastructure Society Waqf Economy	Natural Disaster • Earthquake • Fire • Flood Man-made Disasters • Arson • Rebellions Administrative Decisions • Change of Regime • Change of Regulation Time	• Infrastructural and Physical • Institutional • Social • Economic	• Redundancy and Diversity • Interdependence and Independence • Robustness • Resourcefulness • Adaptability and Creativity • Collaboration • Self-organization • **Uselfulness/ Relavance**

Table. 7.1. Conceptual Framework to Assess Resilience in the Ottoman Cities

According to the first step of the framework, the Ottoman cities consist of mahallas which contain their own service core with various functions according to the needs of locals. While each mahalla was an independent unit, as a part of the urban network, this system prevented cascading failure, and moreover, these mahallas supported each other especially in the cases of facing disasters. After these mahallas were physically formed by locals, a strong-knit community is formed, where neighbors were seen as an extended family. Due to this social connection and strong religious bonds, from the initial steps of the formation process, wealthy locals founded institutions called waqfs. These institutions were formed with an objective (for example, constructing service buildings, helping the poor, cleaning streets, etc.) that is decided by the funder and the funder donated properties and money to create continuous regular income. Waqfs, as a sole institution of Ottoman cities, were responsible for urbanization, municipal duties, disaster management, and recovery. According to the second step of the framework, resilience was mostly against disasters (fire, earthquake, and flood). Also, there were cases of decay in time and changes in regulation that damaged the urban fabric. When a disaster struck a city, the community was involved in quick recovery. If the properties of waqfs were damaged, they were recovered with additions by the locals to fund reconstruction. Moreover, these disasters were sometimes considered as an opportunity to advance to a better level of functioning. When the reconstruction period for damaged buildings

started, locals made additions of new functions if that was needed in the community. Lastly, this whole system was supported by economic power.

Overall, this thesis detected that there was an urban network of Ottoman cities that consists of spatial organization, waqfs, the community, economic power, and natural resources. Aligned with the modern-day resilience theory, the Ottoman cities contained 4 types of urban resilience (infrastructural, institutional, social, economic), which correlates with their traditional and vernacular urban network. Ottoman cities created a resilient system urban network centuries before the invention of the concept of resilience. Also, 10 characteristics of resilience in the resilience literature (redundancy, diversity, independence, interdependence, robustness, resourcefulness, adaptability, creativity, self-organization, collaboration) are evident in the Ottoman cities. New meanings are found to existing characteristics. The resilience literature on robustness mainly focuses on materials and structures' ability to resist stressors. While these characteristics in materials and construction methods of structures in Amasya were observed, also robustness in function was seen. Especially for infrastructure, when there was damage, a structure could be replaced, even with a new material and construction technique, but the location of the functions stays the same. Another characteristic which gained a new meaning was collaboration. Collaboration refers to the actions of various actors of the city for a purpose at the same time. In the cases of mahallas, service cores were built up within different time frames by people who might not be even in the same generation. For instance, when one person built two main functions for a mahalla, another person can take the responsibility for the third when they see a need. However, these two people do not always act at the same time. Locals of a mahalla continue to contribute and advance their mahalla within a wider time period. As a result, this type of collaboration is named delayed collaboration in this research. Lastly, a new characteristic of resilience in the Ottoman urban context called Relevance/Usefulness was detected. The results showed the recovery rate of the functions was dependent on how relevant and useful they are at the time of damage. The more useful the structures are and the more they are relevant to the lifestyle of locals, they are more like to overcome stressors and continue existing.

Lastly, this study concludes that evolutionary (socioecological) resilience is evident in the traditional and vernacular Ottoman cities. Furthermore, for Ottoman cities, *urban resilience is*

maintaining the traditional urban network that consists of spatial organization, waqfs, the society, and economy, retaining this system throughout the stressors (mainly disasters), and continue functioning, maintaining, adapting, transforming, and advancing when/if necessary.

7.6. Recommendation for Further Research

While every Ottoman city consists of 3 main elements of spatial organization, waqfs, the community; economic power, natural resources, local conditions depended on individual cities and might create different levels of resilience. For further research, comparative case studies can be employed to determine the various level of resilience in the traditional and vernacular Ottoman City context.

For further research, another Ottoman city can be selected. For the first step, historical data should be collected and a timeline should be created, and which must be followed through coding to find similar patterns, which was done for this research. This step helps to point out general characteristics that belong to the case study. The next step should be creating the timeline of events, eliminate the initial data with the focus on actions taken before, during, and after the events. Then to employ the framework, 4 steps should be followed through analysis. For the first step, to answer 'Resilience of What', the condition physical fabric through 4 different scales (city, mahallas, buildings, infrastructure) should be layout. Then, through the timeline of events, negative forces that triggered a negative or positive change in the urban fabric should be listed with details as pointed out in appendix 5. 12. After these two steps, the types of resilience and characteristics of resilience that are defined in the framework according to literature should be investigated through evidence. Lastly, while initial literate was not pointing out anything related to usefulness/relevance, analysis of data presented a new characteristic for the resilience of Amasya. Therefore, through analysis, no singularity should be overlooked, which could present a new characteristic for the framework in general or for individual cases.

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APPENDICES

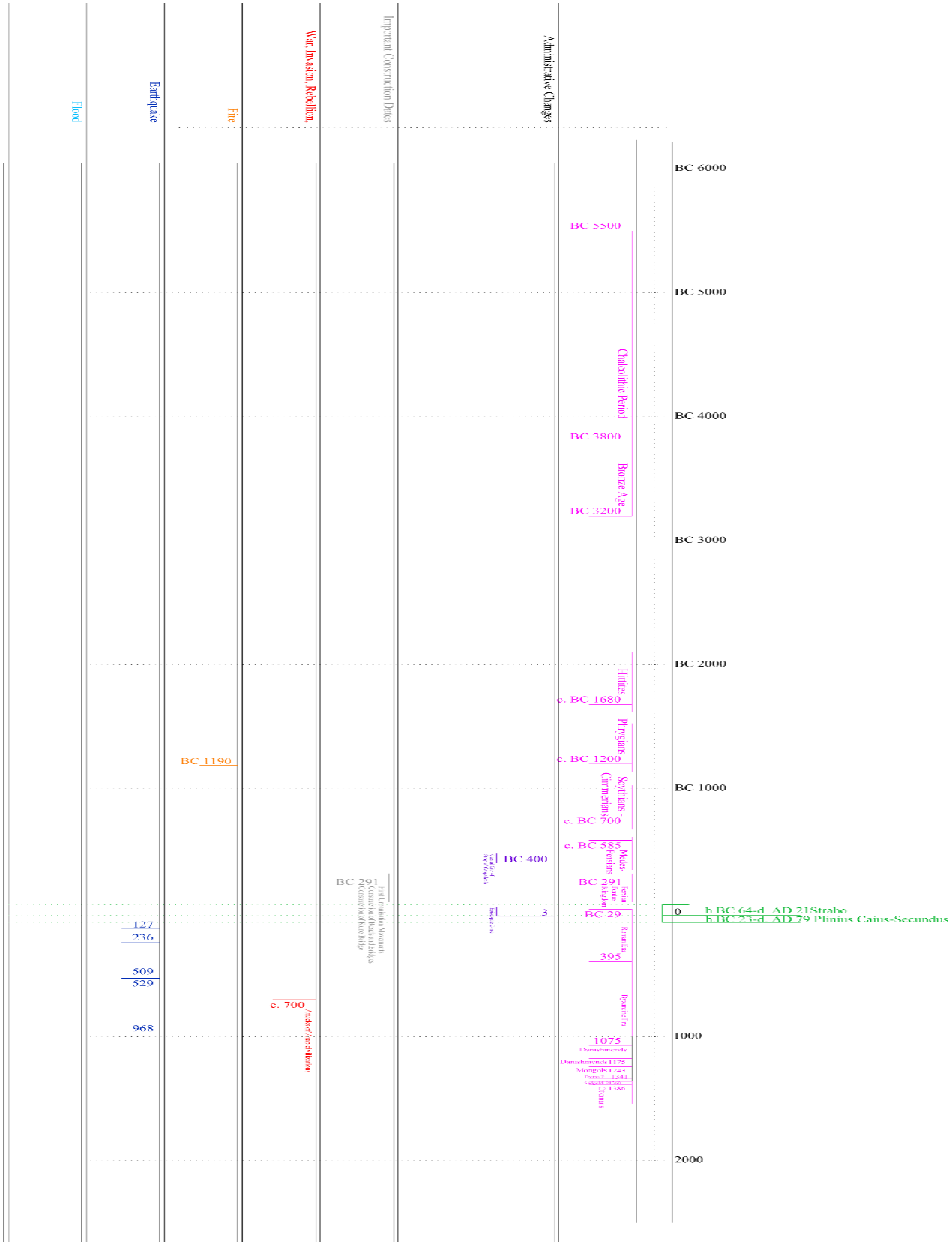
LIST OF APPENDICES

APPENDIX 1.1 - Table of Timeline of events in the Ottoman Empire during the 19th and 20th century

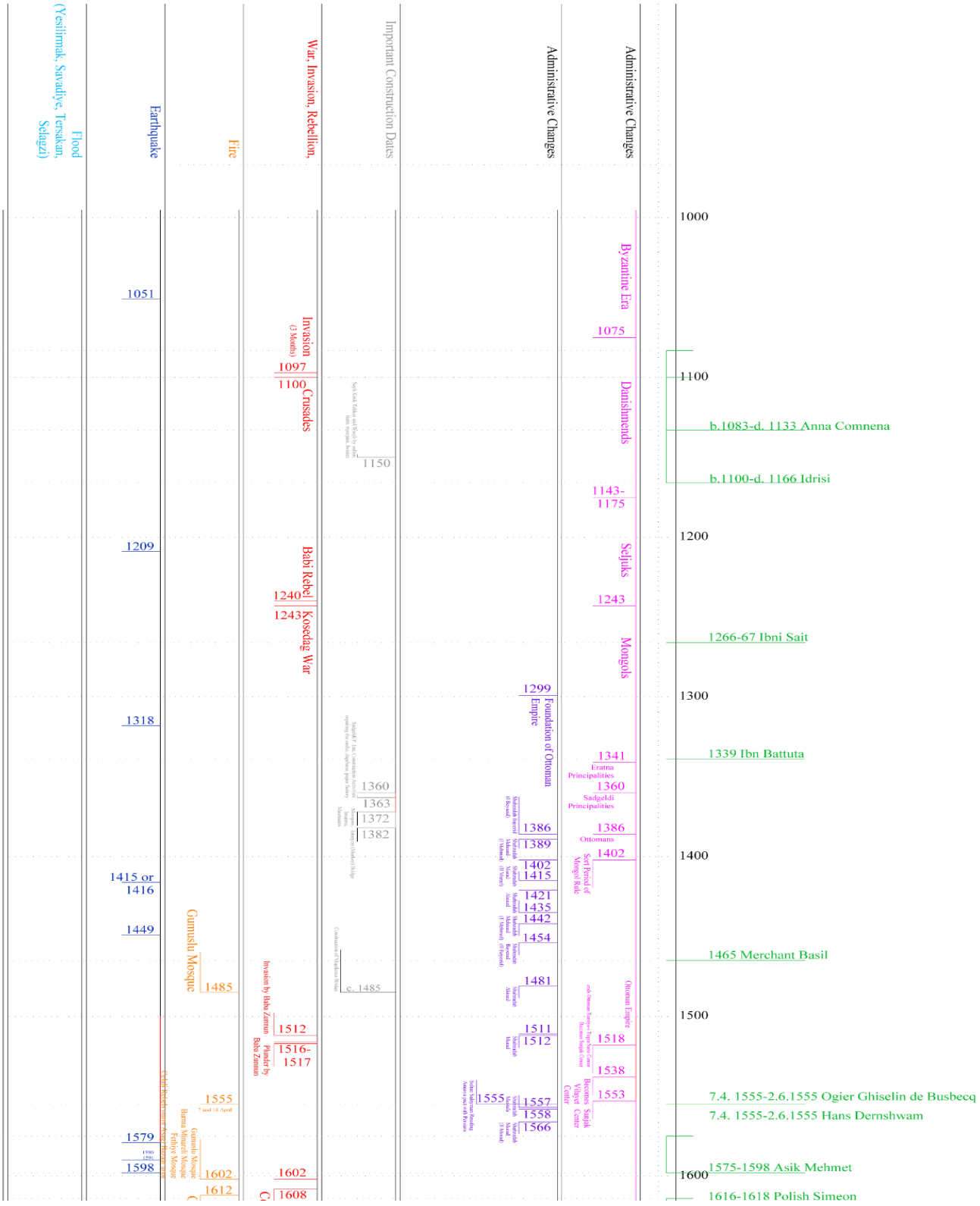
Date		For	Detail	Reference
1808	*Nizami Cedid* by Sultan II Mahmut	Whole country	*Nizami cedid*-New Order Edict by the Sultan for removing janissaries, centralized government, reform movements	Cagdas,
1826	Dissolving '*Tulumbacilar*' Firefighters	Whole Country	Firefighting role was given to municipalities	Seyitdanlioglu, 1999
1826	Fire Prevention Regulation *(Men-i Harik)*	Istanbul	x	Seyitdanlioglu, 1999
1836	Foundation of *Evkaf Nazirligi*	Whole country	Centralization of Waqfs	Cagdas
1839	*Tanzimat Fermani*	Whole country	Modernization movements	Yilmaz, 2009
1848	*Ebniye Nizamnamesi* / Building Regulation	Istanbul	To control urbanization *'The Building Regulation (Ebniye Nizmanamesi) provided standardization and restriction in building works and development control in terms of street* *width, setbacks from the site boundaries, height limitation, and some technical requirements to prevent fire' (Aksoylu, 2017, p.299)* To find a solution to fire (Ozgure, Azakli, 2001).	Ulug, 2013; Aksoylu, 2017
1854	Foundation of First Municipality in Istanbul /*Istanbul Sehremaneti*	Istanbul	Urbanization, cleaning,	Yilmaz, 2009
1854	*Harik Vuku'unda Zabitaca Ittihaz Olunacak Usul ve Muamelate Da'ir T'alimat*		Precautions against war and fire Safety of fire zone, prevention of theft and looting	Seyitdanlioglu, 1999
1856	Islahat Fermani /Ottoman Reform Edict of 1856	Whole Country	Confirmation of Tanzimat Fermani. Right of minorities.	Kodaman, 2007
1856	Istimlak Nizamnamesi (Regulation for Expropriation)	Istanbul	x	Aksoylu, 2017
1859	Sokaklara Dair Nizamname of 1859 (Regulation on Streets)	Istanbul	x	Aksoylu, 2017
1863	Turuk ve Ebniye Nizamnamesi in 1863 (Street and Building Code)	Istanbul	x	Aksoylu, 2017
1864	Vilayet Nizamnamesi	Whole Country	Foundation of local governments Vilayetler olusturulamasi	Yilmaz, 2009

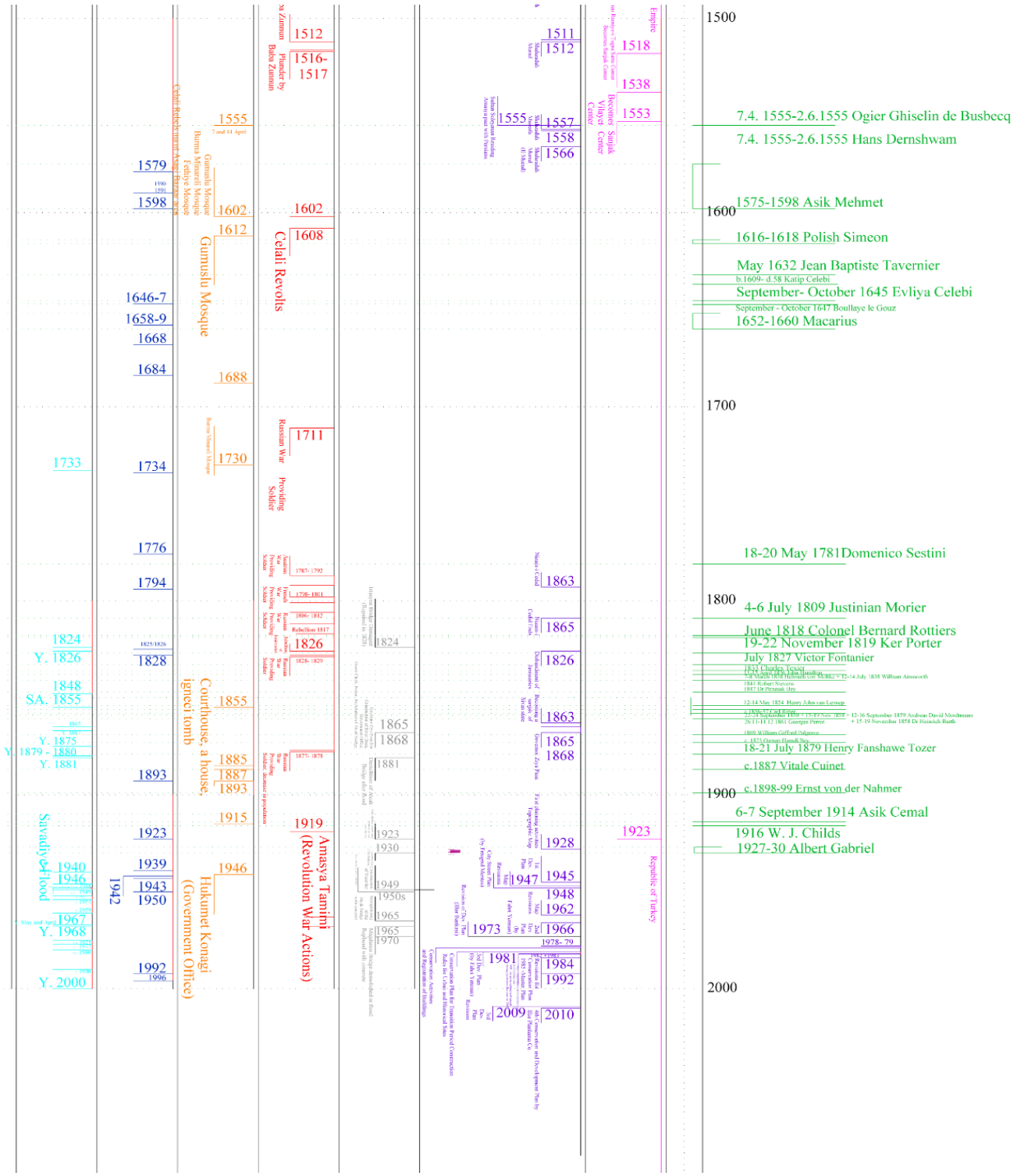
1869	Dersaadet Idare-I Belediye Nizamannamesi	For Istanbul	Foundation of official Istanbul Municipality	Cicek, 2014
1870	Idare-I Umumiye-I Vilayet Nizamnamesi	Whole Country	Foundation of local governments and municipalities	Yilmaz, 2009; Cicek, 2014
1875	Istanbul ve Belde-i Selasede Yapılacak Ebniyenin Suret-i Inṣaiyesine Dair Nizamname in 1875 (Regulation on Construction Methods in Istanbul), Regulaktiopn of Consturciotn Method in Istnabul	Istanbul		Aksoylu, 2017
1876	Kanun-I Esasi /first constitution of the Ottoman Empire article.112	Whole Country	A first lawful act to secure municipalities	Yilmaz, 2009
1877	Nizamname / Dersaadet ve Vilayet Belediye Kanunu	Whole country	Foundations of first official municipalities To control urbanization Municipalities were responsible for urbanization, providing water, fire fighting Valid until 1930 Municipality Law	Ulug, 2013; Yilmaz, 2009; Aksoylu, 0217
1882	Ebniye Kanunu / Construction Law	Whole country	For infrastructure and roads 'The Building Law (Ebniye Kanunu) included some articles related to roads, fire areas, and buildings. The goals of these regulations pinpointed a city with straight and uniformly wide streets defining rectangular or square blocks composed of stone or brick buildings. The application of these regulations in the districts of Galata, Aksaray, etc. resulted in the imitation of the straight and wide arteries of Paris, and patterns adopted from contemporary European trends' (Aksoylu, 2017, p. 299).	Ulug, 2013; Aksoylu, 2017
1891	*Me-I Harik Hakkinda Nizamnamesi*		Similar to the first fire regulation from 1854	
1908	The proclamation of the Second Constitutional Period	Whole Country	-	Kodaman, 2007
1914-1918	World War I	Whole Country	-	-
1919	The Turkish War of Independence	Whole country	-	-
1923	Foundation of Republic of Turkey	Whole Country	-	-

APPENDIX 5.1- Timeline of events in Amasya History



APPENDIX 5.2- Timeline of events in Amasya after the 11th century




1500
1600
1700
1800
1900
2000
7.4. 1555-2.6.1555 Ogier Ghiselin de Busbecq
7.4. 1555-2.6.1555 Hans Dernshwam
1575-1598 Asik Mehmet
1616-1618 Polish Simeon
May 1632 Jean Baptiste Tavernier
b.1609- d.58 Katip Celebi
September- October 1645 Evliya Celebi
September - October 1647 Boullaye le Gouz
1652-1660 Macarius
18-20 May 1781Domenico Sestini
4-6 July 1809 Justinian Morier
June 1818 Colonel Bernard Rottiers
19-22 November 1819 Ker Porter
July 1827 Victor Fontanier
18-21 July 1879 Henry Fanshawe Tozer
c.1887 Vitale Cuinet
6-7 September 1914 Asik Cemal
1916 W. J. Childs
1927-30 Albert Gabriel
Gumuslu Mosque
Celali Revolts
Courthouse, a house, ignecl tomb
Amasya Tamimi (Revolution War Actions)
Hukumet Konagi (Government Office)
Savadiye Flood
Republic of Turkey
Empire

APPENDIX 5.3- List of Amasya Travelers and their details

Traveler	Born-Dies	Date Visited	Nationality	Profession	Book	Other Remarks
Strabo	B.C. 64- A.D. 21	-	Greek	Historian, Geographer	'Geographica'	Amasya was their hometown.
Plinius Caius-Secundus	B.C. 23-A. D 79	-	Roman	Author, Naturalist	Natural History.	-
Anna Comnena	1083-1133	-	Byzantine	Royal member, Writer	The Alexiad	-
Idrisi	1100-1166	12th century	Arab	Islamic geographer and traveler	'*Kitab Rucar / Al Kitab al Rucari / Nuzhat al-Mustak fi Ihtirak al Afak'*.	
Ibni Sait	1208, Granada – 1274, Damascus	1266/1267	Andalusian	Philologist, Traveler, Geographer	NA	Mentioned in an article by Cohen – ' Ibni Sait Sur L'Asie Minor Seldjuquide'
Ibn Battuta	1304- 1369	1339	Moroccan	Traveler	*Tuhfetu'n Nuzzar fi Garabi'l Emsal vel Acaibi'l Efsar'*	The adventures of Ibn Battuta' by Dunn are used as a source for this research.
Marchant Basil	-	1465	European	Christian Pilgrim	-	Mentioned in *'Avrupali Seyyahlarin Gozunden Osmanli Dunyasi ve Insanlari (1530-1699).'*
Ogier Ghiselin de Busbecq	1522-1592	7th of April 1555-2nd of June 1555	Flemish	Scholar, Traveler, Ambassador of Austria	*'Turkish Letters'*	-
Hans Dernshwam	1494-1568	7th of April 1555-2nd of June 1555	German	Traveler, Ambassador of Austria	'Hans Dernschwam's Tagebuch einer Reise nach Konstantinopel und Kleinasien (1553/55): Ins Neuhochdeutsche übersetzt von Jörg Riecke'	-
Asik Mehmet – Mehmet b. Omar b. Bayezud el-Asik	1556/1557, Trabzon -	Between 1575-1598	Ottoman	Traveler	*'Menazirul-avalim'*	-
Polish Simeon	1584-	Between 1616 and 1618 – A week-long	Polish	Christian Pilgrim	'*Polonyali, Tibir Simeon'un Seyahatnamesi, Kronolojisi ve Tezkarlari'*	-
Jean-Baptiste Tavernier	1605-1689	May 1632	French	Merchant, Traveler	The six voyages of John Baptista Tavernier	-
Boullaye Le Gouz	-	C. September-October 1647	French	Traveler	*Les voyages et obseruations du Sieur de La Boullaye-Le-Gouz, gentil-homme angeuin*. A Paris: Chez Geruais Clousier au Palais, sur les degrez de la Saincte Chapelle.	
Evliya Celebi	1611-1682	1645	Turkish	Traveler	*'Seyahatname'*	-
Macarius	-	Between 1652-1660	-	Patriarch of Antioch Orthodox church	*Travels of Macarius Patriarch of Antioch, volume ii*	-
Katip Celebi	1609-1658	NA	Ottoman	Geographer, Traveler	*Cihannuma*	-

Domenico Sestini	1750-1832	18 May 1781-20 May 1781	Italian	Traveler	Viaggio di ritorno da Bassora a Costantinopoli fatto dall'abate Domenico Sestini accademico fiorentino	
Justinian Morier	c. 1780, Turkey – 1849, England).	From Tokat 4th of July in 1809 and left the city on the 6th of July to go to *Merzifon.*	British	Diplomat, Writer	*'A journey through Persia, Armenia, and Asia Minor to Constantinople, in the years 1808 and 1809; in which included, some account of the proceedings of their Majesty's mission, under Sir Harford Jones, Bart. K. C. to the court of the King of Persia'*	-
Colonel Bernard Rottiers	1771- 1857	June 2018 (for 5 days)	Flemish	Military Officer	*'Itinéraire de Tiflis à Constantinople'*	They had military duty in Georgia against the Persian and Ottoman armies in 1811 (Vingopulou, n.d.). They visited Tbilisi, Batumi, *Trabzon*, and *Samsun,* and *Amasya*
Ker Porter	1777-1842	From *Turhal* on the 19th of November 1819 and stayed 3 days	British	Painter, Traveler	'Travels in Georgia, Armenia, Ancient Babylon during the years 1817, 1818, 1819, and 1820'	They drew sketches of the city and rock tombs.
Victor Fontanier	c. 1796, France – 1857, Italy	July 1827 from *Tokat*, then, went to *Merzifon*	French	Pharmacist, traveler	They made expeditions in *Trabzon, Erzurum, Erzincan, Sivas, Tokat* and *Amasya, Izmir, Istanbul* after visiting Crimea, Baghdad, and Georgia and wrote two volumes of a book	They were commissioned to travel east by the French government to explore the Black sea region and Ottoman cities in Asia; therefore, held the position of natural attaché to the French embassy in Istanbul (Nicolaides, n. d.). They are the first traveler the make a map of the city and they also drew a sketch of the city.
Charles (Felix-Marie) Texier	1802-1871	1833	French	Archaeologist, Architect	*"Asie mineure: description géographique, historique et archéologique des provinces et des villes de la Chersonnèse d'Asie"*	Their travel account was published in three volumes between 1839 to 1849 (Vingopoulou, n. d.).
John Hamilton	-	11 – 15 April 1836. (Travelled from *Zile*).	British	Geologist and Historian	*'Researches in Asia Minor, Pontus and Armenia: with some account of their antiquities and geology'*	They were sent by the British Royalty Geology Society for an expedition in the Ottoman Empire, Iran, Caucasia, Mesopotamia in 1842. According to Tuzcu, and as can be understood from their writings, they did not pay attention to Muslims and Turks, and they were interested in minorities like the Armenians and *Rums* (Anatolian Greeks).
Helmuth Karl Bernhard, Count von Moltke	1800, Germany – 1891, Germany	On the 7th of March 1838 from Samsun and left the city on the 8th to go to Tokat.	German	They were a 'chief of the Prussian and German General Staff (1858–88)' (Encyclopedia Britannica, 2018)	*'Turkiyedeki Olaylar ve Durum Uzerine Mektuplar'* (Letters on events and situations in Turkey)	They worked between 1835 to 1839 in the Ottoman military and their famous letter about Ottoman Empire became a book that was considered as an objective observation of the Ottoman Empire in the 19th century.
William Francis Ainsworth	1807-1896	Between 12 July 1838 to 14 July 1838	British	Surgeon, Geographer, and Geologist	*"Researches in Assyria, Babylonia, and Chaldea"* (London, 1838) and *"Travels and Researches in Asia Minor, Mesopotamia, Chaldea, and Armenia"* (London, 1842). Two years later, in 1844, they published their best-known work *"Travels in the Track of the Ten Thousand Greeks"* (Vingopoulou, n.d., Ainsworth, 1842).	On a 'Euphrates Expedition' in 1837, they traveled Asia Minor, Syria, and Mesopotamia with an interest in Chaldean Christians.

Robert W. Stevens	-	1841	British	Worked at the Istanbul British Consulate	His reports were added in a book called *'Majestelerinin Konsoloslari, Ingiliz Belgeleriyle Osmanli Imparatorlugundaki Ingiliz Konsolosluklari'*	They wrote a report about Amasya, Tokat, and Kayseri in 1841
Dr Perunag Feruhan Bey	-	1847	Armenian Ottoman	Doctor	They, throughout this travel, wrote a book in Armenian which gives information about the places they visited and printed in 1868.	They traveled with Mabeyinci Ragip Bey, who was sent by Sultan Albdulmecid in 1847.
Henry John van Lennep	1815-1899	12th of May 1854 – 14th of May 1854.	Born in Turkey to a Levantine family	Educator, Doctor, Ecclesiastics	Travels in Little Know Parts of Asia Minor Volume I, Volume 2	-
Carl Ritter	1779-1859	c. 1856-1857	German	Geographer	'die erkunde von asien, band ix: klein-asie bergliechende erdkunde des halbinsellandes kelien-asien'	-
Andreas David Mordtmann	1811-1879	22 -24 September 1850, 15-19 November 1858, approximately on 12-16 September 1859	German	Worked in German Embassy in Istanbul	'Anatolien-Skizzen und Reisebriefe Aus Kleinasien'	-
Dr Heinrich Barth	1821-1865	15-19 November 1858	German	Explorer, Geographer	Reise Von Trapezunt Durch Die Nordliche Halfte Klein-Asien Nach Scutari Im Herbst 1858'	They came to Istanbul in 1858 and then traveled to Trabzon with the ship and kept traveling to Erzurum, Sivas, Tokat, Amasya, Yozgat, Kayseri, and other cities for six months with German Scholar Mordtmann
Georges Perrot	1832-1915	26 November – 14 December 1861	French	Archaeology professor	Souvenirs d'un voyage en Asie mineur Exploration Archeologique de La Galatie et de La Bithynie d'une partie de la Mysie de la Phrygie, et la Cappadoce.	-
William Gifford Palgrave	b.1826	1869	British	Diplomat	'Mr. Consul on the Anatolian Coast the corresponding island districts, between the longitudes of Sinope and Trebizond, in the summer of the year 1869'	-
Osman Hamdi Bey	1842-1918	NA	Ottoman	Archaeologist, Painter	Les costumes Populaire de la Turkiye'	Published in 1873.
Henry Fanshawe Tozer	1829-1916	18 July-21 July 1879	British	Writer, Teacher, Traveler	Turkish Armenia and Eastern Asia Minor	-
Vital Cuinet	-	NA	French	Geographer, Diplomat	*La Turquie d'Asie, géographie administrative: statistique, descriptive et raisonnée de chaque province de l'Asie Mineure*	Published in 1890
Ernst von der Nahmer	19th c.	c. 1898-1899	German	Geographer, Traveler	Dr. Ernest von der nahmer, von mittelmeer zum pontus.	-
Asik Cemal	-	6-7 September 1914	Ottoman	Traveler, Poet	Amasya Seyahatnamesi	Published in 1926.
W. J. Childs	-	1916	British	Traveler	Across Asia Minor on foot.	-
Albert Gabriel	1883-1972	1927-30	French	Architect, Art Historian	Monuments Turcs d'Anatolia Amasya, Tokat, Sivas	-

APPENDIX 5.4. Details from Travelers' Accounts[75]

		Time	Name of the Book	Geography/Topography /Nature	Citizens/Ethnicity	Trade Roads /Silk Trade	Trade/Silk Production/Economy	Wars/Invasions	Urban Structures	Architecture	Science, Religious, and Cultural Center	Disasters	Resilience Factor	Administrative Role
Pre-O. A.D 0-79	Strabon	B.C. 64 – 21 A.D	Geographica	They mention Amasya in their 'Geographica' as their hometown, where the **River Iris** (*Yesilirmak*) flowed through a deep wide valley. They state the mountain is very steep and high next to the river.	They elaborate on the nature of the city and people's efforts, which made this city a unique place.	x	x	x	They write there was **a palace, rock tombs, cisterns, water channels. In the lower area, there were ghettos and there were two bridges:** one connected the city to the ghettos and one from the ghettos to the outside of the city.	x	x	x	x	x
	Roman Plinius Caius-Secondus	B.C.23 – 79 A.D	X *There is a map showing Turkey in that Era.	The only thing they mention related to the topic was the **River Iris** and how fertile it was.	x	x	x	x	x	x	x	x	x	x
12th C.	Princess Anna Komnena	1137-1153 (Byzantium Era)	Alexiad	x	x	x	x	They comment on the power struggles in the area between Turks and Byzantium commanders, which **caused wars and invasions.**	x	x	x	x	x	x
	Serif Idrisi	1100-1166	' Kitab Rucar / Al Kitab al Rucari / Nuzhat al-Mustak fi Ihtirak al Afak'	'Amasya and its surrounding area are known for its ***mild weather, fertile lands*, hardworking and productive people, *an abundance of water resources***. Besides being a trade center, it is an active city because of these characteristics mentioned' 'There are many ***fruit gardens and water wheels are located next to the big river***. The city became famous among the *Rum* (Anatolian Greeks) lands for *its delicious fruits, beauty*, and scholars and philosophers it raised'.	'… hardworking and productive people…" "The city became famous among the *Rum* (Anatolian Greeks) lands for […] scholars and philosophers, it raised' *1	They mention Amasya as a city of *Rum* (Anatolian Greeks) lands where important **roads crossed, and merchant caravans** stopped by.	'Besides being a *trade center*, it is an active city because of these characteristics mentioned'.	x	'The city is surrounded by the **walls of the castle** in greenery and its **beautiful buildings spread through** the land.'	x	'Besides its economic and natural rich resources, it is a ***scientific and cultural center*** where *important people and rulers were educated*' +*1	x	x	x
13th C.	Ibn-i Sait	1208-1264	x	They mention that the city is located in **the south of the city of Sinop**. 'There are many gardens and a **big river**. **Water wheels** irrigate the gardens […] It is famous for its vineyards and gardens '.	x	x	x	x	x	x	**'There are many doctors and philosophers in this city'.**	x	x	x
14th C.	Ibn Battuta	1304-1369	' Tuhfetu' n Nuzzar fi Garaibi' l Emsal vel Acaibi' l Efsar' ,	They say […] there were many gardens and vineyards next to **the big river**. They also mention there were **water wheels** on the rivers which **provided water to the houses**, and **the city has big gardens**, streets, and markets. *2	x	They say they **arrived in the city from Sivas**.	+*2	x	+*2	x	They mention important **religious leaders who** also live in the city.	x	x	x

[75] Instead of repetition of same text, data is numbered and repetition was done and added under different labels through numbers in order to save space.

15th C.	Merchant Basil	v.1465	x	They mention coming to Amasya where the city was located **at the skirts of 2 mountains** and there were 7 beautiful *konaks* (Turkish mansions) which differentiated the city from other cities they traveled to. *4 They mention going up **to the mountain and seeing the other mountain (Harshena),** the castle, important structures, and *konaks* (Turkish mansions) were lined **next to the river.** *3	They state the majority of the population in Merzifon were **Armenian** except a couple of Turks.	After visiting **Havza, which is now a district of the city Samsun**, they mention coming to Amasya.	x	x	+*3 They state that Amasya is a big city, and two sides of the river were **strengthened with solid stone walls**. **Water from the river was carried by the stone channels to the streets, to the houses. Big houses had their own wells.** *5	+*4	x	x	+*5	x
16th C.	Ogier Ghiselin de Busbecq	1522-1592	' Turkish Letters'	They write the city was **located between two hills and the river Iris divided the city**. Two hills were very close to each other which created only **one entrance** to the city. They continue by describing the lower hills of **two mountains, which surrounded the city, and on top of it, there was a castle**.	x	They explain when they left the city at the same time with the Persian ambassador committee, and they ***left the city from where they entered,*** and later that roads split into two. ***While Iranians took the east one, their group took the west one to go to Istanbul.***	x	x	They say there are ***ruins of buildings from the old Cappadocia Kings*** era and continue saying that they did not find the streets and houses of Amasya beautiful. *6	They state 'houses are like houses in Spain, which are made of ***adobe with flat earth roofs***. When raining, if the roof leaks, they use an old cylinder marble piece to press and make a waterproof roof. In the summer, local people sleep on the roofs. Even though it is not raining much in here, you have to be careful when it does, because your clothes will be muddy because of the mud that flows through the roofs' *8	x	They mention that the day they arrived there was a ***fire,*** and the janissaries prevented the expansion of the fire by burning down the houses in close proximity. They write ***they claim that soldiers want the fires to plunder*** houses. They mention seeing similar arson happened in Istanbul, where the perpetrator could not be found. *7	+*6 +*7 They write ***there was always a Turkish*** troop located to *prevent Iranian and other enemy' invasions.* +*8	+*6
	Hans Dernschwam	1494-1568	' Istanbul ve Anadolu' ya Seyahat Gunlugu' -find the original name	They describe that from Baglica Village to Amasya city center both sides of the road were surrounded by mountains and plantations. They write that they arrived by ***passing mountains and valleys, and a big body of water flows from the middle*** of Amasya, which was called ***Yesilirmak*** (Strabon called it Iris.) They mention, *2 miles before the city, how the roads became narrow* that two carriages could not pass each other. On the right, up in the hills, there was a trail that one can go on foot or on a horse. They state that it was impossible to see the city before getting close and to see the city one needs to reach the river. They continue: "There is a castle rising on a top **magnificent rocky mountain**. **There is another rocky mountain opposite to this**, however, that one is not as magnificent and high as this one."	x	They continue explaining how they arrived at ***Amasya after 3 miles of a journey from a village in Merzifon***. As a total, from Istanbul to *Amasya, it took them 30 days to arrive'*. They state it was *113 Hungarian* miles which are equal to 70 km. They also state that to calculate distance, Ottomans use days instead of miles.	The initial information they give is about a village of Amasya that they arrived, and they explain the soil was full of stones and did not look suitable for agriculture, and **locals used lands as *a plantation, vineyard, or fruit garden***, and they took the grapes to Amasya to sell. They *also explain they did not produce much, and they raised* ***livestock like shepherds.*** their point shows the economy of the surroundings of Amasya is based on fruits, especially grapes and livestock, which they mention that ***people brought their goods to the city center to sell.***	They also mention the political tension between Persians and Ottomans. ***They claim that while Turks did not harm Persians and their villages much, Persians burned every place they went through. They say Turks only damaged the places Iranians left behind.*** This also tells how the wars Ottomans had, had a negative impact on Ottoman cities.	Before entering the city, they passed through the **old stone bridge on the river**. The bridge was only **wide enough for a carriage** to pass, and it was …. long. They state that 'there are many vineyards, fruit gardens, and plantations at each side of the river and there are ***little adobe or stone summer houses*** within those. When you get close to the city, you need to pass the river one more time through ***80 footsteps long wooden bridge***. There are many **water wheels** under the river which carries water to the gardens next to it' They continue: "There is **a castle rising on a top magnificent rocky mountain.** [..]. We have seen ***2 old beautiful churches*** **on the left and right, which was from Byzantium era when we entered the city**." They say as they continued, they saw another beautiful church and they ***reached where they would stay in the city center which was right below the castle.*** 'There is another **stone bridge on the *Yesilirmak,* which is 63 footsteps long**. This bridge does not have railings and is closed to vehicle access because there is no way for 2 carriages to pass each other. **We saw another stone bridge down the city.** This bridge had railings ' This is one of	They say: 'Up high, roads *were built between rocks and* ***big stone doors*** can be seen in there. Some people live there. Therefore, there are fences. Also, ***houses are made of adobe.*** The **interior of the houses is made of unfinished *wood, and they are 2-story high***. *There are* **stables under the houses and on top, there are rooms where they live. But these rooms are made of wooden planks and were covered by earth. The thickness of the earth is half arson** (Turkish yard for 68 cm). There are not many houses in a good state. They live and sleep here. ***Every roof has a big cylinder rock to press the earth roof***. In the middle of the city, close to where we stay, there is a **round tower** (*minaret*). *This tower is* ***made of brick,*** *and it has round stairs to take you to the top of it. There is a quadrangular or octangular structure on top of it, which is similar to balconies (serefe). In the middle of that balcony, there is another spiky tower rising in the middle. There is a door in the southeast. There used to be a bell on it from the Byzantium era.* Before, non-Muslim era, *precones (mumadi)* comes up to here and tells the time of the day. Now, Turkish *mesyn* (*muezzin*) calls for *azan* to call for prayer 5 times a day. *The base of the tower is octangular and 1,5 footsteps long and round part sits on top of it to rise like twisting'* From the definition they give, it could be understood that they mention Burmali Minareli Mosque, which is built in Seljuk Era that survived centuries. *9	x	They state that 'at the night of the 14th of April, ***a great fire started on the other side of the river and many adobe houses were burnt down at the other side of the river***. Janissaries and *Pachas* (the term for higher rank generals of governors) tried to extinguish the fire)	+*9 The material of the houses and the conditions they stated tells residential buildings from the 16th century could not survive and most of the examples in the city today belongs to the 19th century **Janissaries and Pachas (the term for higher rank generals of governors) tried to extinguish the fire; however, they do not have the equipment to extinguish the fire. They had long hooks to prevent the fire spread around. They collapsed the houses in the immediate surroundings with those hooks**. In this fire, many shops were burnt as well. The fires started in the great square. 'As Busbecg mentioned as well, this information	x

									the original bridges that still exist and act as an axis in the city. They say, there were **11 Turkish mosques** in Amasya; however, the most beautiful one was **Cifte Minareli Mosque** which was built by Sultan Bayezid. they state: '***At the end of the city, there is another stone bridge on river Yesilirmak. Total, there are 3 stones and 1 wooden bridge in Amasya. Amasya, which was located on the two sides of a valley, is a poor city, which consists of adobe houses, where houses are on top of each other like birds' nests. Houses do not have proper windows and generally do not look good. They live in the rooms like prisons. Up in the walls, there are windows 1 karis (handspan) wide and 1,5 karis in height. There are no kitchens in the houses. Rooms have small stoves, and they cook their soups here***'.	+*10 They continue by describing the palace of the sultan, where today ruins are left and called **Maiden Palace**. They say '***it is big and modest, and located next to the mountain and is surrounded by gardens. There is a wooden gate between adobe walls. The rooms next to this gate look like village houses. There is a one-story building in the courtyard which is made of adobe. Wooden parts of the building are rough, simple, and made of pine woods. There is another house in the courtyard which was made of bricks*** where Sultan stays […] It looks like a random tradesman's house.			talks about techniques that they use, which helped increase urban resilience. They also mention going to ***the 2 Armenian churches, which were in terrible conditions where the gallery was closed and only was open in-service time and it was a very little church with only one altar(?) and place for 3 people to pray***. **This tells us about the Armenian population in Amasya, but there was a lack of renovation of their religious buildings. *10** They write again about the fire and say, "as I mentioned before, on 14th of April, ***there was a big fire, but they rebuild the houses in a very short time".*** They state, on the 17the of May, the Iranian committee came to the city and placed it in the house that was survived the fire by having a quick repair. This tells about a quick recovery they make after disasters	
	Asik Mehmet	b.1555	' Menazirul-avalim'	They report from old travelers, who said Amasya *was a big city with a castle and city wall*, and there was a ***big river*** that flows through the city, which had *water wheels to provide* ***water to the gardens and vineyards*** around it. they state that according to Ibn-i Said, the city was located at ***the south-east of Sinop city*** +*11	x	x	x	x	There were many *water resources,* and the city was famous for *its* ***vineyards and fruit gardens***. *The scenery was beautiful* *11	x	***Many governors and rulers were raised in the city.***	x	x	x
17th C.	Polish Simeon	b. 1584	' Polonyali Tibir Simeon' un seyahatnamesi' -	They write it was a famous center and the city was located at the **skirts of two mountains**, which was **divided by a river**.	They mention arriving at Merzifon and its population was mostly **Armenian**. In the city center, there were 200 Armenian households and 3 churches	Polish Simeon visited Amasya when they were **traveling for a pilgrimage to Jerusalem from Poland** between 1616-1618. they mention **arriving Merzifon [then] to Amasya**, they write, they arrived in the city center of Amasya in a day. […] They mention they stayed in Amasya for a week and **arrived in Tokat after 2 days of the journey**.	x	x	x	In the city center, there were **200 Armenian households and 3 churches.**	x	x	x	x

	Jean Baptiste Tavernier	1605-1689	‘Topkapi Sarayinda Yasam’ -	They write that Amasya was a city located **at the skirts of two mountains. A river** that flows from Tokat passes through the city and reaches the Black Sea.	x	They passed through **Amasya in May 1632 to go to Iran**.	x	x	**In the south, there was a beautiful landscape and there was a narrow wooden bridge, where 3 people cannot pass through at the same time.**	x	x	x	x	x
	Boullaye le Gouz	b.17th century	‘Les Voyages et Observation du Sieu de la Boullaye Gouz’	They mention there was an ancient, half-ruined castle on top of the **mountain and at the lower part of the mountain, there was a river dividing the city into two**. *12	They say they stayed in the city for 3 days and ***met 4 or 5 Jewish families in*** the Amasya.	After traveling for ***30 days from Istanbul***, they arrived in the city of Amasya	x	x	+*12	x	x	x	x	x
	Evliya Celebi	1611-1682	‘Seyahatname’	There was a ***Tozanli* river** flowing next to the castle. At the point where ***Tozanli* River and *Yesilirmak* meet**, there was a big stone bridge. Amasya city was a **big city that grew on two sides of the river. The river flowed from the south towards the north, while irrigating plantations and gardens via water wheels**. In Ottoman cities like Hama, Adana, and Amasya, the water wheels of the city were famous. Amasya, which was divided into two by a river, had 48 Muslim neighborhoods and 5 Christian neighborhoods	Then they give information about important people in the city, local languages and clothing, food and drink, jobs, artisans, aqueduct, climate, recreation places, and tombs of important people. Amasya, which was divided into two by a river, had **48 Muslim neighborhoods and 5 Christian** neighborhoods.	x	x	They say the castle was left from *Amelika* civilization and many civilizations ruled there. They continue that the castle was **conquered by Danishments in 464 Hijri** by Sultan Melik Shah from Rums. **Persians tried to conquer many times** but failed to do it. **From Danishments, it was passed to the Seljuks, then Timur Era, then finally, to the Ottomans**. He mentions how **the upper castle resisted attacks from Persian leader Timur** and how **the soldiers were waiting ready for *Celali* attacks.** This shows us the castle became a keystone for resistance to military actions or rebellions.	They give a very detailed definition of the **architecture of the castle**. They also mention the **lower castle, which was next to the river and surrounded by short stone buildings**. **It had 3 doors and the southeast Qibla door opened to *Alcak* (Law) Bridge. *Maydonos* Door opened on Bayezid Han Bridge Road, which was a way to go *Merzifon, Gelgiras,* and *Ladik*. In the west, *Meydan* (square) Door was opposed to the big wooden bridge and through this bridge, you could reach *Gokmadrasah*. In the east, there was a door of *Serkiz* bridge. On this wooden bridge, you could go to the *Garipler* Mosque, *Zennubat, Elvan Celebi* areas. The surroundings of the castle had built environment, other palaces, and 600 houses. *Carsi* was small and there was a mosque. There was a *Tozanli* river flowing next to the castle. At the point where *Tozanli* River and *Yesilirmak* meet, there was a big stone bridge. Amasya city was a big city that grew on two sides of the river. The river flowed from the south towards the north, while irrigating plantations and gardens via water wheels**. In Ottoman cities like Hama, Adana, and Amasya, the water wheels of the city were famous. Amasya, which was divided into two by a river, **had 48 Muslim neighborhoods and 5 Christian neighborhoods. There were small and big 5000 houses and palaces. Two of those palaces were for the usage of the Sultans. Pasha's palace was next to Mehmed Pasha Mosque. In the inner castle *Sultan Bayezid, Semsi Pasazade* and *Gedikalanli Ali Pasha* palaces were the most famous ones. All palaces were covered with tiles**. They write that there were other places in the city, but they were not important to write about. **Neighborhoods: Total is 48. Close to the castle *Samlar* neighborhood, opposite side of *Bayezid Pasha* neighborhood, *Mehmed Pasha* neighborhood, *Saray* (palace) and *Hoca (Havace)* neighborhood (Armenian population), *Sofular* neighborhood, *Copluce* neighborhood which is next to the castle. The others are *Serkiz* neighborhood, *Dere* and *Kadikoprusu* neighborhood, *Temanna* neighborhood, *Kilci(killica)* neighborhood, *Bakacak* neighborhood, *Kanli Pazar* neighborhood.’** Then they give information about important people in the city, local languages and clothing, food and drink, jobs, artisans, **aqueduct, climate, recreation**	They categorize building typologies and gives details about them: **‘Amasya mosques: There are a total of 240 mihrabs. *Sultan Bayezid Veli* Mosque**: Its width and length are 100-foot-long. *Mihrab, minbar and muezzin mahfili* are very artsy. There is one big dome, but not so big. This historical building was built between 17 December 1487-4 December 1488. **It has 2 minarets and an inner courtyard. Its waqf is very big. It has rich, big waqfs. On the side of the castle, in the *Samlar* neighborhood, close to houses, there are *Miskinler/Garipler* Mosque, *Kucuk Aga Mosque;* next to *Cekerek* River, in *Irem* vineyard, there is a Bayezid Pasha Mosque**. Its dome is covered with lead and with one minaret with marbles. ***Mehmet Pasha* Mosque: It is next to the river** and has a stone led domed and one minaret. ***Hizir Ilyas* Mosque**: It is a big mosque with a leaded dome. ***Mahkeme* (court) Mosque**: The roof is wooden. There are many mummies in a cell in coffins. The minaret is wooden. ***Fethiye* Mosque: It was converted from a church** and without a minaret. ***Yorguc* Pasha Mosque: It was built by the vizier of *Celebi Sultan Mehmed Han, Yorguc* Pasha. Gok Medrese Mosque: It is without a minaret and has a dome covered with lead. Other than those listed, the rest are considered as masjid. Amasya Masjids: *Saraclar Masjid, Buyukaga Masjid, Temanna Masjid, Kilci Masjid, Kadikoprusu Masjid, Deyre (Dire, Dere Neighborhood) Masjid, Yukari Pazar Masjid, Sefer Aga Masjid, Bedesten Masjid, Copluce Masjid, Mustafa Bey Masjid, Kanli Ali Aga Masjid, Asagi Pazar Masjid, Garipler Masjid, Cukurlar Masjid, Hocazade Masjid, At Meydani Masjid, Kanli Pazar Masjid, Bakacak Masjid, Yukari Meydan Masjid, Asagi Meydan Masjid*. **These are big masjids like the *‘Salatin’* Mosque, which was built in the name of sultans.** **Imarets: There are 10 soup houses to feed the poor and travelers. They are administered by *Sultan Bayezid Veli* imaret, which provides abundance and good meals twice a day. Mevlevihane imaret serves the poor besides dervishes. *Pir Ilyas Dede Imaret, Mehmed Pasha Imaret, Yorguc Pasha Imaret, Gokmadrasa Imaret, Hatuniye Imaret, Coplu Imaret…*** **Caravanserais: *Bayezid Veli* winter guesthouse is covered with lead. *Bayram Pasha* Guesthouse's roof is covered with lead as well. *Bayram Pasha* Guesthouse is leaded and built by the vizier of *Murat IV. Copluce* guesthouse is tiled. *Gokmadrasah* belongs to *Yorguc Pasha. Dogruotur* Guesthouse. *Hacegan* Hans: They have iron doors covered with leads. *Sultan Bayezid Han, Yorguc Pasha Han,***	**Amasya Madrasahs: There are 10 madrasahs. The most perfect, flamboyant, and built-up is *Sultan Bayezid Veli* Madrasah. The other ones are *Mehmed Pasha* Madrasah, *Kadi Madrasah, Gok Madrasah, Buyu Aga Madrasah***. They are all located in big mulberry and fruit gardens. ***Kucuk Aga* Madrasah: *Bayezid Pasha Madrasah*** and others… they have 9 *Darulkurra* which teaches Islamic and Qur'anic knowledge. Only in *Sultan Bayezid Han Darulkurra*, there are more than 300 Qur'anic *hafizes*. There is one *daru'l hadis*. **There are 200 *maktab* teaching literacy to kids. Other than those, each neighborhood has always at least one child *maktabs***. Sanli **Dervishes *Tekkes* (Lodges): There are 40 dervish orders with Zawiya. The most perfect one is *Mevlana Celaleddin Rumi* tekke, *Mevlevihane, sema ve safahane*. *Haci Ilyas Tekke, Gok Madrasah Tekke, Pirler Tekke, Samlar***	x	They mention how the upper castle **resisted attacks from Persian leader Timur and how the soldiers were waiting ready for *Celali* attacks. This shows us the castle became a keystone for resistance to military actions or rebellions.**	They say the castle was left by *Amelika*. civilization and **many civilizations ruled here**. They continue that the castle was conquered by Danishments in 464 Hijri by Sultan Melik Shah from Rums. Persians tried to conquer many times but failed to do it. From Danishments, it was passed to the Seljuks, then Timur Era, then finally, to the Ottomans. **They state Yildirim Bayezid made their *shahzadah* (crown prince) Isa Celebi the governor of the city. Then, Amasya became the government center and Sultan's throne. With palaces that were built for the Sultans, the city became *‘Al-i Osman taht sehri* – Ottoman's crown city'. In official Ottoman cadastral books, it was recorded as ‘Amasya Bey's government center in the Sivas State'.**

									places, and tombs of important people.	***Bayezid Pasha Han, Koca Mehmed Hans, Kapan Han. Ridvan Aga Han, Mehmed Pasha Hans*** **which is closed to *Timarhane* (Mental Hospital). It had an income from many waqfs and was well taken care of. *Bekar* (Bachelor) *Hans*: It has rooms for bachelors and travelers. It had *kapici* (doorkeeper). Every evening, they close the doors by playing drums. People who are left out cannot enter. People who entered cannot go out even if they have an emergency. In the morning, the door opens, and everyone goes to their own businesses. They are orderly places. Hammams: *Sazlioglu Hammam, Kumacak (Kocacik) Hammam, Mustafa Bey Hammam* next to *Mehmet Pasha* Mosque closed to *Bayezid Pasha* area, *Ilica Hammam* next to *Hunkar* palace, one at the beginning of *Alcak* (Low) Bridge, *Alaca Cardakli Hammam* next to the river, Kadi *Hammam* in *Hacizade* area, *Sultan Bayezid* Hammam closed to *Fethiye* Mosque, *Yorguc Pasha* Hammam, *Kanlipazar* Hammam. In the castle, there are four hammams. Two of them are regular and two others are twin hammams. In the Meydan neighborhood, there are two hammams and one of them is a twin. *Carsi* and *Bazaars*: 160 different artisans, and 1060 shops. Most of the *carsi* are stone and strong like bazaars of Bursa. 4 doored with dooms *bedesten* is close to *Bayezid Han* mosque.** **+*13**	***Tekke, Gulabizade Tekke, Muftuzade Ahmed Efendi Tekke, Kadiri Tekke in Kanli Pazar, Miskinler Tekke*** **and others. *13**			
	Macarios III Zaim	v.c. 1652-1660	' Travels of Macarius Patriarch of Antioch'	x	They give information about Christian fraud and their crimes in Amasya. **But through their writing, we could draw the fact that there was a great deal of Christian population in Amasya at that time.**	x	x	x	x	x	x	x	x	x
	Katip Celebi	1609-1658	' Chiannuma'	They state 'Amasya towns are *Havza, Zunnubad, Zeytun, Gedegara, Gelgiras, Gumus, Ladik, Merzifonabad, Merzifon*. Amasya was built in a valley where **Tokat River** passed through'	x	x	x	x	They state 'it has many **neighborhoods, markets, hammams, mosques, madrasahs, and a castle with city walls on top of a hill,** which was renovated by Seljuk Sultan Alaaddin Keykubat. There used to be a silver mine here. In this city, there is an **aqueduct** which was believed to be built for Ferhat for their love Sirin. Here, **there is a big mosque with two minarets, which was built by Sultan Bayezid, and a palace'**.	x	x	x	x	This city is called **'Bagdad-i Rum'. It was *dar-ul mulk* (capital)'**
18th c.	Domenico Sestini	1750-1832	' Viaggo da Costantinopoli a Basra'	They write after walking down from **volcanically formed mountains**, they saw the **river, known as Iris**, and along with the river the city of Amasya.	They also mention the ***Armenian and Turkish populations in Merzifon*** and the architecture of the Merzifon city center. They state Amasya was a big city with approximately ***15000 Turks, Armenians,***	They, like other travelers, mentions **stopping at Merzifon before coming to Amasya city center.** They state leaving the city on the 20th of May **towards Ezine Pazari, then Turhal.**	x	x	They state there were **5 bridges on the river *Yesilirmak* and 3 of them were stone and 2 of them were wooden**. The first one they passed was beautiful. **The second one which connects the walled city side to the rest was made of pieces of columns, cut stone, and marbles**. **14** The bridges they mentioned are still existing today as an axis of the city. Also, according to their description, it could be understood that materials from old structures were used to maintain new structures. Then they continue by saying, after passing through the city, **they went to the castle on top of**	They write that there was a beautiful *Salahaddin* (a mosque built by Sultan or their family) **Mosque with 2 minarets called Sultan Bayezid Mosque**, which was built by Sultan II Bayezid. This mosque had beautiful marble columns at its *rewaq* and 2 magnificent plane trees. They describe partially ruined **Gokmadrasah** and say it was impressive with its ornaments, carvings, and colors and adds that it was used as a workshop. They also mention seeing **stones with Greek writings in the madrasah. Again, stones from Greek structures were used to build another structure.** They state 'In the city, there are ***many tombs and an abundant beautiful stone mosque. In here,***	x	x	**+*14** The bridges they mentioned are still existing today as an axis of the city. Also, according to their description, it could be understood that materials from old structures were used to maintain new structures. Their writings talk about the routes that	The city was officially a part of **Sivas Sanjak**

					and Rums population				**the mountain, which was built by Rums and renovated by Seljuk** ruler Sultan Keykubat. They also mention **partially ruined *Kizlar Sarayi*** (Maiden Palace) **and its hammam**. They briefly mention **rock tombs**.	***like other places, there are bazaars, bedestens, hans, and hammams'.***			pass through the city, some important city structures that still exist today, and the reuse of materials from previous era structures. The latter seems a sustainable and resilient way of building, however, probably, it had a detrimental effect on earlier era structures.	
19th C.	James Morier	1770-1849	A journey through Persia, Armenia an sia Minor to Constantinople in the yea 1808-1809'	They continue by saying that they **watched the scenery of the city from up, next to the caves**. they write about seeing the **river** and water wheels which looked beautiful and there were houses lined at two waterfronts	They also say they find locals very **welcoming, kind, and beautiful**	They came to **Amasya from Tokat on the 4th of July in 1809 and left the city on the 6th of July to go to Merzifon**.	x	x	They describe passing through **rock tombs** and some details of them and they say their guide told them that there was no sculpture **in the castle** anymore and their pieces could be found in the walls in the city. This could be seen as a way of recycling stone, but it damages the pieces from the pre-Ottoman era, so it has a negative effect as well. *15	They write about seeing the river and **water wheels** which looked beautiful and there were **houses lined at two waterfronts. The slender minarets of mosques looked beautiful between flat roof houses.**	x	x	+*15	x
	Colonel Rottiers	v.18 May 1818	' Itineraire de Tiflis a Constantinople	+*16	They say Strabon described that **15-20 different ethnicity lived together for 1000 years together. For 800 years, the Muslim Turks and Armenians lived in peace.**	French Colonel Rottiers, who is possibly a botanist, visited **Tbilisi, Batumi, Trabzon, and Samsun in 1818, and in June they arrived at Amasya and stayed 5 days. Then, from Amasya, they went to Tokat, Sinop and Kastamonu. They write that they arrived from Samsun to Amasya in 24 hours.** He writes about leaving the city to go **Turhal.**	Then they continue by explaining the economic and commercial details of Amasya by listing the goods and their prices.	x	They say the Tokat River flowed and connected to the river Iris and **there were 3 sturdy stone bridges in the city center in the first ages and preserved to that day. The other two bridges had stone foundations and the rest of the structure was wooden.** *16	x	x	x	**'The city was preserved without damage from ancient times and as same as Strabon described'**. They write about leaving the city to go Turhal and mentions seeing caravanserais on the way. They mention seeing workers who were **working for a renovation of a caravanserai** outside of the city which was in a bad condition. **they say rich local people provided monetary help for this caravanserai to serve poor people and pilgrims**. +*16	They report Amasya and its surrounding was a part of Cappadocia in ancient times, which was called by the Arabs as 'Amesiyah', and it was a hometown of Great Mithridates.
	Ker Porter	1777-1842	' Sir Robert Ker, Travels in Georgia, Persia, Armenia, Ancient Babylon during the years 1817, 1818, 1819, and 1820'	They describe when they entered **the valley of Amasya**, they saw a magnificent view with **luxurious gardens and rock tombs**. They describe the aqueduct, **the river**, and waterwheels. They say the city is aligned with two sides of the river. But it was mostly on the northern side. On the other side, there was a **mountain that looked like natural pyramids** which had a castle on top. *17 **Water was muddy; however, it was used for irrigation. But, because of the topography around the river, the locals had to use water channels to get water**	They say according to their guide *Sadik*, there were **6000 houses in Amasya, therefore if every house had 4 members, the population was roughly 24000**.	They travelled from **Turhal to Amasya**. Then, **from the Amasya city center, they went to Merzifon.**	Amasya was a place for **silk production and a trade center**.	x	They say **the streets were narrow and badly constructed**. Their horses hardly moved on. **Houses were high and cantilevered**. It looked like houses of London before the great fire. **Roofs of houses in the narrow streets were not wider than 12 *karis* (hand span).** The streets were filled with trash and smelled terrible. They saw a **couple of Greek structures**. Then, they reached the **neighborhood, passing through a bazaar**. Later, to go rock tombs They got a permit and a guide, then **through narrow streets, they went through 160 feet wide bridge. They give details of this bridge by saying it had marble columns and carved stones and examples of classic architecture**. +*17 +*18	They traveled from Turhal to Amasya, and they mention that they saw many ***hans*** **and caravanserais, which, they say, did not look like Turkish architecture**. They realize **ruins and one of them was a Christian church. they say most of the ruins were used as a mosque** They mention **they saw the exterior walls of Sultan Bayezid mosque. They crossed 7 pillared bridges.**	x	x	They claim the details of this bridge proved Strabo's writings. If so, this bridge was 19 centuries old. They give a very detailed description of **the castle and rock tombs** *18 They realize **ruins and one of them was a Christian church. They say most of the ruins were used as a mosque**	They say Amasya was one of the **oldest and richest Pontus and Cappadocia cities.**
	Fontanier	b.1796	Voyages En Orier de L' annee a r annee 1830'	They mention coming from **Tokat and walking through the *Tozanli* river**.	They also mention **Georgians who immigrated after the**	They visited Amasya in July 1827 from ***Tokat*, then, went to *Merzifon*.**	Amasya was a center for **silk production and trade in Anatolia**	They mention also seeing many **prisoners of war** who	They say they entered **Amasya through narrow and long streets where two sides of the street were full of old ruins. In the city center, houses looked like they climbed on top of each other.**	They rented a room from **a caravanserai**.	They say seeing what **Strabo** describes was curious. They say	They mention at the time they visited, there was **a plague,** and	While waiting for the governor's permission to investigate rock tombs, they	**They say Amasya was ruled by a *mutesellim* which was dependent on**

				The city was built in **a valley where the Iris River flowed**. **It looked the same as the description of Strabo.** *22 **Water wheels in the river irrigated vineyards and fruit gardens.** **They went to *Aynali* (Mirrored) Cave with an Armenian without a permit. They said they could be punished for visiting it without a permit because administrators could think they were treasure hunters.**	**Russian War 30 years ago. They state in Amasya city Centre, there were 7950 Muslims, 1000 Armenian, and 100 Rum, a total of 10000 households**. They say this structure was **an important religious structure that was claimed by Orthodox Rums, Armenian Gregorian, and Turkish Muslims**. Each religion had a day and time for their prayers and religious ceremony. They could hear prayers from mosques from caravanserai they stayed. They say Muslim crowds came to the mosque on Saturdays. Locals came here to pray to fight against the plague. Muslim Turks did not let in Armenians and Rums to the place in their prayer time. Then, they got help from **a Turk to visit those places without waiting for a permit with no trouble**. So, they started their expedition in the city with Turkish friends and assistants.		**even from the first ages**. They mention tax fraud and how locals (both Turkish and Armenian) were suffering from this tax collection from corrupt officials and some Armenian locals. They claim the **economy of the Ottomans was not in a good shape because of uneducated accountants**. When the **Ottomans issued banknotes**, but people did not want to use them even though it became compulsory, and this caused bigger economic problems. They mention the wrong actions of administers and some corrupted officials in the Ottoman state caused a lot of economic problems in the Empire. They say most of the **locals worked in silk production and trade**, therefore they lived in the rural area in the summers. There were also many **flour mills**. **Silk production was very advanced in Amasya.** It was the most chosen product after Bursa and Geyran silk. **All of the silk fabric production centers in the country got their silk yarns from Amasya. Tradesmen from those centers came to Amasya to buy silk yarn.** Bazaar on Fridays, silk producers came to the bazaar to sell their products.	were advised to become a Muslim to have a better living standard and they became Muslim. They also mention how **Rums organized for a rebellion with the help of Russians and Europeans, but after the failed attempt**, all Rum officials in the government lost their jobs. They again mention **the plague and how it caused casualties** in the city and its surroundings. They mention local admonitors asked for help from them for the plague. they say there are no precautions and quarantine among locals	**The streets were full of shops, workshops, and businesses**. **Houses around the upper castle were moved to lower areas. In lower castle areas and left side of the river, there were city walls and ruins** Where **two riverfronts get closer, there were two bridges from the ancient era which were also described by Strabo. Stone bridges were repaired with materials from the ruins in the surrounding, which was damaged by natural disasters. It was located at the point where the axis cross. Two bridges had active traffic. Water wheels** in the river irrigated vineyards and fruit gardens. They say the rulers who invaded Amasya in different eras**, always built the city again in Greek style. However, they did not pay attention to the original fabric, so every time structure became more vulgar.** They claim there was no research and investigation on Amasya's urban fabric. Amasya's glorious, rich history is left hidden in the dark. *20 +*21	**Two *konak*s** that Strabo mentioned still existed that day. They say they found **a fountain** from an ancient era. They say **next to the bazaar there were two structures whose era is unclear. To the left, the old temple was turned into a tomb for Muslim princes (*shahzadahs*). Brick wall and minaret were added later to that structure. They say this minaret was attracted their attention and they saw similar architecture in Sivas. On the right, there was an old mosque. There were old mulberry trees in the garden of the mosque. A bit further, there was a mosque, which was converted from a church. They say an Armenian woman said the mosque had 40 sculptures inside**. They say the most **modern structure was the mosque, which was built by Sultan Bayezid. It could be seen from the entrance of the valley with its glory. Cypress trees looked like they were competing with minarets. Next, to the mosque, there was a madrasah, a library, and a guesthouse. In the guesthouse, food for travelers and the poor were provided by the state**.	Amasya, which was built in a narrow strait, was a hometown of the old geographer They say the most modern structure was the mosque, which was built by Sultan Bayezid. It could be seen from the entrance of the valley with its glory. Cypress trees looked like they were competing with minarets. Next, to the mosque, **there was a madrasah, a library, and a guesthouse**. In the guesthouse, food for travelers and the poor were provided by the state.	every traveler was put under quarantine for 15 days. They were trying to **avoid this quarantine and got permission from the governor, but it was dangerous for them to enter the city as well since there were mass deaths**. Where two riverfronts get closer, there were two bridges from the ancient era which were also described by Strabo. Stone bridges were repaired with materials from the ruins in the surrounding, **which was damaged by natural disasters***19	saw three rock tombs on top of the left side of the mosque. **They say they could not see some of the structures that Strabo described***21 After crossing the little bridge, they walked up to the caves and tombs, and they described those in detail. They say because **the pictures were destroyed, to prevent more destruction, security guards protected the *Aynali* cave. However, they say, locals took stones for construction from old ruins. They say builders came with chisels and hammers and got stones from here and carried them to construction sites. They say every time they walked around in the city, they saw stones from these caves. They say these caves were used as a church to hide. They also heard those caves later were used as prisons. They say in the rooms of the castle, swords, knives, kitchen equipment, utensils, firearms, shields, armors, helmets, and clothing from older civilizations were under protection. They heard some treasure hunters stole artifacts from here to abroad.** +*19 +*20 +*22	***Sivas Pashalik*. There was a city council consisted of the local governor and important figures who decided jurisdictions, city planning, taxes, prices, security, state lands, waqfs duties. This council was dependent on *Mutesellim*. They had a *konak* in the city and their rank was Pasha. Governance was known as an Amasya *Pashalik*. Pasha had deputies (*divan efendisi and Sarraf*). They had many *kavas* (armed attendants), private servers, and slaves. They had an important authority in Amasya and its surroundings. They intimidated everyone under their command and collected taxes cruelly.**

							Bazaars were open till Friday prayer time. Then, silk producers went back to their houses. **Tradesmen from Syria bought silk to take back to their countries**. They also mention the abundance and taste of fruits in gardens were very famous and they were pretty cheap. Some of them were sold to Tokat and some in the rest of the country. The **other important industry was the textile industry and fabric dyeing. Also, limestone from the mines was used for construction**.								
Charles Texier	1802-1871	Asie Mineur; Description Geographie, Historique et Arceologue de provinces et des la Cher sonnese'	They say Amasya was located in a **valley where a long, deep river Iris passed through, and two mountains surrounded the river**. They continue by saying that the castle on top of the mountain was located like a crown where its walls went down to the river. ***25** **There was another strait that leads to the valley of the city. They also mention seeing beautiful gardens,** the castle, and the famous aqueduct of the city.	x	They write about the **wars that the city faced and even though when the Kingdom of Pontus declined, the city stayed as capital and protected its importance due to trade routes and fertile lands. During the empire of Trebizond**, in which the information from Princess Anna Komnene was presented earlier, the **city became an important center**. ***23** Now, Texier says, because **it was a trade route passage between Black Sea ports and Iranian ports, the city preserved its importance and development**.	x	They state it **was attacked by Muslim commanders. * Before *Rums*, the city was taken by Danishments and later was given to the Seljuks, then was taken by the Ottomans**. In the sultan Bayezid Era, they write, the **city was attacked by Timur, and the castle resisted a seven-month-long siege, and the rest of the city was plundered, and people were killed. Persian Shah tried to invade but could not succeed in 1472**. **+*23**	They also mention there were **two bridges** in the river and while the first one was to create a passage between city to towns, the second one was to create a passage to rural areas from towns. There was another strait that led to the valley of the city. They also mention seeing beautiful gardens, **the castle, and the famous aqueduct of the city. *** They say: '**The streets are narrow, and pavements are missing. Locals tend to live in summer houses or houses in the gardens away from the city rather than a city center**'. They finalize their writings with very detailed information about the **rock tombs.** **+*24** **+*25**	They explain that **madrasahs and mosques from 13th-century Alaaddin Keykubat Era** were still the jewelry of Amasya. They note that Sultan I Selim was born here, and **they built many madrasahs and *maktabs*** in Amasya, which later raised many scholars ***26**	**+*26**	x	x	They say: 'Amasya city is not only famous for its monuments **but also for being governmental center**. Its architecture is more famous than Arabic architecture. **However, today it is not as developed as it used to be**. '*****24 **+*23**
John Hamilton	v. 11-15 April 1836	' Researches in Asia Minor, Pontus, and Armenia'	After coming to the **Amasya valley**, they saw **Yesilirmak with waterwheels which irrigated plantations and mulberry gardens.** They write when getting closer to Amasya, they started to see fruit gardens, ***Yesilirmak***, and water wheels in it.	They mention seeing **gypsies** and talking with them and watching their dance and listening to their songs **In the city, there were 3000-4000 Turk, 750 Armenian, 100-150 Rum**	They came to the from form ***Zile***	**+*31**	Later, it was **damaged as a result of invasion from Persian and Arab-Muslim commanders. In Byzantine times, it was attacked by many Turk commanders**.	There were **little dams** to slow down the speed of water where **water wheels** are located. Then they saw the **aqueduct, mountains, and Acropolis on top of the mountain**, and the valley with gardens. When they **entered through narrow streets, they saw caves described by Strabo** across the river. **Because these buildings were placed in the balance so that they gave Amasya a better and more picturesque look than other Turkish cities.** They state there were **4 bridges on *Yesilirmak*. The first one on the west was a modern stone bridge. The second one probably was done by the Romans. This**	They drew gravure of the city. They say in the streets **they went through there were Islamic buildings, some ruins, and mosques. Houses and other public buildings were made of stone.** 'Lower than this bridge, the valley widened and there were many mulberry gardens. Silk was the most important product. They write that they realized **at the entrance of the city, there were some Turkish structures in ruins. It was speculated that those were tombs of Sultans who conquered the Byzantines**.' ***31**	In the same street, there was a **madrasah***29	They mention going to the castle and seeing the Acropolis and giving details about the structures. They mention one of **the entrances of the caves shifted because of an earthquake**. *27	They mention **seeing an aqueduct that was described by Strabo** and they say Fontainer did not understand their description and interpreted it wrong. *28	The Kingdom of Pontus was one of **the most important civilizations** in Amasya. They knew it from coins that existed from that era. When the Romans conquered Asia Minor, the city was the **capital of the Kingdom of Pontus**

					households. *30				**old bridge was next to the cemetery. Opposed to *Mutesellim Konagi*, where the river turns to the north, there was a third wooden bridge, and half a mile lower, there was the fourth bridge made out of stone.** +*27,+*28,+*30	+*29				
	Helmuth von Moltke	1800-1891	' Moltke' nin Turkiye Mektuplari' -find the original name	They write that the ancient city was the most distinct and beautiful scenery they had ever seen. They state **two important rivers connected each other and flowed to the north**. The place where they connect was a **valley surrounded by mountains.** *33	They describe the celebrations of **Eid day and say women were coming from hammams in their colorful clothing.** +*32	They came to **Amasy**a on the 7th of March 1838 **from Samsun** and left the city on the 8th to go to **Tokat.**	x	x	They state **'the castle was built by Genevans is almost totally ruined. It is a monument which was made of old materials.** [..] and it is a shame that Strabon did not write about the buildings of this city in detail'. +*33	The place where they connect was a valley surrounded by mountains and **there were domes, minarets, and dense houses for 20000-30000 people who lived there**. They mention the **castle on the mountain and the rock tombs of the kings of Pontus.** *32	x	x	They **mention some of the artifacts were as perfect as the first day they were built**, however, some were ruined. **They say they rolled a rock from the mountain which suddenly started to fall toward the city and panicked them; however, it fell on top of the old ruined hammam**	x
	William Francis Ainsworth	1807-1896	' Travels and Researches in Asia Minor, Mesopotamia, Chaldea, and Armenia'	x	They state the population of the **city was 18000 and 5000 of it were Armenian**. They refer to F. Fontanier that there were **10000 households** in the city. Amasya was governed by the Pasha of Sivas and there was an **Armenian Bishop***34 +*35	They traveled to **Amasya on the 12th of July 1838 from Tokat and left the city on the 14th of July 1838 to go Samsun via Ladik**.	They observe, generally, Armenians worked in **silk production**.	They also mention **rebellion against *Shahzadah* Ahmet** and how locals were executed because of it. They say most of the city population was Turkish and even though they owned lands, shops, and had a role in the administration of the city, they were not happy with the current administration. They also mention **because of the state of emergency, which was a result of another rebellion, religious leaders, important people were not happy.**	Like other travelers, they start by stating the beauty of Amasya with its **castle ruins**. They mention going to the castle and seeing **rock tombs**.	*Shahzadah* Mehmet built **a palace** for themselves. Also, there were beautiful ***Konaks* of rich Ottoman Pasha's and Turkish people**. **At the skirt of the mountain, below the castle, there were some mosques and churches which became ruins. They conclude with Sultan Bayezid Mosque**, its surrounding buildings, and **the garden of it**, which was preserved well.	They also mention because of the state of emergency, which was a result of another rebellion**, religious leaders, important people were not happy.** *35 +*34	x	x	They claim old coins of the city with faces of **Roman and Byzantine** rulers show that this **city was an important governmental center**. They state the city was taken by **Turcomans from the Kingdom of Trebizond and became the lands of Konya (*Seljuk*) Sultan**. In Ottoman Era, political **importance was decreased and in 1392**, Yildirim Bayezid lived here. There were games of thrones between *shahzadahs*. They also mention the **decline of the city after *Shahzadah* Mehmet's execution** by their father Sultan Suleiman, and after this event, no *Shahzadah* was sent to the city as governor and **the city was started to be governed by *Pashas*** and **became less important in its governmental importance** +*34
	Robert W. Stevens	Reported in 1841	x	x	x	They claim how **it was dangerous and it was taking a long time to travel to trade centers, like Istanbul, at the beginning of the 19th century, but now with the invention of steam trains, and safer roads, trade interests moved to Istanbul**, which	They give information about trades in Amasya and how the **Anglo-Ottoman trade treaty was signed in August 1838**. They mention about **silk**	They conclude with **plunder on trade caravan by locals because of the rejection they got for their**	x	*x*	x	x	x	x

						positively affected the economy of Amasya, they state in December 1841. *36	**and snail trade.** They also mention the **silk production in 1841 and how abundant, quality, and profitable it was and exported to Europe**. But because of the **inefficiency of the traditional way of silk production, silk prices were declined. They state Amasya silk was the best after Bursa and Edirne Silk**. +*36	**request for lower tax**.						
	Dr. Perunak Feruhan Bey	v. 1847	x	x	+*37	x	They conclude their writings about Amasya by writing about seeing **mulberry trees** towards Ladik for 6 hours long journey and **as a result silk production and trade in the city.**	x	They mention **the castle, caves around the city, and famous aqueducts.** They state 'there **are 48 mahallas** and 25000 population, of which 6000 of it was Armenian while 1000 of it was *Rum*. *37	'There are **12 big mosques and 25 masjids in the city**. The most important **mosques were Bayezid and Gokmadrasah Mosque**. The workshop in front of Gokmadrasah is no longer in use. **Armenians have 3 churches and 1 school, and *Rum*s have a church. The city has 12 hammams, 12 *hans*, 1 big *carsi* (market), and a *bedesten* (suq)**'.	**Strabon was from here and they mention other famous people from Amasya.**	x	x	x
	Henry John Van Lennep	1815-1899	' Travels in little known parts of Asia minor' ' Oriental Albums Peoples and Scenery of Turkey'	They describe passing the **mountain and seeing many water wheels which were to irrigate fruit gardens and plantations** They say they could see all the city and the bridges from Ottoman and Seljuk Era, houses which were next to the mountains, **and fruit and mulberry tree gardens, and geography. They also explain using the barometer and finding the highest point from the river was 1578 feet** +*39.	They write about **Evangelist Christian colonies in Amasya** and their economic success, their improvement in the silk production, and them **leaving all initiatives to Germans**. Many carpet makers, masonry masters, millers, machinists, shoemakers **immigrated to Amasya** with their families*38 They allege that locals were known for their conservativ eness and bigotry.	They came to **Amasya from Ladik on the 12th of May 1854 and went to Tokat on the 14th of May** They conclude by mentioning there were **two roads to go to Tokat from Amasya**. (There is a drawing of the route)	Also, when coming to the city, they mention **seeing gardens, which had silk houses in them** Even though water wheels belong to the city, they were also used by **silk factories and flour mills** +*38	x	Then, they talk about seeing the **old castle and passing through a Christian neighborhood**, which, they say, was the hottest and unhealthiest place in the city. they **allege Turks own the best spots at two riverfronts**. They mention going to the **old acropolis on top of the mountain**, which not much left and the **lower castle was in a better state**. They claim when they first visited the city in 1844, the castle was definitely in a better state. Then they give very detailed **definitions of the old ruins and their surroundings, and the aqueduct of the** city. They mention their host; **Mr. Krug's house was next to the ruins** on top of mountains. They say they could see all **the city and the bridges from Ottoman and Seljuk Era, houses which were next to the mountains**, and fruit and mulberry tree gardens, and geography.	They mention, from afar, the houses looked made of adobe; however, they were **made of a wooden skeleton and filled with adobe (*himis*), and roofs were red tiles.** They also built a **chapel**. They say they left the city on the 14th of May, **walking through many mosques. they mention seeing the temples of the Kingdom of Pontus, which was converted to a mosque**. **At the entrance of the city at Tokat side, there were many mosques and Muslim tombs from Abbasi Era**. They also mention seeing a **ruined masjid and ruined madrasah with the same architectural style**. This architectural style cannot be seen in the western cities, they claim. They state 'their distinct feature is their **arches, which is simple and similar to Roman and Greek style. Also, madrasahs, mosques, and tombs of the Abbasi Era has ornaments, gravures, and quotes from Quran**'	x	x	They mention going to the old acropolis on top of the mountain, which not much left and the lower castle was in a better state. **They claim when they first visited the city in 1844, the castle was definitely in a better state.** *39 They say **locals used marbles they found from old relics to build their own homes**	They write in the **Roman era** the city was a **capital of a state.**
	Carl Ritter	1779-1859	die erkunde von asien, band ix: klein-asie vergleichende erdkunde des halbinselandes kelten	They write that Amasya was a hometown of famous geographer Strabon and one of **the most fertile lands in Anatolia** The city was surrounded **by mountains and divided by river Yesilirmak** and local are very hospitable. They state:	They state locals are very hospitable. Silk production is the main resource of **income for 20000 people** in the city. [...] Silk production	The silk produced here is **sold to Europe through Sinop and Samsun ports**	There are more **mulberry gardens here than the Ottoman silk production center, Bursa**. Amasya silk is **lower quality than Bursa and cheaper than Bursa silk**. The silk produced here is **sold**	They state 'the city **resisted Timur's siege for 7 months, but it was damaged**. In Kulagu Han Era, **40000 Tatars from Persia plundered the city**, later some of them	They also mention seeing **the castle** and its walls on top of the mountain. At the skirts of the mountain, there were **rock tombs**. At the point where the **castle wall** ends, 2 rivers connect and become Yesilirmak. In ancient times, they write, **there was a stadium that was 3000 feet away** from the city walls. they also mention about **2 bridges on *Yesilirmak***	There were many **churches** which were in ruins now **Sultan Bayezid mosque** is the most important monument of the city where there is **magnificent Sycamore in its garden. The madrasah and the hospital around it** were built in the same era. There was a tower here which was renovated by Byzantines.	They state Amasya is **a city of scholars and philosopher s** which Strabon and Stoifer was born here They also mention about **two famous**	x	They say even though the city had changed, **it is almost as same as Strabon mentioned**. There were many **churches which were in ruins now**	Amasya was the **center of the state during the Kingdom of Pontus** They report that Idrisi Ibni Battuta, Hamdullah Kazvini, and other Muslim travelers gave valuable

				'The observation of Tavernier, Dubre, E. Bore had very strong impressions about Amasya. According to Dubre, **at the riverfront of Yesilirmak where two sides are close to each other for 30-35 meters**, there were 5 bridges. *40.	is done by **Armenians**'. *41 There **are 4000 households in the city. 750 of it Armenian, 100 of its Rum households**.		**to Europe through Sinop and Samsun ports**. Silk production is done by Armenians'. Then, they finalize their impressions of the city by mentioning **silk production and trade, the Armenian population** the surroundings of the city. +*41	were settled in the city	'Foundations of Byzantium Era Buildings can be seen today. [..] The area where the ruins of old buildings from Ruler Mark Orelyus era is located was the center of the metropolis' 'There are **water wheels of 6-meter diameter at two riverfronts**. Those water wheels irrigate the vineyards and gardens. A foreign specialist G. Dorents were invited to the city to finish Ferhat **Aqueduct** to bring new water resources to the city. There are **4000 households in the city**. 750 of it Armenian, 100 of it Rum households. **The city looks beautiful from afar. However, when you are inside, it looks like a ruin. Because the city planning is done without aesthetics concerns and plan, the streets are narrow and twisted. Houses are surrounded by high walls, the streets are not clean, and we got lost from time to time in the streets**. Prussian engineer Captain Mulbach says the city looks like the Erin Bray castle next to the Ren River. Like in Ren River, there are roads going down to the river +*40	There was a **palace of Ottoman** Shahzadahs there which was built later and in close proximity, **they have many lands of their own and lands of waqfs**	**poets, Mumin and Mihri Hatun,** who was raised in the city			information about Amasya such as the city having thermal springs in 1213 **and the city was rebuilt between 1230-1236.**
	Andreas David Mordtmann	1811-1879	' Istanbul ve Yeni Osmanlilar' -find the original name'	They continue "this city is the hometown of Strabon, and it preserves its characteristics as the day they described. It is **built next to Yesilirmak between two mountains**	They report that according to Diez and Urquhart, the locals were very nice and honest people. They, then, writes, **the city population was about 25000, and 1000 of it were Armenian, and some *Rum* families** in it, who can speak Turkish.	**'The city has two entrances: one goes to Merzifon-Samsun direction and the other goes to Tokat direction'**	'Moving from the city center to those entrances, the whole valley is surrounded by **mulberry trees. Silk producer's houses and workplaces are in the gardens**.' They say locals **sold the silk to Diyarbakir, Aleppo, Damascus, Germany, and other European merchants**. They mention the **tax rates being higher** in Bursa and Amasya on silk production. They also mention other **agricultural products, which are grain, fruit, and vegetables**.	They finalize their writings for their first visit explaining the **death of Dr. Bartoletti as a result of a rebellion and say 5000 Albanian was sent to the city to quell the rebellion**.	They mention the **rock tombs** and closes to that area mulberry gardens **and the houses of the owners.**	*x*	x	x	They continue "this city is the hometown of Strabon, **and it preserves its characteristics as the day they described**	x
		2nd visit -	x	x	x	In their second visit on 23 September 1850, through a road next to Yesilirmak, they mention coming to Zana **seeing abundant villages like they have seen in Bursa, as well as many villages on important trade roads because they were plundered by undisciplined soldiers or bandits***41	x	+*41	x	*x*	x	x	x	x
		3rd visit	x	x	On their third visit on 12 October, they came to Amasya	x	x	x	They write about visiting the castle, **Aynali (mirrored) cave**, which was used as a church and hiding spot. They suspect that damage to the ornaments could	**Gokmadrasah** is partially ruined, and the observatory is ruined. *42	x	x	+*42 +*43	Finally, they write about the **governor of Amasya, Hamdi Pasha, and tells**

					and meet **Mr. Krug. They mention Krug's updates on German colonies**				be done by Seljuks. They state '**the monuments from the Seljuk Era are located on the west side of the city center. Gokmadrasah and observatories** are the most famous structures from Seljuk Era. *43	At the foundation of **Mr. Krug's house, there are remnants of a hammam** that was built by Shahzadah Bayezid. Bayezid built **a tomb for their teacher Habib Kasim** in here".				**that they were exiled to Amasya** because of their mistake. They find it surprising that an inexperienced person is sent to exile here to govern a city and says what could you expect from a man like them.
Dr. Heinrich Barth	1821-1865	' reise von trapezunt durch die nordliche halfte klein-asien nach scutari im herbst 1858'	On the 16th of November, they state that they arrived city center of Amasya, and they walked **to the north next to the river** Then they describe the city. According to their observation, there were rock tombs in the city and **the city was built on natural topography next to the river.** They also explain **seeing the vineyards and fruit gardens which had 2-story houses** in, and these houses were not occupied frequently.	They, then, mentions meeting **Mr. Krug, who was a tradesman** and had a house in the city Another point they made is about **Tatar and Circassian immigrants** coming to the city and having problems with the **Turks and Kurds** They wrote about interacting with locals and sightseeing the city alone as well. They state their observation s:'Amasya is a beautiful city with the daily lives of locals, full of energy, and close to the northern coast of Asia minor. For archaeologi sts, it is an exciting center. Archaeologi cal attractions will be important today and future. If there is a railway built here, many European immigrants can come and settle down here'. They say according to Mordtmann there were 38 madrasahs in the city and the **population was 25000**. *44	They came to **Amasya on 15 November 1858 from Turhal and left the city on 19 November 1858 to go to Yozgat**. They start by writing that they traveled from Turhal on the 15h of November and saw **Turkish caravanserai on the way** Also, **the railroad for Samsun-Amasya-Sivas was started to build; however, the railways were not installed, and some areas were destroyed by a flood especially areas next to the river were destroyed.** +*44	They also talk about **German colonies and their silk production, and trade**.	x	He comments on seeing **a stone fountain and seeing another one after a walk**. They write, seeing **streets with basalt tiles**. Then, they highlight **the water channels (aqueducts)** at the side of the road which was also **used as a road off-season** beside being irrigation channels. They say when going back to Mr. Krug's house, instead of going through **muddy, badly paved streets, they went through another hill**. They mention that this **road did not exist in Vincke's city plan**. They say they saw most of the monuments and artifacts of the city on the 16th of November which helped them to understand the cultural and physical fabric of the city. They write about seeing the city for another day. In the city ruins, **they saw many rock tombs and a bit further there was a fountain with similar architecture**. They also write about measuring the monuments, but not precisely. They explain the rock tombs in detail and mentions some of them were in ruins and some were renovated and strengthened. states the old castle is 1890-meter-high from the river and the description of the castle and towers looks the same how Strabon described. they claim there used to be people living within the castle walls and there were still some people living in ruined houses +*44	He, then, mentions meeting Mr. Krug, who was a tradesman and had a house in the city. The **house was located where the river Yesilirmak meets a small river** and the house was in **Swiss architectural style**. **Bayezid Mosque** looked very mystic, peaceful. The old big sycamores in the garden increased the peaceful aura. **There used to be 4-5 beautiful bridges and today 5 bridges are in use. One of them was built by Bayezid Pasha in Sultan I Mehmed Era.** Mr. Krug showed them a *kitabe* (inscription panel) of an **old paper factory**. Also, **the railroad for Samsun-Amasya-Sivas was started to build; however, the railways were not installed, and some areas were destroyed by a flood especially areas next to the river were destroyed**. they also visited Seljuk Era monuments in the city center. They mention the ***Bimarhane*** is now serving as a workshop. they mention Mordtmann saying ***Bimarhane* was built in 1384 by Karakoyunlu Giyaseddin Mehmet and the hospital was small to function properly and unnecessarily flamboyant**. They say they saw **4 arched Roman bridges and Turkish tombs** towards rock tombs. They write; '**Gokmadrasah** is useful and big. It is a dashing building which was named after blue tiles it has. **The tower for astronomic observations** is tilted now. According to Portman, Gokmadrasah is approximately built in the middle of the 7th century. On the other side of the street**, there is a tomb of Giyaseddin Ebul Fetih, son of a Kilic Arslan**. According to Mordtman, it was built in 1269 and this building has more ornaments than Gok Madrasah [..] **There are also tombs of Seljuk and Ottoman Shahzadahs'**. He writes ***Imarethane,*** which was a Seljuk-era philanthropic organization that had a Greek *kitabe* (inscription panel). **They also saw a tomb built by the Son of Bayezid, Fatih**	They say according to Mordtmann there were **38 madrasahs** in the city and the population was 25000. Amasya **was an important educational and scientific center that was a magnet for scientists all over the world. However, today, there are not many scientists in the city.** +*44	Then, they highlight the water channels (aqueducts) at the side of the road which was also used as a road off-season besides being irrigation channels. they give information about **channels that were repaired by a specific type of cement after getting destroyed by a flood**. *45	+*45	x
Georges Perrot	1832-1915	'exploration archeologique et de la alata et de bithyne' ' souvenir rf' im innere an asia minor'	They write about coming to **Yesilirmak Valley, seeing mulberry gardens and houses in the gardens**. they find the city interesting which was built in a **valley surrounded by grey mountains**. They say at the skirts of **two**	According to them, locals, **Muslims, and Christians** have great character. They were more welcoming	On 26 November 1861, they traveled from **Corum to Amasya**. They finalize their words by stating he left the city to go **Samsun on 14 December 1861,**	**Local industry was almost about to stop working** **They also mention about Anglo-**	+*45	They mention seeing **the castle and old tombs. When entering the city center, they saw big, strong, beautiful mosques and madrasah** from Seljuk and Ottoman Era.	At the square close to the river, they saw the **mosque built in the name of Sultan Yildirim Bayezid**. (Which is the wrong reference, it was built by Bayezid II). they write there are **houses located on the riverfront and water wheels** to irrigate gardens which reminded them Tiber River in Rome.	Amasya used to be a city of **universities (madrasahs), a scholar and science center in the Seljuk Era. According**	+*47	They write: **"Mosques, madrasahs and some other buildings condition and maintenance are not** good. Bad management is	When the **central government questioned the acts of crooked administrators on their corruption and their neglect of natural**

				mountains there was the river Yesilirmak and houses around the river have gardens with fruit trees.	than people from Rio de Jenario, Quebec, Melbourne. However, they were not open-minded, and Turks **were not interested in developments of technology and industrialization**. **The economic level of Christians was better than Muslims**, and because **Christians did not go to war, their population increased constantly, and they were ¼** of the whole population. The birth rate among the Turks was high, however, their population was decreasing because of war casualties. ***45** The total population of Amasya was more than **25000**. In **18 madrasahs, there were 2000 mullahs and student**	**then, Trabzon, Istanbul.**	**Ottoman Commercial Treaty in 1858 and how that affected negatively on Ottoman economy**, especially locals. But then, another **treaty with the French in 1862 helped the Ottoman economy a bit better**, they claim they also write about the Ottoman state issued their first banknote which later became compulsory to use because of not having enough coins and peoples' resistance to not using it. **+*45** **+*46** **+*48**		They saw **a stone bridge guessing that might be from the Byzantium era.**	He writes about meeting **Mr. Krug and going to their modern style house** which was located at the southeast of the city ***48** He continues that the city was full of **old but beautiful mosques** These **madrasahs, like British universities, had vineyards, plantations, shops in *bedesten*, houses in Amasya as a property of their waqf. **** Waqf's properties could not be sold or given to somebody. They built and maintained **mosques, madrasahs, *hans*, water channels, fountains**' He writes: "**Mosques, madrasahs and some other buildings condition and maintenance are not** good. Bad management is taking the money and preventing them from maintaining, not providing services and register immovable possessions to their name.' ***50**	**to them, it was like Anatolian Oxford; however, those old days were behind with the development of modern positive science now because they only thought theology**. Madrasahs had high income from those. Also, locals donated food, clothing, and money. They explain that waqfs were part of *Evkaf Nazirligi*. Each waqf had a manager and board. Waqf's properties could not be sold or given to somebody. Each waqf had a certain aim, and management made good deeds according to Islamic rules in the name of founders. They built and maintained mosques, madrasahs, *hans*, water channels, fountains; gave services to educational institutions or the poor such as providing food and clothing. Management rented their immovable possession and collected rent for having a regular income for maintenance and repair of immovable possession and continuation of services. They write: "However, waqfs' aims cannot be changed. Amasya's waqfs lost its aims. Some people in the management made the waqf not properly		taking the money and preventing them from maintaining, not providing services and register immovable possessions to their name.' **+*47**	**disasters, they denied it**. ***47**

										functioning for their gain. The services they provide stopped entirely.' *46 +*47, +*49,+*50				
William Gifford Palgrave	b.1826	' Raport by Mr. Consul ....'	The city was founded next to the **Yesilirmak river which was used to irrigate gardens. Because of the mild climate and abundance of water resources, a variety of agricultural products and fruits were produced. It had big mulberry gardens**.	**The population of the city center was 15931 and 6208 of it were Christians**. In some parts of the river, there were flour mills. They mention Mr. Stroh and their business, them founding factories **and bringing Germans to work**. *51 Palgrave continues: '**Total population of Amasya with its districts and villages is 44270 and 737 of it are Christians**.'	x	**According to Stroh and Imbert cited in Palgrave states that in Amasya produced buckwheat, raw silk, various fruits, goatskin were the main products and at that time locals struggled economically because of high taxes.** They finish their observation by giving demographic and **economic details of districts** Vezirkopru, Osmancik, Merzifon, and fees and taxes of Amasya. *51	x	They say like the city of Hama in Syria, the river had **water wheels** to carry water to gardens and plantations	In their writings, they say Amasya was famous for **its old monuments carved in stone and other historical monuments**.	x	x	**x**	x
Osman Hamdi Bey	1842-1918	x	The city is built in a **narrow valley, and it has big fruit gardens** where locals spent their summers	x	Amasya is one of the oldest cities in the Kingdom of Pontus. Even though getting damaged by wars, **it stayed as capital and commercial transit center during that era**. During the Kingdom of Trebizond of Komnene Reign, a city preserved its importance. *51 . **All trades between Iran and the Black Sea transit through Amasya**. *52	+*51 +***52**	Amasya is one of the oldest cities in the Kingdom of Pontus. Even though **getting damaged from the war**, it stayed as capital and commercial transit center during that era. During the Kingdom of Trebizond of Komnene Reign, a city preserved its importance. Then**, it was conquered by Danishments, Seljuks, and finally Ottomans in the era of Sultan I Murad.**	x	Yavuz Sultan Selim was born in Amasya and **built many madrasahs which raised important scholars**. *53	+*53	x	**x**	+*51
Henry Fanshawe Tozer	v. 18-21 July 1879	' Turkish Armenia and Eastern Asia Mino'	They mention coming to Amasya through a **narrow passage and seeing the river and the valley got widened and became triangle shape**. In the valley there were plantations. **On top of the mountain**, there was a castle and its wall, and the city was founded **next to the river below***55	**The population of the city was 20000**. Then, they mention asking about neighborhoods to locals. **Because they could not**	They also write about meeting with the protestant community, and they said they believed this traveler came for investigation of **railroad construction. This railroad, local expected, would connect them to ports and ease their commercial activities***54	According to them, this country was fertile and productive, and you could not say **it was poor because everything you needed was cheap**	With Pasha, they also talked about the **Russo-Ottoman war and Pasha said 15000 men went to war, however, only 1 in every 10 could return**. Therefore,	They say there was **a wooden bridge from the Roman** era closed to the *han*. This bridge was left underwater in winter, even though **it had stone railings**. The river flew in the middle of the city and **on the north side there was a castle up in the hill**. Then they left the Pasha with a local guide they provided. They passed through **a wooden bridge and started walking in the narrow streets. they mention**	They went to **a *han* to rest, which was a long structure**. Han had courtyards and there were **stables on the ground floor, and the upper level had rooms with balconies**. From rooms, one could see rock tombs. After seeing rock tombs, when they were walking next to the river, they mention **seeing a beautiful structure from the Seljuk Era, which was a *han* of Timur**.	x	They mention meeting with the Pasha in order to secure their travel. During this meeting, Pasha mentions there was **a flood in *Yesilirmak* 4 years ago in March.**	They compare the observation on rock tombs with different travelers such as Strabo, George Perrot, Dr. Barth, Ker Porter, Charles Texier. They **also mention that the city was the same as Strabo described**.	They claim if this country administered better, you could have produced anything there

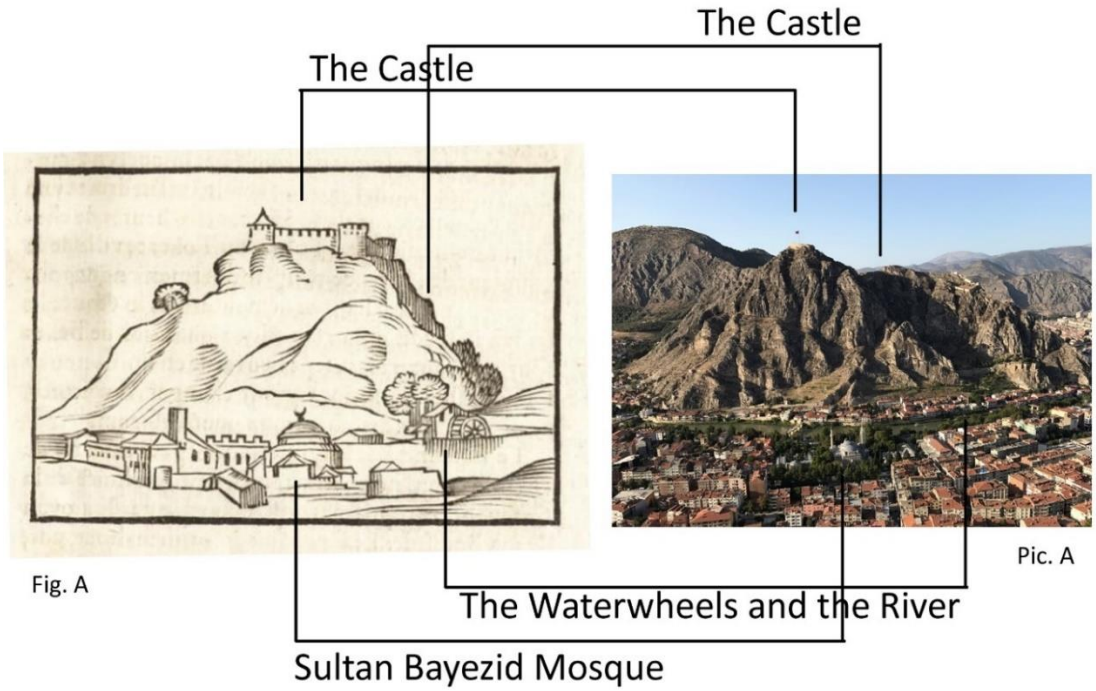
				Then, they passed **through a stone bridge and walked next to the river. They saw many water wheels** which were used for irrigation. It reminded them of Verena and Adige and water wheels on them, but those were bigger than usual water wheels. River Iris became 60 meters wide there, they describe*56 When one looked from the *han* to the river, **it flowed from the east to the west and turned to the north before the bridge they passed. Red and grey rocks rose at two sides of the river. The western side was higher, and it was 2000 feet high. Most of the city was built at the skirts of these mountains. Trees and gardens between houses looked like a scene from paint**.	**differentiat e which one was Muslim and which one was Christian and there were neighborho ods with locals from both communitie s. Locals mentioned it was not a surprise. They observed that both communitie s even wore the same outfits including a headscarf***5 9 +*54	On the 21st of July in 1879, they left to go to Yozgat They and their friend Mr. Crowder came to **Amasya from Samsun on the 18th of July in 1879 and left the city on the 21st of July to go to Yozgat.**	They also write about **high taxes**. +*58	the industry in the city was damaged remarkably. *58 They mention **this castle resisted 7 month-long Timur siege**	**seeing the castle walls and the old castle**. They mention seeing **rock tombs** and giving a detailed definition of them. After passing through **the stone bridge again**, they walked through the shadows of mulberry trees. They mention when they were leaving Mr. Krug's house, they were mesmerized by the scenery of Amasya. From that point, **they saw trees in the city, minarets, a river divided by bridges, and mountains rising from two sides, and two fertile villages** +*55 +*56 +*59	They say 'when we said we were surprised when we couldn't see a church in villages, locals said there are some old churches. Until 5 years ago, building a church would cause a rebellion, locals said' They mention not seeing **any churches in the villages**.		**When the river rose and passed 15 feet high bents, some part of the wooden bridge was left under the water**. Because the bridge was not repaired, **the damage could still be seen that day**, they say. *57	+*57	
	Vitale Cuinet	p.1890	' La Turquie d' Asie-Geographie-Administrative-Statistique- Descriptive et Raisonnee de l' Asie Minor'	They write: '**Geographic Location: Amasya Sanjak is located at the north-west of the city of Sivas. It is at 32 and 34 15' east longitude and 40 9' and -41 24' north latitude. Boundaries are defined by the river *Kizilirmak* in the northwest and the city of Kastamonu, the city of Trabzon on the northeast, Tokat Sanjak in the southeast, Kastamonu in the south-west and the city of Ankara. The area is 29450 km2. There are 8 towns: *Amasya Merkez(center), Merzifon, Vezirkopru, Osmancik, Gumushacikoy, Ladik, Havza, Mecidozu***' They mention the climate of the city. Then they give details of the economy of the city. they state: 'Agricultural production: Amasya and its surrounding one of **the most fertile lands** in Ottoman Asia [...] **Climate and water resources makes the products very high quality'**. *61 +*60 +*63	In the city council, **Muslims and Christians were represented according to their population ratio**. **Orthodox Rums** only opened primary-level schools even though they were rich. * They say the population was **259000 (Muslim Sunnis 132000, Muslim Shias 66000, Armenian Gregorians 44000, Armenian Protestants 5500, Armenian Catholics 1100, Rum Orthodox 11000). They state in Amasya *Sanjak*, there were 967 schools and 8840 students (7990 male, 850 female). In the Amasya city center, there were 183 schools, 2310 students (2070 male, 240 female)**. *62 Amasya was a very **important center for Armenian Gregorian**	For transportation and roads, they write **'in 1887, to connect Sivas to Black Sea ports and the rest of the world, they finished building 1202 km of road. Those roads mostly cross Amasya Sanjak. Ottoman accepted two big projects. One is a railroad between Samsun and Sivas crossing Amasya and Tokat. The second is again the railroad between Sinop and Samsun crossing in Amasya. Traveling between Sivas and Samsun is quite expensive which increases the prices of products. Locals (age between 16-60) have to work in road construction by law unless they pay road taxe**s. Then he continues by explaining the roads, mountains, and trade activities of the city. +*63	They give details of the agricultural products. They then give information about industrial production and the state's textile industry was the most prominent industry in the city. **In Merzifon, there were 3000 and in Amasya, there are 2500 families in the industry**. they **also mention the milling business and Swiss owner, Mr. Krug, of the modern flour factory. For silk production**, they say 'these days it is developing and becoming widespread. Amasya used to be one of the oldest silk production centers'. Then they give information about mineral water, thermal water, **alcoholic beverage, match factory, tobacco trade**, mines, forests, fauna, rivers, lakes, transportatio n, and roads*63	They say there were **no active troops ready for war, but some auxiliary troops** 'When they lost the war against Pompeius, **Pompeius burnt the city down'** 'After the long reign of the Romans, the city was **taken by the Kingdom of Trebizond, then, was taken by *Danishment s*, then, *Seljuks*, later, Ottoman took it in 1397 and for 65 years it faced dangers, then with the power gain of the Ottomans, it had a very stable era. In the era of Yildirim Bayezid, Timur tried to invade the city 7 times and burned the city down when they failed. In 1472, *Uzun Hasan* became another problem for the city, but expelled by Sultan II Mehmet and Shahzadah Mustafa**.'	They write: 'Amasya city geography: The altitude of Amasya is 405 meters. **The city fabric is built in long in a narrow valley**. Yesilirmak connects with *Tozanli Suyu* and *Cekerek Cayi* right before Amasya. There are **water wheels** for irrigation. The valley is surrounded by mountains. Amasya vineyards, gardens were always famous for their perfect fruits and vegetables. [...] **Because the new settlement was not built at the same place, the old settlement was preserved very well. Backstreets were narrow and shadowed. The pavement is not in a good condition.** Locals are very hardworking' *60 'A perfect **palace** was built.' '**The city was rebuilt** under the command of Romans. **The city wall was strengthened, and towers were added**.' 'There are artificial caves made for king tombs [...] Then, **the Acropolis** was damaged a lot from the wars but repaired after by the new rulers. There is a military barracks under the rock tombs"*67	*'Mithridates Evpator*, from a house of the Kingdom of Pontus, started their kingdom here. The city became more beautiful at their age. **Many buildings with stone columns were built'** 'In the Anatolian Seljuk era, this function was done by ***Gokmadrasah*** which was finished in 1231. However, it is half-ruined and needs repair. **Most of the historic buildings are preserved well and just some are in ruins, which are in the Acropolis. The artifacts taken from here are well preserved. The artifacts taken from here are well preserved**.' They write Amasya **madrasah** that was built in Seljuk and Ottoman Era was built **on top of a church from** the Kingdom of Trebizond era. **Big Bazaar and *carsi*** which were built by *Sofu Bayezid* were in ruins as a result of a fire in 1885.	They say the education level was increased last 6 years with the help of the military, but religious education was slowing down. **There used to be many madrasahs here for religious education; however, they were derelict. The only madrasah left behind had 50 students. Like in every *sanjak*, Amasya has 1 *Rustiye* (middle school) and some primary schools. Primary schools gave comprehen sive education and for free. Orthodox Rums only opened primary-level schools even though they were rich**. 'For 2 centuries, it was a **religious center'** 'The city became a Roman city and turned into a **polytheistic**	Big Bazaar and *carsi* which were built by *Sofi Bayezid* were in ruins as a result of **a fire in 1885**.	In the Anatolian Seljuk era, this function was done by *Gokmadrasah* which was finished in 1231. However, it is half-ruined and needs repair. **Most of the historic buildings are preserved well and just some are in ruins, which are in the Acropolis. The artifacts taken from here are well preserved**. *66 They write Amasya **madrasah that was built in Seljuk and Ottoman Era was built on top of a church** from the Kingdom of Trebizond era. *64 +*60 +*67	In Amasya *sanjak*, **there were offices of finance, region, and criminal courts, tax collection, mine, and forest, post, and telegraph, agriculture, trade, city planning, education**. Those offices worked in cooperation. Then, they give detailed information about courts, security, ottoman state income and debts, tobacco and cigarette regulations offices. History of the City: **Amasya is one of the rare cities that has had the same name for over 25 centuries and preserve its ancient characteristics**. There is no certainty about who built this city. Hystape, son of Darius, conquered the city and made it **a center of *satraplik* (state)**. For 2 centuries, it was a religious center' '*Mithridates Evpator*, from a house of the Kingdom of Pontus, **started their kingdom here.** The city became more beautiful in their age.'

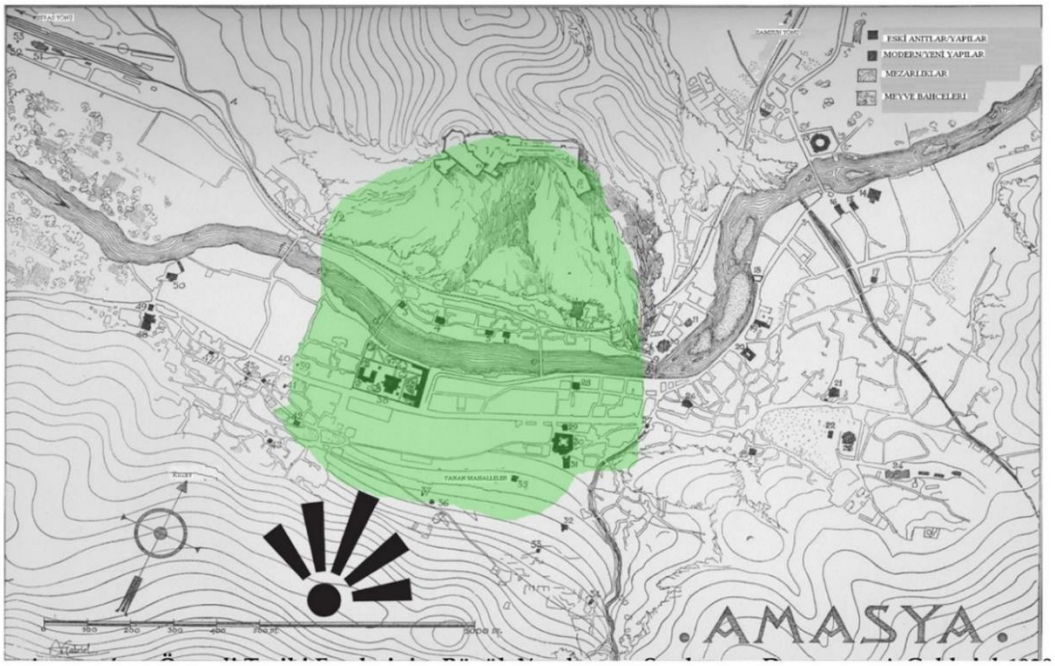
					bishops. *65		+61				**Roman religion center**.' +*62 +*64 +*65 +*66			
	Ernst Von Der Nahmer	v.c.1898-1989	' Von Mittelmeer Zum Pontus'	Then they saw **gardens, vineyards, and plantations at two sides of the riverfront. They mention mulberry gardens and houses in the gardens** before entering the city center. *69 Then, traveled to the north and started to see water wheels that **irrigated gardens**. They write about **fruit gardens and mulberry gardens** and houses in them	Then, they met **Mr. Krug** on the way and went to their home. From Mr. Krug's house, they say, the scenery of Amasya was the most beautiful and mesmerizing view in Anatolia. They say **Mr. Krug's house hosted many European scholars and travelers. they describe Mr. Krug's character and their works in Amasya. They mention other immigrant Germans, their lifestyle, and their work. They claim they all assimilated into Muslims or Armenians** They say **the population of the city center was 20000 (10000 Muslim Turks, 7500 Armenian, 2500 Rum, Balkanite, and Caucasian Muslim Turks, Circassians, Georgians).** **+*68**	x	They then mention **silk production**. They claim, even Marco Polo mentioned famous silk production in Amasya and its surroundings without giving the name of Amasya	They mention the **Armenian rebellion which happened 7-8 years ago**.	They say when they entered Amasya Sanjak, **bad roads became good**. They also mention **water pipes providing water to houses from springs and *Yesilirmak*** They say in the most powerful era of the Ottoman Empire, **the city had 250 mosques, 48 madrasahs, and 40 tekkes***70 When they visited the city, **Amasya was like a construction site**. The roads were about to be completed. A little dam in the *Yesilirmak* was about to complete.	They say **houses used to have flat pressed earth roofs**, but at that time they had red-tiled roofs. *71 In the middle of the city, there **was a mosque and *kulliyah* by Sultan Bayezid**. He says he visited very much-loved Shia religious leader ***Seyh Hamza*'s tomb** is in the city which was very popular among locals. . **Tombs of *Seyh Hamza* at the right side of Great Mosque (Bayezid Mosque).** People who loved them built **a mosque and tomb. The religious school close to the tomb was opened in the name of *Seyh Hamza* and it was very popular**. * There was also the **tomb of *Mehmet Rustu Pasha*** at the point where *Yesilirmak* and *Terskan Cayi* connects. The neighborhood was named after them. Next, **to the tombs, there was a Rum Church. And next to that, there was a primary school for the Rum community**. When he was there, **boarding schools** were opened to teach social science and science and raise personnel for agriculture and industry. *	They say they visited very much-loved **Shia religious leader *Seyh Hamza*'s** tomb is in the city which was **very popular among locals**. Tombs of *Seyh Hamza* at the right side of Great Mosque (Bayezid Mosque). People who loved them built a mosque and tomb. **The religious school close to the tomb was opened in the name of *Seyh Hamza* and it was very popular.** Next, to the tombs, there was a Rum Church. And next to that, there was a primary school for the Rum community. The sultan gave **Rums the right to religion and education.** But they always asked for more, they claim. Education in Amasya is very advanced. When they were there, boarding schools were opened to teach social science and science and raise personnel for agriculture and industry. The schools had modern equipment. Fees for students were paid from the budget of the city. **The school was popular among Muslims and Christian**	They say when they visited the city, **heavy rain and hail happened**. And **damaged locals' houses, vineyards,** and gardens. They say a representative of unplaced immigrants and representative of owners of damaged houses and vineyards and gardens, and Dr. Zimmer from the German community came to the governor. The governor assured reconstruction, delay of tax collection, and construction houses for immigrants in the shortest time. *72	**+*71** **+*73**	They say **the governor of the city was banished to here, but they genuinely worked for the development of the city** **+*70**

											students. *68 +*69 +*70				
20th C.	Asik Cemal	v.6-7 September 1914	*Amasya Seyahatnamesi*'	x	x	x	x	x	x	x	x	x	**x**	x
	W. J. Childs	v.1916	' Across Asia Minor on foot'	They write about coming to **narrow and long Amasya valley**. Then they mention **plantations, fruit gardens**. **The river was flowing even though it had dams and bends. The mountain around the city was 1000 feet high.** **The valley of the city was a mile wide** **The valley** was full of houses and gardens. They say you could see **the river, trees, gardens,** and bridges that dived the river. On their second day, they mention seeing people walking in the narrow steers and caravans passing through the river* From up there, they saw **mountains, the river, fruit gardens,** and heard waterwheels. They mention that there are not as many **fruit gardens and vineyards as in Amasya. They also mention the rough climate and cold winters of Amasya.**	That day, it still was an important city with **60000 population** They say they visited the city at the end of October. they say while he was taking a picture of the city, two policemen came to arrest them and asked for their passports. They write that they were hoping for their Turkish guide to come because they knew they were the best passport for them which they meant the best guarantor. they **say if a Muslim vouch for your identity, your work, and where you go, that was credible**. According to them, the bazaar is a panorama of the city, and you could **see many races together. Also, on their way, they saw many travelers from different races**. +*75 +*78	They mention on the **road to Baghdad, they saw a caravan of military carrying weapons from Sivas to Istanbul to resist the Italian invasion.** *76 **He writes on the day of the Amasya bazaar, they decided to leave the city to go to Tokat**.	They mention German colonies, their **success in different businesses, especially in the silk trade. they** write about a German Armenian rebel from this city who got killed	They say because of capitulations, foreigners were banned from the Ottoman Empire, so their presence attracted locals' attention. After talking with a governor who accepted their innocence, the governor said **they had to take precautions against foreign spies because the states were at the time of war**. They also got a permission letter from the governor about taking a picture*75 They then went to the castle with their guide Ahmet, and they write that even famous **Timur could not take this castle after 7 months of siege** They mention German colonies, their success in different businesses, especially in the silk trade. They write about a **German Armenian rebel** from this city who got killed*78 +*76	They say Amasya was the most romantic and picturesque city of Anatolia. They felt like entering a sacred valley. They said what was told about this city was even less than its real beauty. They claim **if the city had better roads and railroads**, most tourists would come to see the mesmerizing city. **On the west side of the valley, there was an enchanting castle.** **It was 1 mile long among the river Iris. One of the bridges reminded them of Roman style. Others were from the Seljuk era. Mosque and houses looked on top of each other like a ladder were the most important structure of the city. The east streets of the city were full of those houses and mosques.** **Next to the river, there were row houses. The city had many mosques, *hans*, and madrasahs from the Seljuk era. They mention rock tombs and how they stayed without destruction and plunder. They say they couldn't take their eyes off old *tekkes* (dervish lodges), mosques, courtyards of mosques, bridges, and the river.** They state that you could see the whole city from **the castle on the mountain** like the Eiffel Tower in Paris and Corcovado Mountain in Rio. They say you could see the river, trees, gardens, and bridges that dived the river. On their second day, they mention seeing people walking in **the narrow steers and caravans passing through the river** +*74 +*77	'**In Amasya, you can see many mosques which look like monasteries with roads with arches. Besides those, the city is full of old Seljuk madrasahs, dervish lodges, *hans*, old bridges, houses, rock tombs.** However, seeing all of those is up to your investigation and attention. Here, there is **no guidebook about the history of the city and details of its architecture to guide your** investigations [..] A Seljuk caravanserai or a *han* could be beautiful, but if you cannot get any clue on who built it and lives that the structure witnessed, it is a dead building. [..] However, there is no history of these buildings. When you **search Seljuk history, you cannot get much. Because as we can see in Amasya, there are not many much-written resources about their history. People from the Seljuk Era built many structures in their national style and those buildings survived totally until today.** But, again, when we check official records, we cannot get any information. So, in Amasya or any Anatolian city, even by **accident, you could see magnificent buildings, ornamented mosques, bridges, and caravanserais**. Some of them are in ruins and some of them are preserved well. But when it comes to official written documents, information is so little'.	Next to the river, there were row houses. The city had many mosques, *hans*, and **madrasahs from the Seljuk era**. They say they couldn't take their eyes off old ***tekkes* (dervish lodges)**, mosques, courtyards of mosques, bridges, and the river. * **'Besides those, the city is full of old Seljuk madrasahs, dervish lodges, *hans*, old bridges, houses, rock tombs**.'	When they were watching the city, across their window, under the arched passage, **the fires started,** and people started to put off the fire	They mention the castle was turned into ruins **and had some stone walls and some parts with Rum style and bricks**, which they took a couple of pieces*74 Then they continue visiting rock tombs and *Aynali* Cave with their guide Ahmet. they say **they were damaged by rolling stones.** They say the history of those rock tombs was a mystery. From up there, they saw mountains, the river, fruit gardens, and heard waterwheels*77 'When we check official records, we cannot get any information. So, in Amasya or any Anatolian city, even by accident, you could see magnificent buildings, ornamented mosques, bridges, and caravanserais. **Some of them are in ruins and some of them are preserved well.** But when it comes to official written documents, information is so little'. *	Amasya was **the capital of the Kingdom of Pontus** in the old ages They say they could understand **why Seljuk Sultans loved this city, which they believe, was a result of its beauty**.
	Albert Gabriel	b.1883-1972	' Monuments Turcs d' Anatolia Amasya, Tokat, Sivas'	Amasya was founded in a **narrow valley, surrounded by two mountains, and divided by *Yesilirmak***. There were many little dams in this **river** that provided the speed for water for flour mills. There were also unique water wheels	x	In all ages, because it was located in a **passage from Mesopotamia to the Black Sea,** it had always been one of the most important places in the area.	There were many little dams in this river that provided the speed for water for **flour mills**. *80	After the 8th century, the city became one of the **military cities of the Byzantines. Arabs invaded the city temporarily in 712. The city was**	In the era **of Mehmet I, the city was rebuilt and developed**. There was a **big palace, which was built on ruins from an ancient era. Roads were widened, and many new buildings were built**. He later continues with **city identity and physical fabric**. According to them, the	Ancient tombs, **Seljuk Madrasahs**, Ottoman mosques still provided much information related to Turkish art history, they claim.*86 On the left side of the river, there were houses and rock tombs on the mountain. Upper than those, there were **old Acropolis and the castle. To**	Other than this, **famous scholars, *seyhs* (sheik), poets, historians, artists increased its importance. From the first ages to**	He mentions how the **fire in 1913** on the west side of the city destroyed those beautiful monuments and structures	He says ancient fabric; the walls of the castle were mostly disappeared. However, **ancient castles and rock tombs were exactly how Strabo described. They write about the**	According to their research, the **city preserved its original name from the beginning. The city was probably built in the first ages**; however, the date is uncertain. First,

				for **irrigation purposes**. Because of **its topography, the city could not be taken by Timur** and ruled by Ottoman Shahzadahs, faced game of throne*81				**taken by Turkish Seljuks from Byzantines**. But there was no certain information about the matter. It was known that the city **was taken by Turks with a tribe of Danishments**. Different resources mentioned it **was under their rule around the 9th century and 11th centuries. The city was given to *Nizameddin Argansah*, son of Seljuk Sultan, in 1193 but later was taken by their brother *Rukneddin Suleyman*. *82** In the era of the **Mongol invasion**, the city became an important autonomous *Beylik* (tribe) center. The city regressed in Eretna Era. Then, **the city was taken by *Emir Haci Sahgeldi*, later invaded by *Eretna Beylik* again. So, *Sahgeldi* asked for the Ottomans' help and was taken by the Ottomans by Sultan Yildirim Bayezid in 1392 in the second attempt. *84**	information Strabo give was the oldest and the most trustworthy document. They report from them about **rock tombs, the castle, Yesilirmak, and city walls. Then, they report from Evliya Celebi about the topography and city fabric. They say ancient fabric; the walls of the castle were mostly disappeared. However, ancient castles and rock tombs were Exactly how Strabo described. They write about the bridge that Strabo mentions still existed that day. Information about the bridges of Amasya on when they were built, how they were named and repaired was very complicated to figure out, they claim. they report from Evliya Celebi on the doors of the castle and bridges of those. *Karanlik* door opens to Low bridge, Meydan Door opens to the big wooden bridge and in front of Gokmadrasah, the west one open to *Serkis* Bridge and *Garipler* Mosque. Serkis bridge was also named *Helkis* Bridge or *Hukumet* Bridge, they say. This bridge was close to *Hukumet Konagi* (Government Office). they say the oldest bridge which was also described by Strabo was *Alcak* Bridge. However, new wooden parts, new stones in the walls of the bridge, and new parts on arches showed it had many changes over time. In the first ages he says, this bridge was connecting the city walls to outer neighborhoods and rural areas. They say there was another fifth bridge in the city that *Evliya Celebi* did not mention. they report from locals that this *Kus* Bridge was built by Seljuks. However, according to their investigation of the foundation of the bridge, they realized that this bridge was originally built in the ancient era. they say this information was also validated by locals. they claim this could be the one that Strabo mentioned. they stated, as also could be seen in a city plan, the city's development to outer parts of the castle and new settlements and neighborhoods happened in Seljuk and Ottoman Era. Especially *Samlilar, Tatar,* and *Ihsaniye* neighborhoods in the north side on the way of Samsun were Ottoman settlements. According to them, besides a couple of city gates, bridges, names, and places from the Hellenistic Era, Amasya developed for centuries coherent with Turkish city identity and architecture. Then they finalize with a description of their city plan.** **+*79,+*80**	**have more area, the city grew towards little hills on the right side of the *Yesilirmak*. Structures on these hills were divided by roads that reached *Yesilirmak* and also were aligned next to the riverfronts. Structures in this area are Turkish monuments that were built with the same architectural style, similar scale, and coherent with each other and surroundings. Mosques, madrasahs, toms, and *hans* surrounding those, *carsis*, neighborhoods created a beautiful Ottoman-Turkish city identity**. *83	**that day, Amasya was a science and culture center which raised important people.** **+*83** **+*85** **+*86**	but the ruins could still be seen. **Even though all invasions, earthquakes, fires, natural disasters, most of the monuments and structures, which were built in a different era, stand that day**. **After an earthquake, the city was known to be rebuilt by *Alaaddin Keykubat* however, there was no official record of this**. *79	**bridge that Strabo mentions still existed that day**. Information about the bridges of Amasya on when they were built, **how they were named and repaired was very complicated** to figure out, they claim*	it was **the capital of the Kingdom of Pontus, then the capital of the Roman Empire state**. In the era of Diospontus, the city became a religious and **administrative capital**. *85 +*81 +*84 In middle age, it was known for **Baghdad of Rums. In the Ottoman Era, it was a city that was liked and prioritized by the Sultan and shahzadahs. Amasya became a very prestigious and important city during the governance of Shahzadah Mehmet II and Shahzadah Bayezid. It was embraced as a second capital by Sultan Suleiman, and they spent time there. they are accepting my European ambassador shows the importance of the city**. **+*82**

APPENDIX 5.5. Details of Depiction by Le Gouz





Point of View

The Area Depicted

References

1- Fig. A. Gravure of Boullaye Le Gouz, 1647 (Le Gouz de La Boullaye, Clousier, 1653, p.67)

2- Pic. B. Photograph of Amasya (Gurel, 2017)

3- Map of Amasya by Gabriel in 1928 (Tuzcu, 2007)

APPENDIX 5.6. Details of Depiction by Bozoklu Osman Sakir

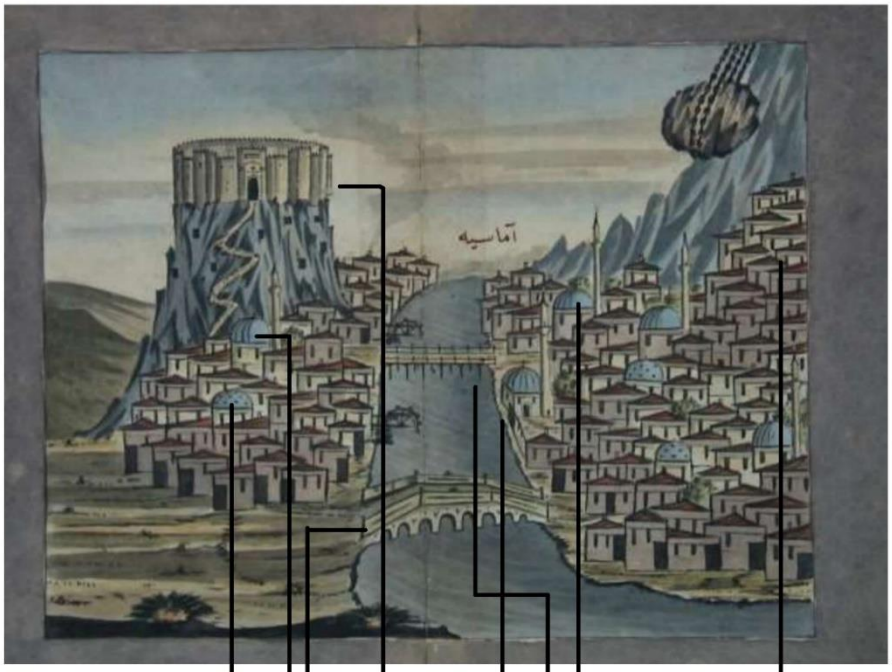
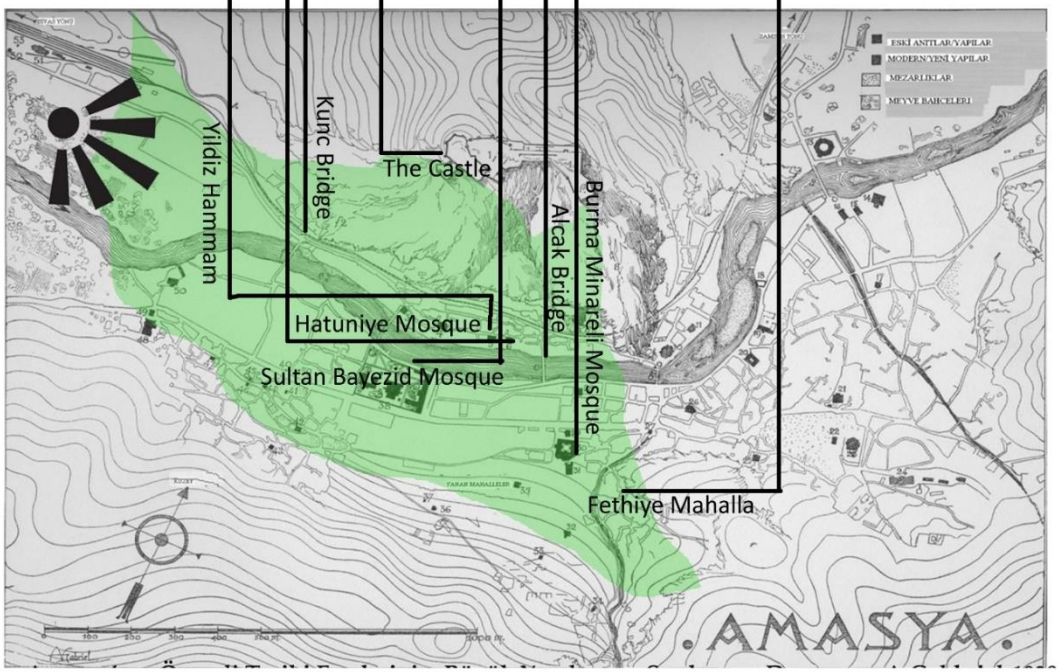


Fig. B



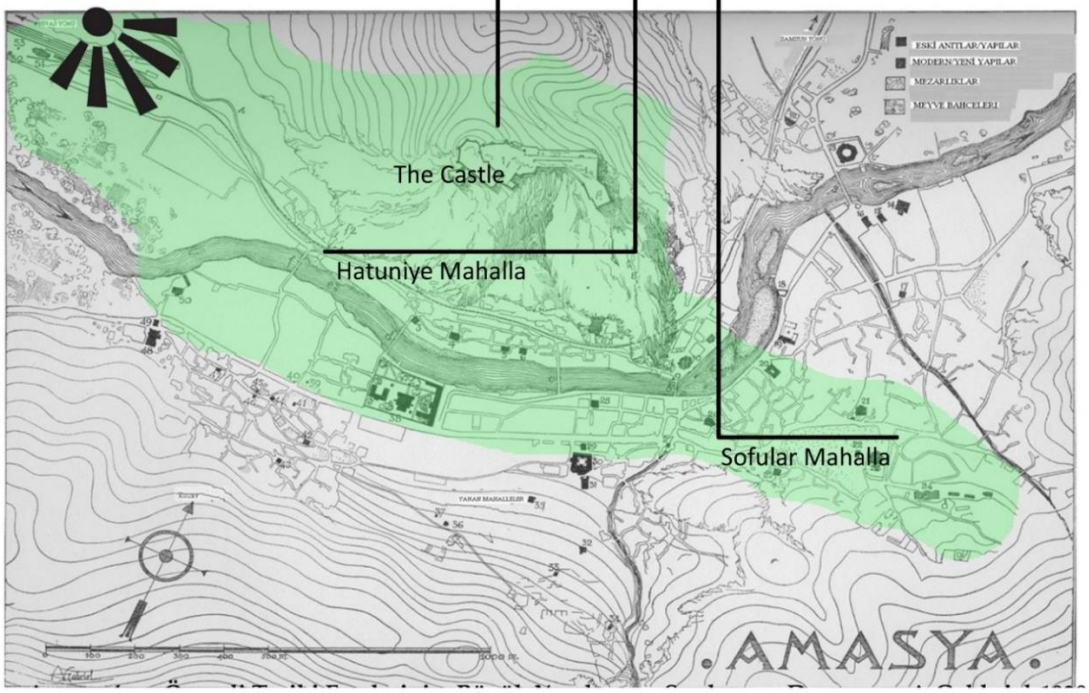
Point of View

The Area Depicted

References
1- Fig. B. Miniature of Amasya at the beginning of 19th century by Bozoklu Osman Sakir (Kavak, 20
79)
3- Map of Amasya by Gabriel in 1928 (Tuzcu, 2007)

APPENDIX 5.7. Details of Depiction by Ker Porter

Fig. D



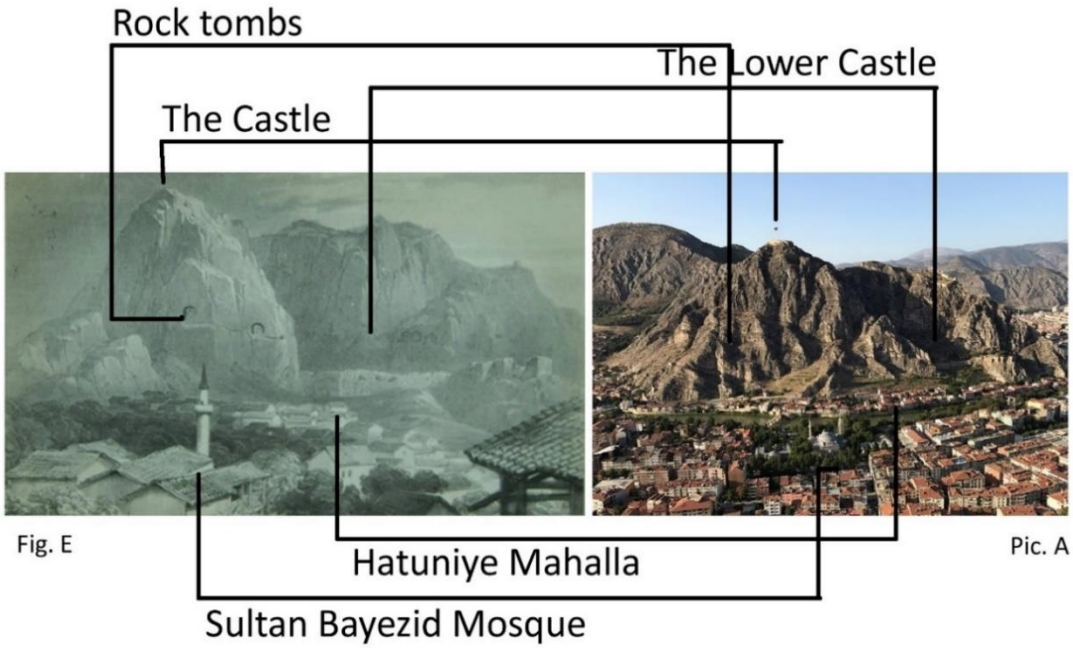
Point of View

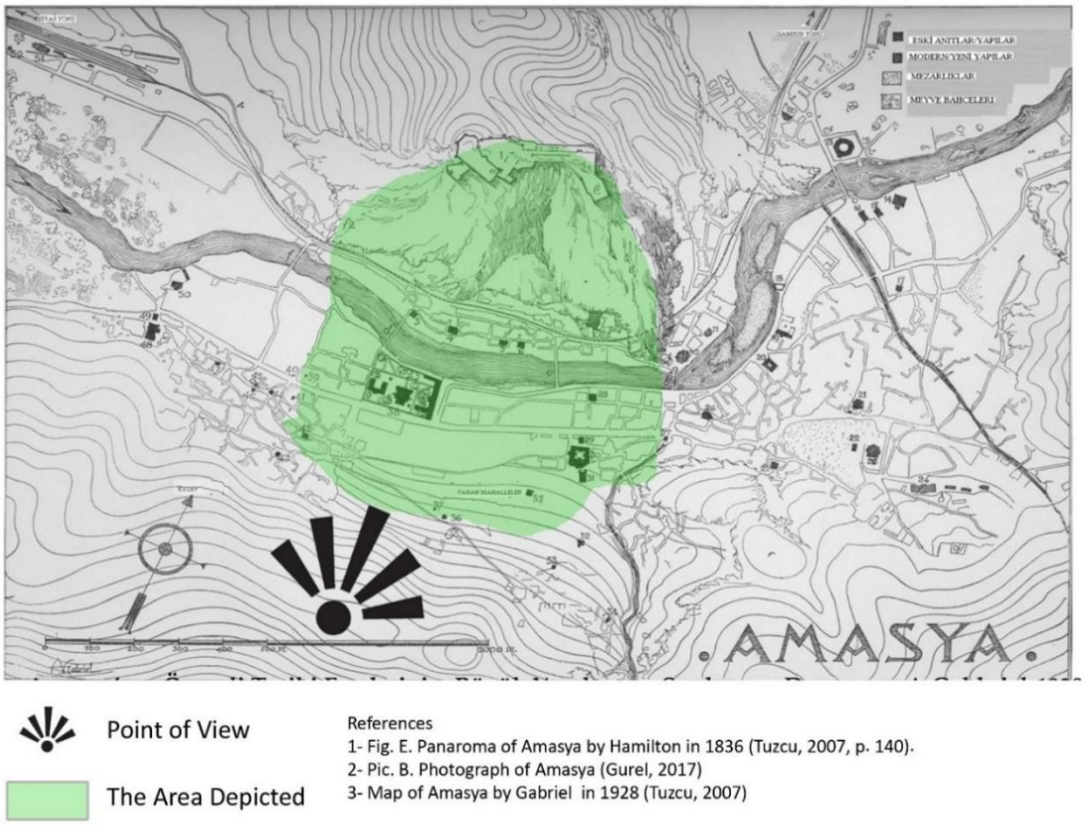
The Area Depicted

References

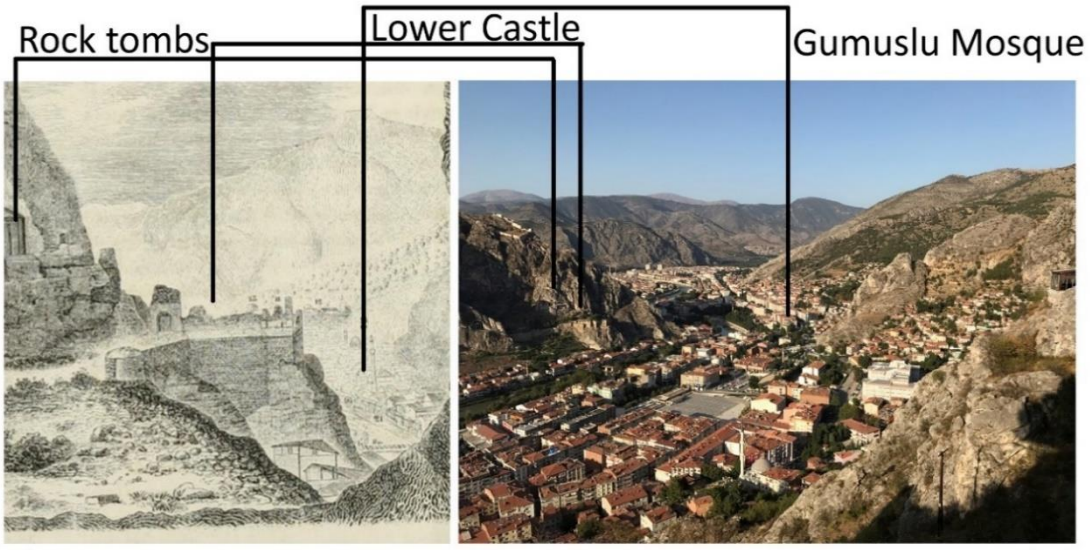
1- Fig. D. View of Amasya by Sir Robert Ker Porter (Porter, 1822, p. 712).
2- Map of Amasya by Gabriel in 1928 (Tuzcu, 2007)

APPENDIX 5.8. Details of Depiction by John Hamilton



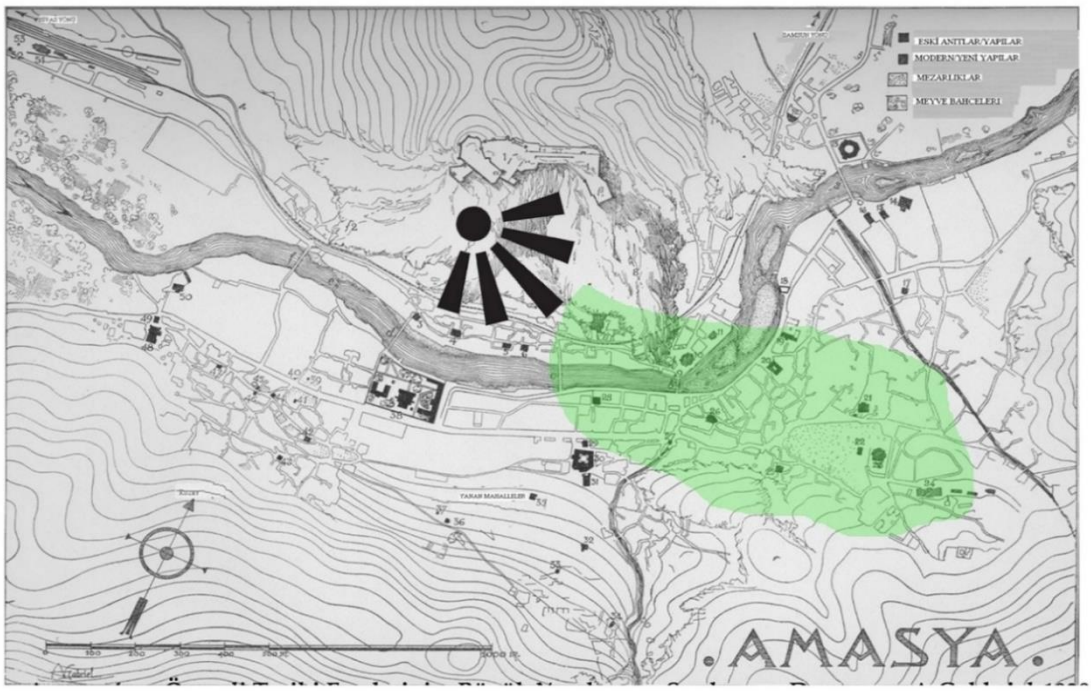


APPENDIX 5.9. Details of Depiction by Dr Heinrich Barth



Pic. A

Pic. C



Point of View

The Area Depicted

References

1- Fig. G. Close-up of Dr Barth's depiction (Tuzcu, 2007)

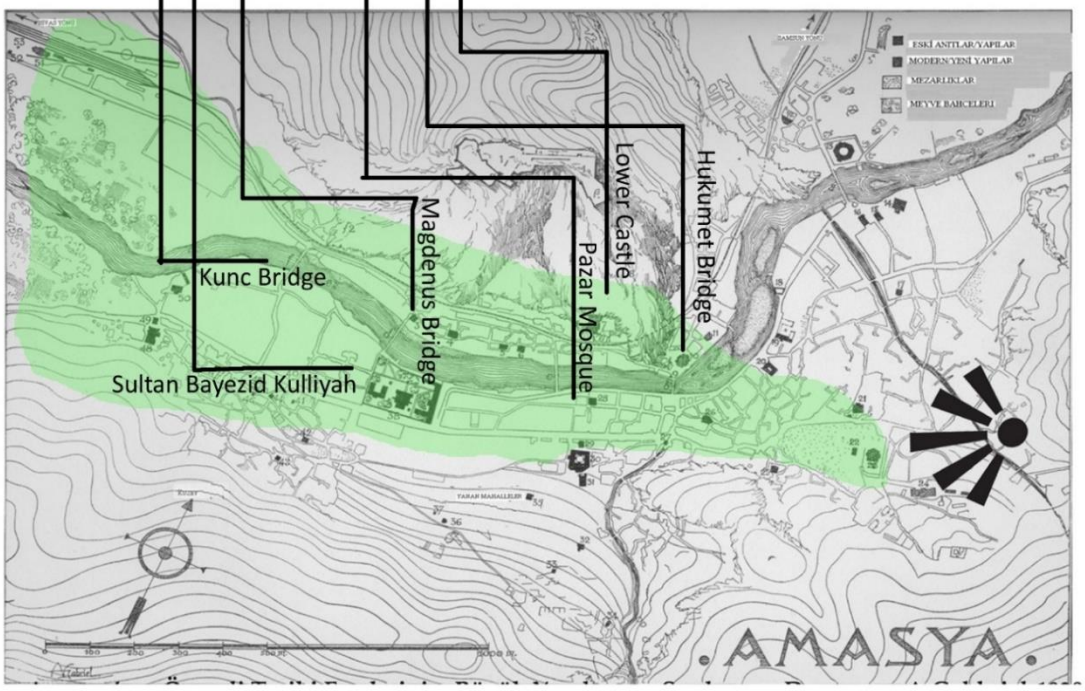
2- Pic. C. Photograph of Amasya (Gurel, 2017)

3- Map of Amasya by Gabriel in 1928 (Tuzcu, 2007)

APPENDIX 5.10. Details of Depiction by Van Lennep

Fig. H

Pic. E.



Point of View

The Area Depicted

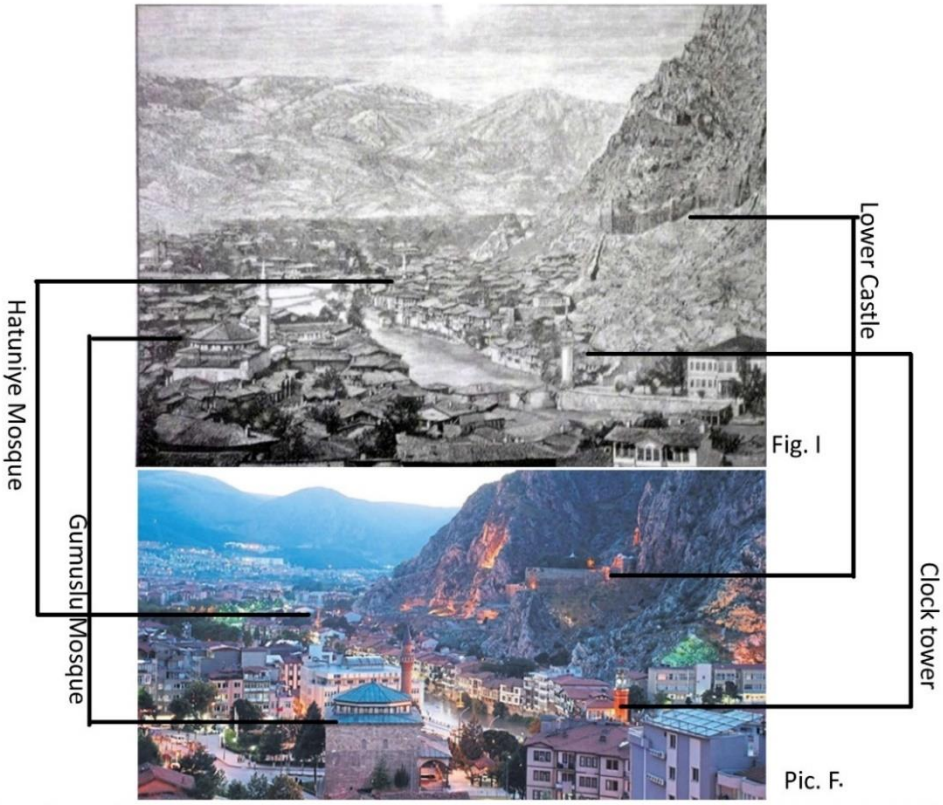
References

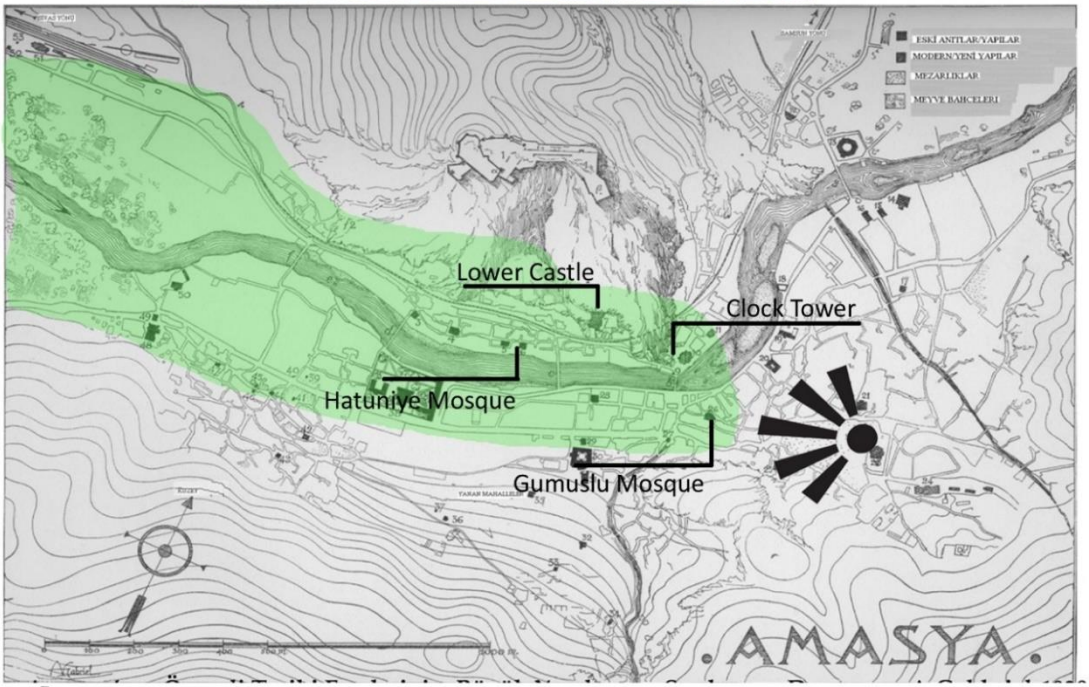
1- Fig. E. Sketch of Amasya's general view by Van Lennep, van Lennep, J. H., 1870, p. 87).

2- Pic. H. View from Sofular Mahalla (Gurel, F.,2017)

2- Map of Amasya by Gabriel in 1928 (Tuzcu, 2007)

APPENDIX 5.11. Details of Engravings of Hesperos





Point of View

The Area Depicted

References

1- Fig. I. Engraving of Hesperos. Leipsia, 1885, v.4: 305 (Menç 2007, cited in Etyemez and Alt
2- Pic. F. View of Amasya (Sabah Newspaper, 2018)
2- Map of Amasya by Gabriel in 1928 (Tuzcu, 2007)

APPENDIX 5.12. Table of Mahallas and Service Buildings in detail

When Disappeared	NA	NA	NA	NA	NA	X	X	NA
Exist or Disappeared	D	D	D	D	D	E	E	D
Change of Function date	x	x	x	x	x		x	x
Change of Function	x	x	x	x	x	X	x	x
by whom6	x	x	x	x	x	X	vgm	X
Recovery	x	x	x	x	x	1835	1975;2012	X
When	x	x	x	x	x	repair needed	NA	x
S- MANMADE	x	x	x	x	x	X	repair needed	X
By Whom5	x	x	x	x	x	X	X	X
Recovery Date4	x	x	x	x	x	X	X	X
S-Flood	x	x	x	x	x	X	X	X
By Whom3	x	x	x	x	x	X	X	X
Recovery Date2	x	x	x	x	x	X	X	X
S2- Earthquake	x	x	x	x	x	X	X	X
By Whom	x	x	x	x	x	X	X	X
Recovery Date	x	x	x	x	NA	X	X	X
S1 - Fire	x	x	x	x	1854	X	X	X
Date of Waqf	NA	1468	1468	1505	1511	NA	NA	NA
Date of Construction	1822	1468	1468	1505	1511	1786	1886-1892-1908	1886-1892	1868
Name of Person	NA	Acem Ali	Acem Ali	NA	NA	NA	Mahmud Efendi, Mir Hasan Efendi.	Mahmud Efendi, Mir Hasan	NA
Material	NA	Stone	NA	NA	NA	Stone	Stone	Wooden	Stone
Name of the Building	Sehir Kuthedasioglu Tekke	No name	Acem Ali	Sultan Hatun Daru'l Kurra	Sultan Daru' l Kurra	No name	Azeriler (Sirvanlilar) Mosque	No name	No name
Typology	Tekke	Fountain	Maktab	Madrasah	Madrasah	Madrasah	Mosque	Madrasah	Fountain
Core number	s	1	1	s	s	1	3	3	s
Name of Mahallas	**Acem Ali**	**Acem Ali**	**Acem Ali**	**Acem Ali**	**Acem Ali**	**Bayezid Pasa**	**Bayezid Pasa**	**Bayezid Pasa**	**Bayezid Pasa**

NA	X	X	X	X	NA	NA	NA	NA	NA	NA
D	E	E	E	E	D	D	D	D	D	D
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	X	vgm	X	X	X	X	X	X	X	x
x	X	1952-1956;1975-77	X	X	X	X	X	X	X	x
x	x	NA	x	x	x	x	x	x	x	x
x	X	Repair needed	X	X	X	X	X	X	X	x
x	X	X	X	X	X	X	X	X	X	x
x	X	X	X	X	X	X	X	X	X	x
x	X	X	X	X	X	X	X	X	X	x
x	X	vakiflar genel mudurlugu	X	X	X	X	X	X	X	x
x	X	Not recovered, 1952	X	X	X	X	X	X	X	x
x	X	NA / Minaret 1939	X	X	X	X	X	X	X	x
x	X	X	X	X	X	X	X	X	X	x
x	X	X	X	X	X	X	X	X	X	x
x	X	X	X	X	X	X	X	X	X	x
NA	1417	1417	1417	1495	1531	1531	1531	1883	1883	NA
1634-1638	1414	1414	1414	1495	1531	1531	1531	1883	1883	1525
NA	Vizier Yahsi Beyzade Bayezid	Vizier Yahsi Beyzade Bayezid	Vizier Yahsi Beyzade Bayezid	Kucuk Kapi Agasi Ivas Aga	Gazi Bey	Gazi Bey	Gazi Bey	French Jojuyet Community	French Jojuyet Community	NA
NA	Stone	Stone	Stone	Stone	NA	NA	NA	NA	NA	NA
IV. Murat Kervansaray	Bayezid Pasa Mosque	Bayezid Pasa Mosque	Bayezid Pasa Mosque	Kumacik Hammam	No name	No name	No name	Jojuyet Church	Jojuyet Maktab	Ibadullah Carsi
Caravanserai	Guesthouse	Mosque	Souphouse	Hammam	Fountain	Maktab	Masjid	Church	Maktab	Carsi
s	1	1	1	s	2	2	2	4	4	s
Bayezid Pasa	**Bayezid Pasa**	**Bayezid Pasa**	**Bayezid Pasa**	**Bayezid Pasa**	**Bayezid Pasa**	**Bayezid Pasa**	**Bayezid Pasa**	**Bayezid Pasa**	**Bayezid Pasa**	**Bozahane**

NA	NA	NA	NA	NA	NA	NA	x	NA	NA	NA
D	D	D	D	D	D	D	E	NA	NA	NA
x	x	x	x	x	x	1688	x	x	x	x
x	x	x	x	x	x	Given to another religios order	x	x	x	x
x	x	x	x	by Amasya municipality	x	x	Ziya Pasa and el-hacc mehmet aga	x	x	x
x	x	x	x	X	x	x	1864; 1891	x	x	x
x	x	x	x	NA	x	x	NA	x	x	x
x	x	x	x	Demolished	x	x	Repair need	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	Grandson of Ubeydullah Efendi;	x	x	x	x	x	x	x
x	x	x	NA; 1734;NA	x	x	xx	x	x	x	x
x	x	x	1602; 1730; 1854;1886	x	x	x	x	x	x	x
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1468	1834	NA	1525	1215-1238	1215-1238	1565	1391	1401	1732	1469
Acem Ali Aga	Lutfullah Efendi	NA	Ubeydullah Efendi	Danishmend rulers	Danishmend rulers	Followers of Kadiri Order	Ceribasi Mehmet Celebi	Kaya Pasa	El-hacc Hasan aga	Acem Ali Aga
NA	NA	x	NA	Stone, Brick, Wood	NA	NA	Stone	Stone	Stone	stone
No name	No name	Ibadulla Carsi	Ibadullah (Ubeydullah)	Enderun mosque	Cami-I Enderun Madrasah	Gulabi Tekke	Ceribasi Mosque	No name	No name	No name
Fountain	Fountain	Carsi	Masjid	Mosque	Madrasah	Tekke	Mosque	Fountain	Fountain	Fountain
s	s	s	s	1	1	s	1	s	s	s
Bozahane	**Bozahane**	**Bozahane**	**Bozahane**	**Cami-I Enderun**	**Cami-I Enderun**	**Cami-I Enderun**	**Ceribasi**	**Ceribasi**	**Ceribasi**	**Ceribasi**

1808	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
D	D	NA	D	D	D	NA	D	D	D	D
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	Ahmed Efendi	x
x	x	x	x	x	NA	x	x	x	1578	x
x	x	x	x	x	NA	x	x	x		x
x	x	x	x	x	damaged	x	x	x	Repair needed	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
NA	x	x	x	x	x	x	x	x	1578	x
1730; 1808	x	x	x	x	x	x	x	x	NA	x
NA	1864	NA	NA	NA	NA	NA	NA	1383	1383	NA
1704	1864	1737	NA	NA	NA	1468	1550	1383	1383	1475
Haci Ahmed Efendi	NA	NA	NA	NA	NA	NA	Cirakcizade Ahmed Celebi	Ali Pasa ibn Esen Bey	Ali Pasa ibn Esen Bey	NA
NA	NA	NA	Stone	NA	NA	Stone	NA	NA	NA	NA
Nuhoglu /Nuh tekke	Ceribasi Daru' l Kurra	Seyh Kirik Tekke	No name	No name	No name	Handan-Sirin Street Fountain	No name	No name	No name	Hoca Sultan Tekke
Tekke	Madrasah	Tekke	Fountain	Maktab	Mosque	Fountain	Masjid	Fountain	Masjid	Guesthouse
s	s	s	1	1	1	s	1	1	1	2
Ceribasi	**Ceribasi**	**Cikrik**	**Cikrik**	**Cikrik**	**Cikrik**	**Cikrik**	**Cirakci**	**Darusselam**	**Darusselam**	**Darusselam**

NA	1759, by inheritance	NA	NA	NA	NA	NA	1877	NA	NA	NA
D	D	D	D	D	D	D	D	D	D	D
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	1877	x	x	x
x	x	x	x	x	x	x	abandoned/ demolished	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	yes	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
NA	NA	1578	NA	NA	NA	NA	NA	NA	NA	NA
1475	1475	1578	1516	1516	1544	1544	1327	1516	NA	1843
NA	NA	Ahmed Efendi	Masume Hatun	Masume Hatun	Fatma Hatun	Fatma Hatun	NA	Masume Hatun	Kanli Ali aga	Fatima Hanim
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Stone
Hoca Sultan Tekke	Hoca Sultan Tekke	No name	No name	No name	No name	No name	Atabey	No name	Kanli Carsi	Telli Pinar
Soup house	Tekke	Maktab	Fountain	Masjid	Fountain	Masjid	Madrasah	Tekke	Carsi	Fountain
2	2	1	1	1	2	2	s	1	1	s
Darusselam	**Darusselam**	**Darusselam**	**Dere**	**Dere**	**Dere**	**Dere**	**Dere**	**Dere**	**Devehane**	**Devehane**

NA	NA	NA	NA	NA	1730	NA	1907	NA	NA	NA
D	D	NA	D	D	D	D	D	D	NA	NA
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	Ali Bey	x	x	x	x
x	x	x	x	x	x	1668	x	x	x	x
x	x	x	x	x	x	NA	x	x	x	x
x	x	x	x	x	x	Repair needed	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	El-hacc Ali Aga	El-hacc Ali Aga	x	x	x	x	x
x	x	x	x	1609	1609	x	x	x	x	x
x	x	x	x	1591	1591	x	x	x	x	x
x	x	x	x	x	Abdullah Efendi	Abdullah Efendi	x	x	x	x
x	x	x	x	x	1808	1808	NO	x	x	x
x	x	x	x	x	1730	1730	1909	x	x	x
NA	NA	NA	NA	1609	1609	1609	1842	1843	NA	NA
1746	1832	1813	1813	1223	1223	1609	1842	1843	1765	1766
Abdullatif Efendi	NA	NA	El-hacc Hasan aga	Aydin Bey	Aydin Bey	El-hacc Ali Aga	NA	NA	NA	NA
Stone	Stone	Stone	NA	NA	NA	NA	Wooden	NA	Stone	Stone
No name	Devehane	Abdullah Efendi Fountain	No name	Kanli (Aydin) Hammam	Kanli Masjid	Kanli (Kagni) Tekke	Kapancizade	No name	Omer Aga Fountain	Ahmed Aga Fountain
Library	Madrasah	Fountain	Tekke	Hammam	Masjid	Tekke	Madrasah	Maktab	Fountain	Fountain
s	s	s	s	1	1	1	S	s	s	s
Devehane	**Devehane**	**Devehane**	**Devehane**	**Devehane**	**Devehane**	**Devehane**	**Devehane**	**Devehane**	**Eski Kethuda**	**Eski Kethuda**

NA	NA	NA	NA	x	NA	NA	NA	x	NA	x
NA	D	D	D	E	D	D	D	E	D	E
x	x	1886	x	x	x	x	x	x	x	x
x	x	Madrasah	x	x	x	x	x	x	x	x
x	x	x	x	El hacc Hasan Efendi; El-hacc Ali	x	x	Waqf Trustee Gurcuzade Mehmet	Waqf Trustee Gurcuzade Mehmet	Waqf Trustee Gurcuzade Mehmet	by waqf; vgm
x	x	x	1848;1886	1638;1777; 1883;	1621	x	1898	1898	1898	1863-1864;1974-75
x	x	x	NA	NA	NA	x	NA	NA	NA	NA
x	x	x	repair needed	repair needed	repair neded1	x	Repair needed	Repair Needed	Repair Needed	needed repair
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	Mustafa Sidki Pasa&Ayse Hanim	x	x	x	x	x	x
x	x	x	x	x/ 1956	x	x	x	x	x	x
x	x	x	x	1647; 1939	x	x	x	x	x	x
x	Haci Efendi Mehmed	x	x	x	x	x	x	x	x	x
x	1609	x	x	x	x	x	x	x	x	x
x	1602	x	x	x	x	x	x	x	x	x
NA	1432	NA	1762	NA	1505	1506	1267	1267	1267	1437
1803	1432	1829	1762	1117	1495	NA	1267	1267	1267	1428/1431
NA	NA	Hasan Aga	NA	Fetih Gazi	Son of Qadi Molla Beylik . mehmet	Qadi Molla Beylik	Governor Emir Seyfeddin	Governor Emir Seyfeddin	Governor Emir Seyfeddin	Vizier Atabegzade Yorguc Pasa
Stone	NA	NA	NA	Stone	Wooden and Stone	Stone	Stone	Stone	Stone	Stone
Huseyin Bey Fountain	Kapisi Kible Masjid	Ak Hasanoglu Tekke	Kasifiye	Fethiye Mosque	Kadi	Kadi	Gokmadrasah Tekke	Gokmadrasah Mosque	Gokmadrasah	Yorguc Pasa Mosque
Fountain	Masjid	Tekke	Madrasah	Mosque	Madrasah	Hammam	Tekke	Mosque	Madrasah	Mosque
s	1	s	1	s	1	1	1	1	1	2
Eski Kethuda	**Eski Kethuda**	**Eski Kethuda**	**Eski Kethuda**	**Fethiye**	**Fethiye**	**Fethiye**	**Gokmadrasah**	**Gokmadrasah**	**Gokmadrasah**	**Gokmadrasah**

x	1855	NA	NA	NA	x	NA	NA	NA	x	NA
E	D	D	D	D	E	D	D	D	E	NA
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	N	Gumusluzade Ibrahim Pasa .	x
x	NO	x	YES	x	x	x	x	1871	1688	x
x	1855	x	NA	x	x	x	x	NA	1602	x
x	Demolished	x	repair needed	x	x	x	x	Repair Needed	Bandits., Arson, 1011:1602	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	1879	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	Defderzade Ahmed Bey ibn Abdullah	x
x	x	x	x	x	x	x	x	x	1485	x
x	x	x	x	x	x	x	x	x	818/1415	x
x	x	x	x	x	x	x	x	NA	El-hacc Mustafa Aga	x
x	x	x	x	x	x	x	x	1793	1721-2	x
x	x	x	x	x	x	x	x	1792	1721-22	x
1437	1437	NA	NA	NA	NA	NA	1795	1738/1794	1327	NA
1431	1431	1416	1416	NA	1279	1825	1795	1738	1325	1689
Vizier Atabegzade Yorguc Pasa	Vizier Atabegzade Yorguc Pasa	NA	NA	Vizier Atabegzade Yorguc Pasa	NA	NA	Amasya governor	soldier	Gumusluzade Taceddin Mahmud	Gumusluzade Ibrahim Pasa
Stone	Stone	NA	NA	Stone	Stone	NA	Wooden	Wooden	Wooden / Stone	Stone
Yorguc Pasa	Yorguc Pasa Madrasah	Ismail Bey Tekke	Melik Gazi Tekke	Cardakli Hammam	Torumtay	Sunbul Mehmed Efendi	Hayriye	Feyziye	Gumuslu (Taceddin) Mosque	No name
Soup house	Madrasah	Tekke	Tekke	Hammam	Fountain	Masjid	Madrasah	Madrasah	Mosque	Fountain
2	2	s	s	2	s	s	s	s	1	s
Gokmadrasah	**Gokmadrasah**	**Gokmadrasah**	**Gokmadrasah**	**Gokmadrasah**	**Gokmadrasah**	**Gokmadrasah**	**Gokmadrasah**	**Gokmadrasah**	**Gumusluzade**	**Gumusluzade**

NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
D	D	D	D	D	NA	NA	D	D	D	D
x	Madrasah	1889	x	x	x	x	x	x	x	x
x	1740	Ibtidai maktab	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	Sefer Aga	x
x	x	x	x	x	x	x	x	x	NA	x
x	x	x	x	x	x	x	x	x	1647	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
NA	NA	1510	1614	1745	1803	1803	1469	1469	1469	after 1647
1776	1407-1408	1510	1614	1740	1803	1803	b. 1469	b. 1469	b. 1469	after 1647
Çorumlu Seyh Hasan Efendi-zâde	Hace Celal Celebi	Grand Vizier Sadrazam Ali Pasa	Defterdar Semseddin Pasa	Fatma Hatun	Abdi Aga	Abdi Aga	Haci Hamza Bey	Haci Hamza Bey	Haci Hamza Bey	Sefer Aga
NA	NA	NA	NA	Wooden	NA	NA	Stone	NA	Stone	Stone
Seyhoglu Tekke	Gumusluoglu tekke	Ali Pasa	No name	Fatimiye	No name	Egri mosque	No name	No name	No name / Sefer Aga Masjid	No name
Tekke	Tekke	Maktab	Masjid	Madrasah	Fountain	Mosque	Fountain	Maktab	Masjid	Fountain
2	s	s	s	1	2	2	1	1	1	1
Gumusluzade	**Gumusluzade**	**Gumusluzade**	**Gumusluzade**	**Gumusluzade**	**Gumusluzade**	**Gumusluzade**	**Haci Hamza**	**Haci Hamza**	**Haci Hamza**	**Haci Hamza**

x	NA	NA	NA	x	x	x	x	x	x	NA
E	D	D	D	E	E	E	E	E	E	D
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	192-1971	x	x	x	x	x	x
	x	x	x	x	x	x	x	x	x	x
x	x	x	x	repair needed	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	NA	x	x	x	x	x	x
x	x	x	x	1980	x	x	x	x	x	x
x	x	x	x	vgm	x	x	x	x	x	x
x	x	x	x	1592;1669;1954-1971	1669	1669	1669	1669	1669	x
x	x	x	x	1591;1668;1939	1668	1668	1668	1668	1668	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
NA	NA	NA	NA	1486	1486	1486	1486	1486	1486	1609
Late Ottoman	1826	1910	NA	1481-1486	1481-1486	1481-1486	1481-1486	1481-1486	1481-1486	1609
NA	NA	NA	Haci Ilyas Bey	Shahzadah Ahmed	Shahzadah Ahmed	Shahzadah Ahmed	Shahzadah Ahmed	Shahzadah Ahmed	Shahzadah Ahmed	Seyh Ahmed Efendi
Stone	NA	Stone	NA	Stone	Stone	Stone	Stone	Stone	Stone	NA
Narlibahce Fountain	No name	Haci Hasan Efendi	No name	Sultan Bayezid Mosque	Sultan Bayezid Dar'ul Kurra	Sultan Bayezid Maktab	Sultan Bayezid	Sultan Bayezid	Sultan Bayezid Dar'ut-ta'lim	Kutup Tekke Masjid
Fountain	Masjid	Maktab	Maktab	Mosque	Madrasah	Maktab	Soup house	Guesthouse	Madrasah	Masjid
s	s	s	s	1	1	1	1	1	1	2
Haci Ilyas	**Haci Ilyas**	**Haci Ilyas**	**Haci Ilyas**	**Haci Ilyas**	**Haci Ilyas**	**haci ilyas**	**Haci Ilyas**	**Haci Ilyas**	**Haci Ilyas**	**Haci Ilyas**

NA	NA	x	x	NA	x	NA	x	x	x	x
D	D	E	E	D	E	NA	E	E	E	E
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
1609	1609	1842	1911	1418	NA	NA	NA	NA	1510	1510
1609	1609	1842	1909-1911	1418	NA	1800	Ottoman Era	Ottoman Era	Seljuk Era	1510
Celebi Mehmet Efendi	Seyh Ahmed Efendi	Huseyin Zeki Efendi	Mehmed Hamdi Efendi	Pasa Hatun	Idizade Akif Mustafa Efendi	Zaim Mehmet Aga	NA	NA	Bulbul Hatun	Bulbul Hatun
NA	NA	NA	NA	NA	Stone	Stone	Stone	Stone	Stone	Stone
Celebi Mehmet Efendi	Kutup Tekke	Sultan Bayezid	Sultan Bayezid	No name	No name	No name	No name	No name	Yildiz (Cukur) Hammam	Hatuniye Maktab
Maktab	Tekke	Library	Library	Masjid	Fountain	Fountain	Fountain	Fountain	Hammam	Maktab
s	2	1	1	s	s	s	s	s	1	1
Haci Ilyas	**Haci Ilyas**	**Haci Ilyas**	**Haci Ilyas**	**Hatuniye**	**Hatuniye**	**Hatuniye**	**Hatuniye**	**Hatuniye**	**Hatuniye**	**Hatuniye**

x	x	x	NA	1876	1876	NA	NA	x	x	x
E	E	NA	D	D	D	D	D	E	E	E
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	vgm	x	x	x	x	x	x	Amasya Valiliği ile Amasya	x	Amasya Kültür ve Tabiat Varlıkları Koruma ve Eğitim Vakfı
x	1964;1995	x	x	x	x	x	x	x	x	2012
x		x	x	x	x	x	x	x	x	x
x	repair needed	x	x	1876 war	1876 war	x	x	x	x	for bridge construction
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
1510	1510	1510	NA	NA	NA	NA	NA	No Waqf	No Waqf	No Waqf
1510	1510	Seljuk Era	1485	NA	NA	NA	NA	1864	1864	1864
Bulbul Hatun	Bulbul Hatun	Bulbul Hatun	NA	Mehmet Celebi	El-hacc Hasan aga	NA	Hace Muhibuddin Meydud Ziyari	Governor Ziya Pasa	Governor Ziya Pasa	Governor Ziya Pasa
Stone	Stone	Stone	NA	Stone	NA	Stone	NA	Stone	Stone	Stone
Hatuniye Imaret	Hatuniye Mosque	No name	Hekim Celebi Masjid	No name	No name	No name	No name	No name	No name	No name
Soup house	Mosque	Fountain	Masjid	Fountain	Maktab	Fountain	Masjid	Governor Office	Prison	Clock tower
1	1	1	s	s	s	s	1	s	s	s
Hatuniye	**Hatuniye**	**Hatuniye**	**Hekim Celebi**	**Hekim Celebi**	**Hekim Celebi**	**Hekim Celebi**	**Helkis**	**Helkis**	**Helkis**	**Helkis**

x	x	x	NA	NA	x	x	x	NA	NA	NA
E	E	E	D	D	E	E	E	D	D	D
x	x	x	x	x	x	x	x	x	x	X
x	x	x	x	x	x	x	x	x	x	X
x	x	x	x	x	vgm	Vakiflar Genel Mudurlugu	x	NA	x	X
x	x	x	x	x	1978	2009	x	NA	x	X
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	repair Needed	closed 1992 for restoration	x	Abandoned	x	X
x	x	x	x	x	x	x	x	x	x	X
x	x	x	x	x	x	x	x	x	x	X
x	x	x	x	x	x	x	x	x	x	X
x	x	x	x	x	x	x	x	x	x	X
x	x	x	x	x	x	x	x	x	x	X
x	x	x	x	x	x	x	x	x	x	X
x	x	x	x	x	x	x	x	x	x	X
x	x	x	x	x	x	x	x	x	x	X
No Waqf	No Waqf	No Waqf	1609	1609	1466	1466	1466	1466	NA	NA
1894	1864	1894	1609	1609	1466	1466	1466	1466	1651 or 1654	1651 or 1654
Governor Ziya Pasa	Governor Ziya Pasa	Governor Ziya Pasa	Mustafa Aga	Mustafa Aga	Hizir Pasa	Hizir Pasa	Hizir Pasa	Hizir Pasa	Mutesellim Hizir Aga	Mutesellim Hizir Aga
Stone	Stone	Stone	NA	NA	Stone	Stone	Stone	Stone	NA	NA
No name	No name	No name	No name	No name	Hizir Pasa	Sunbul (Hizir Pasa) Hammam	Hizir Pasa	No name	No name	No name
Police Station	Municipality	Pharmacy	Masjid	Maktab	Mosque and Tekke	Hammam	Madrasah	Maktab	Fountain	Maktab
s	s	s	2	2	1	1	1	1	2	2
Helkis	**Helkis**	**Helkis**	**Helkis**	**Helkis**	**Hizir Pasa**	**Hizir Pasa**	**Hizir Pasa**	**Hizir Pasa**	**Hizir Pasa**	**Hizir Pasa**

NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
D	D	NA	D	D	D	E	D	D	D	D
x	x	x	X	x	x	x	x	x	x	x
x	x	x	X	x	x	x	x	x	x	x
x	x	x	X	x	x	x	El-hacc Ali	El-hacc Ali	x	x
x	x	x	X	x	x	x	x	x	x	x
x	x	x	x	x	x	x	NA	NA	x	x
x	x	x	X	x	x	x	derelict, 1668	derelic, 1668	x	x
x	x	x	X	x	x	x	x	x	x	x
x	x	x	X	x	x	x	x	x	x	x
x	x	x	X	x	x	x	x	x	x	x
x	x	x	X	x	x	x	x	x	x	x
x	x	x	X	x	x	x	x	x	x	x
x	x	x	X	x	x	x	x	x	x	x
x	x	x	X	x	x	x	El-hacc Hasan Aga	El-hacc Hasan Aga	x	x
x	x	x	X	x	x	x	NA	NA	x	x
x	x	x	X	x	x	x	1730	1730	x	x
NA	NA	NA	NA	1444	1444	1444	NA	NA	1508	1508
after 1456	NA	after 1456	1651 or 1654	1444	1444	1444	NA	NA	1508	1508
NA	NA	NA	Mutesellim Hizir Aga	Eslem Hatun	Eslem Hatun	Eslem Hatun	Sulu Bey	Sulu Bey	Fahrunnisa Hatun	Fahrunnisa Hatun
NA	NA	NA	NA	Stone	NA	NA	NA	Stone	NA	NA
Pir Serefuddin Hamza	No name	Hamza Dede (Pir Serefuddin)	Ehlullah Tekke	No name	No name	No name	No name	No name	No name	No name
Masjid	Fountain	Masjid	Tekke	Fountain	Maktab	Masjid	Masjid	Hammam	Maktab	Masjid
s	s	s	2	1	1	1	1	1	2	2
Hizir Pasa	**Hizir Pasa**	**Hizir Pasa**	**Hizir Pasa**	**Islam**	**Islam**	**Islam**	**Kameruddin**	**Kameruddin**	**Kameruddin**	**Kameruddin**

NA	NA	NA	NA	NA	NA	NA	x	Before 823	NA	x
D	D	D	D	D	D	E	E	E	D	E
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	vgm	x	x	x
x	x	x	x	1648	x	x	1968-71	x	x	x
x	x	x	x	NA	x	x	NA	x	x	x
x	x	x	x	needed repair	x	x	repair needed	x	x	x
x	x	x	x	x	x	X	X	X	X	X
x	x	x	x	x	x	X	X	X	X	X
x	x	x	x	x	x	X	X	X	X	X
x	x	x	x	x	x	X	X	X	X	X
x	x	x	x	x	x	X	X	X	X	1955
x	x	x	x	x	x	X	X	X	X	1939
x	x	x	x	x	x	X	X	X	X	X
x	x	x	x	x	x	X	X	X	X	X
x	x	x	x	x	x	X	X	X	X	X
1404	NA	NA	NA	NA	1736	1420	1495	NA	NA	NA
1404	1404	1404	1404	1534	1736	1420	1485	1402	1402	1758
by a local figure	Mahmud Celebi	Mahmud Celebi	Mahmud Celebi	NA	NA	Molla Bahsi Halife	Kilari Suleyman Aga	Kaya Pasa	Kaya Pasa	Rahtuvan Mehmet Pasa
NA	NA	NA	NA	NA	NA	NA	Stone	Stone	NA	Stone
Mahmud Pasa Daru' l Kurra	Mahmud Celebi Tekke	No name	No name	Seyh Masjid	Osmaniye	No name	Kilari Suleyman Aga Mosque	No name	No name	Tashan
Madrasah	Tekke	Soup house	Guesthouse	Masjid	Madrasah	Masjid	Mosque	Hammam	Maktab	Han
2	1	1	1	2	2	s	1	1	1	1
Karatay	**Karatay**	**Karatay**	**Karatay**	**Karatay**	**Karatay**	**Kazanci**	**Kazanci**	**Kazanci**	**Kazanci**	**Kazanci**

NA	NA	x	NA	NA	NA	1230	before 1815	NA	NA	NA
D	D	E	D	D	D	D	D	D	D	D
x	x	x	x	x	x	1661	x	x	x	x
x	x	x	x	x	x	Mosque	x	x	x	x
x	x	x	x	X	X	Haci Beyzade Mehmet Bey	x	x	x	x
x	x	1950	x	X	X	1071	x	x	x	x
x	x	NA	x	x	x	NA	x	x	x	x
x	x	demolished converted to modern han	x	X	X	NA	x	x	x	x
x	x	X	x	X	X	X	x	x	x	x
x	x	X	x	X	X	X	x	x	x	x
x	x	X	x	X	X	X	x	x	x	x
x	x	Ziya Bey	x	X	X	X	x	x	x	x
x	x	1865	x	X	X	X	x	x	x	x
x	x	1668	x	X	X	X	x	x	x	x
x	x	Vakiflar Genel Mudurlugu	x	X	X	X	Benderli Hacc Feyzullah Aga	x	x	x
x	x	2010	x	X	X	X	1815	x	x	1900
x	x	2005	x	x	x	x	No date	x	x	1893
NA	NA	NA	NA	1466	1466	1466	NA	NA	NA	1871
1766	NA	1485	1511	1466	1466	1466	1661	1815	1815	1815 or 1871
Ahmet Bey	NA	Buyuk Kapi Agasi Husevin Aga	Kilicci Yusuf Bey	Haci Ahmed Celebi	Haci Ahmed Celebi	Haci Ahmed Celebi	Haci Beyzade Mehmed Efendi	Benderli el-hacc Feyzullah Efendi	Benderli el-hacc Feyzullah Efendi	Benderli el-hacc Feyzullah Efendi
NA	NA	Stone	NA	NA	NA	NA	NA	NA	NA	NA
Tashan Sadirvan Masjid	Arasta	Bedesten	No name	No name	No name	No name	No name	No name	No name	Benderli
Masjid	Carsi	Bedesten	Masjid	Fountain	Maktab	Masjid	Mosque	Maktab	Mosque	Madrasah
1	1	1	1	1	1	1	1a	1b	1b	1b
Kazanci	**Kazanci**	**Kazanci**	**Kilicci**	**Kocacik**	**Kocacik**	**Kocacik**	**Kocacik**	**Kocacik**	**Kocacik**	**Kocacik**

NA	NA	NA	NA	1883	x	x	1826	x	NA	NA
D	D	D	D	D	D	D	D	D	D	D
x	x	x	x	1891	x	x	NA;1713	x	x	x
x	x	x	x	Shops	x	x	Tekke; madrasah	x	x	x
x	x	Mehmet Emin Efendi	x	x	x	Kubali Abdu Bey	Son of Kubali Abdi Bey mevmet pasa	x	x	x
x	x	1883	x	x	x	1669	1694	x	1550; 1696	x
x	x	NA	x	NA	x	1668	1668	x	NA	x
x	x	derelict	x	1883 derelict, 1891 half demolished	x	Derelict	Derelict	x	repair needed	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	xx	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	1669	1687;1713	x	x	x
x	x	x	x	x	x	1602	1602;1687	x	x	x
NA	NA	NA	NA	1751	1453	1453	1453	NA	1397	1397
1748	1748	1748	NA	1751	1453	1453	1453	1693	1270	1397
El-hacc Osman Bey	El-hacc Osman Bey	El-hacc Osman Bey	NA	NA	Huseyin El Halveti	Huseyin El Halveti	Huseyin El Halveti	Mehmet Pasa	Kepuk Selguri	Davud Bey
NA	NA	NA	Stone	NA	NA	NA	Stone and Wooden	NA	NA	NA
No name	No name	No name	Alaca Hammam	Bekir Pasa	No name	No name	Husamiye	No name	No name	No name
Fountain	Library	Masjid	Hammam	Madrasah	Fountain	Mosque	Madrasah	Maktab	Masjid	Maktab
1	1	1	s	1	1	1	1	1	1	1
Koprubasi	**Koprubasi**	**Koprubasi**	**Koprubasi**	**Koprubasi**	**Kuba**	**Kuba**	**Kuba**	**Kuba**	**Kubcegiz**	**Kubcegiz**

NA	NA	NA	NA	x	NA	x	NA	NA	NA	NA
NA	D	D	D	E	D	E	D	D	D	D
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	1862-3, 1967	1863	1863,	1863	1863
x	x	x	x	x	x	NA	NA	NA	NA	NA
x	x	x	x	x	x	needed repair	repair needed	repair needed	repair needed	repair needed,
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	vgm	vgm	vgm	vgm	vgm
x	x	x	x	x	x	1958-63	1958-63	1958-63	1958-63	1958-63
x	x	x	x	x	x	1939	1939	1939	1939	1939
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
NA	1437	1437	1479	NA	NA	1495	1495	1495	1495	1495
1402	1437	1437	1479	Seljuk Era	1165	1486-1495	1495	1495	1495	1495
NA	Ahmed bin Mesun	Ahmed bin Mesun	NA	NA	Yagibasan Gazi Han	Hizir Pasazade Mehmet Pasa	Hizir Pasazade Mehmet Pasa	Hizir Pasazade Mehmet Pasa	Hizir Pasazade Mehmet Pasa	Hizir Pasazade Mehmet Pasa
Stone	NA	NA	NA	Stone	NA	Stone	Stone	Stone	Stone	Stone
Kaya Pasa fountains	No name	No name	Ali Celebi Daru' l Kurra	Yukari Hammam	Kursunlu Han (Han-I Yagibasan)	Mehmet Pasa Mosque	Mehmet Pasa	Mehmet Pasa	Mehmed Pasa Madrasa	No name
Fountain	Fountain	Masjid	Madrasah	Hammam	Han	Mosque	Guesthouse	Soup house	Madrasah	Fountain
s	1	1	s	s	s	1	2	2	2	2
Kubcegiz	**Kursunlu**	**Kursunlu**	**Kursunlu**	**Kursunlu**	**Kursunlu**	**Mehmet Pasa**	**Mehmet Pasa**	**Mehmet Pasa**	**Mehmet Pasa**	**Mehmet pasa**

NA	NA	NA	NA	x	NA	NA	NA	NA	x
D	D	D	NA	E	D	D	D	D	E
1879	1832	x	x	x	x	x	x	x	x
Residence for immigrants	Madrasah	x	x	x	x	x	x	x	x
x	Sheikh of Tekke	x	x	x	x	x	x	x	x
1863-64 and 1821	1677	x	x	x	x	x	x	x	x
NA	x	x	x	x	x	x	x	x	x
repair needed,	Maintenance	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x
Vakiflar Genel Mudurlugu	x	x	x	x	x	x	x	x	x
1958-63	x	x	x	x	x	x	x	x	x
1939	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x
Unknown Date	x	x	x	x	x	x	x	x	x
1495	NA	NA	NA	NA	NA	NA	NA	1661	1925
1495	1428	1234	1504	1437	1890	1841	1579	1661	1914-1927
Hizir Pasazade Mehmet Pasa	Çevikçi Şemseddin Mehmet el- Kırtasi	Governor Nureddin Tograk	Oruc Bey	Yorguc Pasazade Mustafa Bey	Mehmet Bey	Ali Efendi Mehmet Pasa	Hayreddin Efendi	Mehmet Aga	NA
Stone	NA	NA	Stone	Stone	NA	NA	NA	NA	NA
Mehmet Pasa Tekke	Cevikce Tekke	No name	No name	Mustafa Bey (Mehmet Pasa) Hammam	Mehmet Bey Madrasah	No name	No name	Mehmet Aga Daru'l Kurra	Kilicarslan Ilkokulu (Primary School)
Tekke	Tekke	Masjid	Fountain	Hammam	Madrasah	Madrasah	Masjid	Madrasah	School
2	s	1	s	s	s	s	s	s	s
Mehmet Pasa	**Mehmet Pasa**	**Mehmet Pasa**	**Mehmet Pasa**	**Mehmet Pasa**	**Mehmet Pasa**	**Mehmet Pasa**	**Mehmet Pasa**	**Mehmet Pasa**	**Mehmet Pasa**

1688	NA	1864	NA	NA	x	1090	NA	NA	x	NA
D	E	D	D	NA	D	D	D	D	E	D
x	x	x	2 houses were built	x	x	1909	x	x	x	x
x	x	x	NA	x	x	Converted to Madrasah	x	x	x	x
x	x	x	x	x	x	x	x	x	vgm	x
x	x	by the governor Ziya Pasa	x	x	x	x	x	x	1960-62	x
x	x	1864	NA	x	x	x	x	x	NA	x
x	x	demolished	Demolished	x	x	x	x	x	repair needed	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	1962-74	x
x	x	x	x	x	x	x	x	x	1590;1939	x
x	x	x	x	x	x	x	x	x	x	x
NO	x	x	x	x	x	x	x	x	Na;NA;NA recovered 1960)	x
YES	x	x	x	x	x	x	x	x	1590; 1602; 1720; 1915	x
NA	x	x	NA	NA	NA	NA	NA	NA	NA	1750
1603	1906	1653	1432	NA	1909	1703	NA	NA	1242	1750
Ahmed Efendi	1906		By Semseddin Ahmed, known as	NA	A local	A local architect	NA	NA	Seljuk Ruler Necmeddin Ferruh	a local
NA	x	NA	NA	Stone	Stone	Stone	NA	NA	Stone	NA
Muftioglu Tekke	Copluce Primary School (Yesilirmak	Narli Bahce	Darbhaneci Tekke	No name	Burma Minare	Burmali minaret maktab	No name	Bali Bey Mosque	Burmali minaret mosque /Mahkeme	Sungurlu
Tekke	Maktab	Madrasah	Tekke	Fountain	Madrasah	Maktab	Fountain	Mosque	Mosque	Madrasah
s	s	s	s	1	1	1	s	s	1	s
NA	**NA**	**NA/Narli Bahce Area**	**Pervane Bey**	**Pervane Bey**	**Pervane Bey**	**Pervane Bey**	**Pervane Bey**	**Pervane Bey**	**Pervane Bey**	**Pervane Bey**

NA	NA	1875	NA	NA	x	NA	NA	NA	NA	NA
D	D	D	D	D	E	NA	D	D	D	D
1897	x	NA	x	x	x	x	x	x	x	x
Given to Ministry of Education	x	Madrasah	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	NO	x	x	x	x	x	x
x	x	1875	x	1875	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	NA	x	x	x	x	Imam and mutevelli	Imam and mutevelli	Amasyali Hasan Efendi / Imama
x	x	x	1609; 1688; 1738	x	x	x	x	NA	NA	1620
x	x	x	1602; 1686; 1730	x	x	x	x	1730	1730	1602, 1730
1453	1506	1506	1527	NA	NA	NA	NA	NA	NA	NA
1453	1506	1506	1527	1495	Seljuk Era	NA	1494	1620	1620	1494
NA	Governor Pirincci Sinan Bey	Governor Pirincci Sinan Bey	Son of Qadi	By Seljuk governor	NA	NA	Hizir Pasa	Recep Celebi's grandson Amasyali	Receb Celebi's grandson Amasyali	Royal Teacher Sadrettin Receb
NA	NA	NA	NA	NA	Stone	NA	NA	Fountain	NA	NA
Ya Vedud Tekke	No name	No name	Darulhadis	Dograkiye	Konak Hammam	Mekteb-I Ali-I Idadi	No name	No name	No name	No name
Tekke	Maktab	Masjid	Madrasah	Madrasah	Hammam	Maktab	Tekke	Fountain	Maktab	Masjid
s	1	1	s	s	s	s	s	1	1	1
Pirincci	**Pirincci**	**Pirincci**	**Pirincci**	**Pirincci**	**Pirincci**	**Pirler**	**Recep**	**Recep**	**Recep**	**Recep**

1844	NA	NA	NA	NA	NA	NA	1740	NA	NA	NA
D	D	D	D	D	D	D	D	D	D	D
x	x	x	x	x	x	x	1740	x	x	x
x	x	x	x	x	x	x	Madrasah	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	1871;1895	x
1844	x	x	x	x	x	x	NA	x	NA	x
Demolished, 1844	x	x	x	x	x	x	abandoned	x	repair needed	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	1888
x	x	x	x	x	x	x	x	x	x	1647
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	NA
x	x	x	x	x	x	x	x	x	x	1602
1467	1478	NA	NA	NA	1340	1340	NA	NA	1801	1225
1467	1478	1473	1467	1467	1340	1340	1467	1832	1801	1225
Sadi Efendi	Muftu Mueyyedzade Ali	Sadi Efendi	Sadi Efendi	Sadi Efendi	Nureddin Kutlu Bey	Nureddin Kutlu Bey	NA	Muftu Mahmud Efendi	Tayyar Pasa	Halfet Gazi
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Wooden (2nd edition)
Saadeddin Tekke	No name	No name	Saadeddin Tekke	Saadeddin Tekke	No name	No name	Meydan (Ehli Hatun) Tekke	No name	Meydan Koprusu / Tayyar Pasa	Halifet Gazi Madrasah
Tekke	Maktab	Masjid	Guesthouse	Soup house	Fountain	Maktab	Tekke	Library	Madrasah	Madrasah
1	1	1	1	1	2	2	s	s	s	s
Saadeddin	**Saadeddin**	**Saadeddin**	**Saadeddin**	**Saadeddin**	**Sabikuddin**	**Sabikuddin**	**Sabikuddin**	**Sabikuddin**	**Sabikuddin**	**Samice**

NA	NA	NA	NA	NA	NA	1730	x	x	x	x
D	D	D	D	D	NA	D	E	NA	E	E
x	x	x	x	x	x	x	x	x	x	1909
x	x	x	x	x	x	x	x	x	x	Ibtidai maktab
x	x	x	x	x	x	x	x	x	Ayas Aga	x
x	x	x	x	x	x	x	x	x	1495	x
x	x	x	x	x	x	x	x	x	NA	x
x	x	x	x	x	x	x	x	x	demolished by unknown reason	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	NA	x	NA	NA
x	x	x	x	x	x	x	NA	x	NA	NA
x	x	x	x	x	x	x	YES	x	yes	yes
Turizade El-hacc Ali Aga	Turizade El-hacc Ali Aga	Turizade El-hacc Ali Aga	x	x	x	NA	x	x	x	x
1784	1784	1784	x	x	x	NA	x	x	x	x
NA	NA	NA	x	x	x	1730	x	x	x	x
1443	1443	1443	NA	NA	NA	NA	1489	1489	1495	1495
1443	1443	1443	1784	NA	1377	1564	1489	1489	1495	1495
Architect Semseddin Ahmed	Architect Semseddin Ahmed	Architect Semseddin Ahmed	Turizade El-hacc Ali Aga	Kazasker Ibrahim Efendi	NA	NA	Huseyin aga	Huseyin aga	Kucuk Kapi Agasi Ivas Aga	Kucuk Kapi Agasi Ivas Aga
Stone	NA	NA	NA	NA	Stone	NA	stone	Stone	Stone	Stone
No name	No name	No name	No name	No name	Kadilar Fountain	Hizir Pasha Tekke	Buyuk Kapi Agasi Madrasa (Huseyin	Kapi Agasi Fountain	Samlar Ayas Aga Madrasah	Kucuk Ali
Fountain	Maktab	Masjid	Madrasah	Madrasah	Fountain	Tekke	Madrasah	Fountain	Madrasah	Maktab
1	1	1	1	s	s	s	2	2	1	1
Samice	**Samice**	**Samice**	**Samice**	**Samice**	**Samice**	**Samice**	**Samlar**	**Samlar**	**Samlar**	**Samlar**

x	NA	x	x	NA	NA	NA	NA	NA	NA	NA
E	D	E	E	D	D	D	D	D	D	D
x	x	x	1984	x	1893; 1910	x	x	1281	x	x
x	x	x	House	x	Ibtidai maktab; rustiye maktab	x	x	sold as private property	x	x
vgm	x	x	x	x	x	x	x	Governor Ziya Pasa	x	x
1976; 2006	xx	1990-92	x		1470	x	x	X	x	x
NA	x	NA	x	x	NA	x	x	x	x	x
repair needed	x	repair needed	x	x	demolished	x	x	demolished by governor	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
NA	x	x	x	x	x	x	x	x	x	x
NA	x	x	x	x	x	x	x	x	x	x
yes	x		x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
1495	NA	NA	NA	NA	1373	NA	NA	NA	NA	NA
1104-1134 - 1495	1544	1848	19th	19th	1373	1414	1883	1517	Seljuk Era	NA
Emir Gezi Kucuk Kapi Agasi Ivas Aga	NA	Sadrazam Mehmet Rustu Pasa	NA	NA	NA	NA	NA	Garipler Agasi Mehmed Aga	NA	NA
Stone	NA	Stone	Stone	Wooden	NA	NA	Wooden	NA	Stone	Stone
Samlar Ayas Aga Mosque	Samlar Tekke	Seyh Ismail Siracuddin Sirvani	No name	No name	Alaca Yahya Bey Madrasah	Mevlevihane	Sarachane (Haci Mahmud Efendi)	Garipler Masjid	Sultan Mesud Hammam	No name
Mosque	Tekke	Masjid and Tomb	Fountain	Tekke	Madrasah	Tekke	Madrasah	Masjid	Hammam	Bedesten
1	s	s	3	3	s	s	s	S	s	s
Samlar	**Samlar**	**Samlar**	**Samlar**	**Samlar**	**Sarachane**	**Sarachane**	**Sarachane**	**Sarachane**	**Sarachane**	**Sarachane**

NA	NA	x	NA	x	x	NA	NA	B. 1909	B. 1090	1858
D	D	E	D	E	E	D	D	D	D	D
x	x		x	x	x	x	x	X	X	X
x	x		x	x	x	x	x	X	X	X
x	x	Tevhide Arpacioglu, vgm	x	x	x	x	x	X	X	NA
x	x	1951;1977	x	2005	x	x	x	X	X	No
x	x	x	x	x	x	x	x	x		Demolish by unknown
x	x	repair needed	x	restoration	x	x	x	X	X	X
x	x	x	x	x	x	x	x	X	x	X
x	x	x	x	x	x	x	x	X	x	X
x	x	x	x	x	x	x	x	X	x	X
x	x	x	x	x	x	x	x	X	x	X
x	x	x	x	x	x	x	x	X	x	X
x	x	1948	x	x	x	x	x	X	x	X
x	x	1939	x	x	x	x	x	X	x	X
x	x	x	x	x	x	x	x	X	x	X
x	x	x	x	x	x	x	x	X	x	X
NA	NA	1758	NA	NA	NA	NA	NA	NA	NA	1792
1864	1910	1371	1314	NA	NA	900/1495	NA	NA	1620	1792
NA	NA	Emir Sadgeldi Pasa	NA	NA	NA	Kizlar Agasi Firuz Aga	NA	NA	Murat Aga	NA
NA	NA	Stone and Brick	NA	Stone	Stone	NA	Stone	Fountain	NA	Wooden
Rusdiye Maktab	Ibtidai Maktab	Sarachane mosque	Mevlevihane	Kucuk Hammam	Buyuk Hammam	No name	No name	No name	Murat Aga Masjid	Rahmaniye / Abdurrahman
School	School	Mosque	Tekke	Hammam	Hammam	Masjid	Fountain	Fountain	Masjid	Madrasah
s	s	1	s	s	s	1	s	s	s	s
Sarachane	**Sarachane**	**Sarachane**	**Saray**	**Saray**	**Saray**	**Saray**	**Savakca**	**Savakca**	**Savakca**	**Savakca**

1826	X	NA	NA	x	x	x	x	NA	NA
D	E	D	D	E	E	E	E	NA	D
1826	x	x	x	x	x	x	x	x	x
Personal Property	x	x	x	x	x	x	x	x	x
NA	X	X	x	x	x	vgm	x	x	x
No	X	X	x	x	x	1963-72	x	x	x
NA	x	x	x	x	x	NA	x	x	x
Demolished	X	x	x	x	x	Repair needed	x	x	x
x	X	X	x	X	x	X	x	x	X
x	X	X	x	X	x	X	x	x	X
x	X	X	x	X	x	X	x	x	X
x	X	X	x	X	x	X	x	x	X
x	X	X	x	X	x	X	x	x	X
x	X	X	x	X	x	X	x	x	X
x	X	X	x	X	x	X	x	x	X
x	X	X	x	X	x	X	x	x	X
x	X	X	x	X	x	X	x	x	X
NA	NA	NA	NA	1502	1502	1502	1505	NA	NA
1550	1550	1550	1414	1485	1485	1485	1505	1554	Seljuk Era
Follower of Religious Leader	Follower of Religious Leader	Follower of Religious Leader	NA	Abdullah Pasa	Abdullah Pasa	Abdullah Pasa	Abdullah Pasa	Seyh Abdullah Efendi	Emir Mubaruziddin Behramsah
NA	NA	NA	NA	Stone	Stone	Stone	Stone	NA	NA
Sehre Kustu Tekke	No name	No name	Seyh Cui Tekke	Abdullah Pasa	No name	Sofular (Abdullah Pasa)	Abdullah Pasa Daru' l Kurra	Seyh Abdal Tekke	Behramsah Masjid
Tekke	Fountain	Masjid	Tekke	Madrasah	Fountain	Mosque	Madrasah	tekke	Masjid
1	1	1	s	2	2	2	2	s	1
Sehirustu	**Sehirustu**	**Sehirustu**	**Seyh Cui**	**Sofular**	**Sofular**	**Sofular**	**Sofular**	**Sofular**	**sofular**

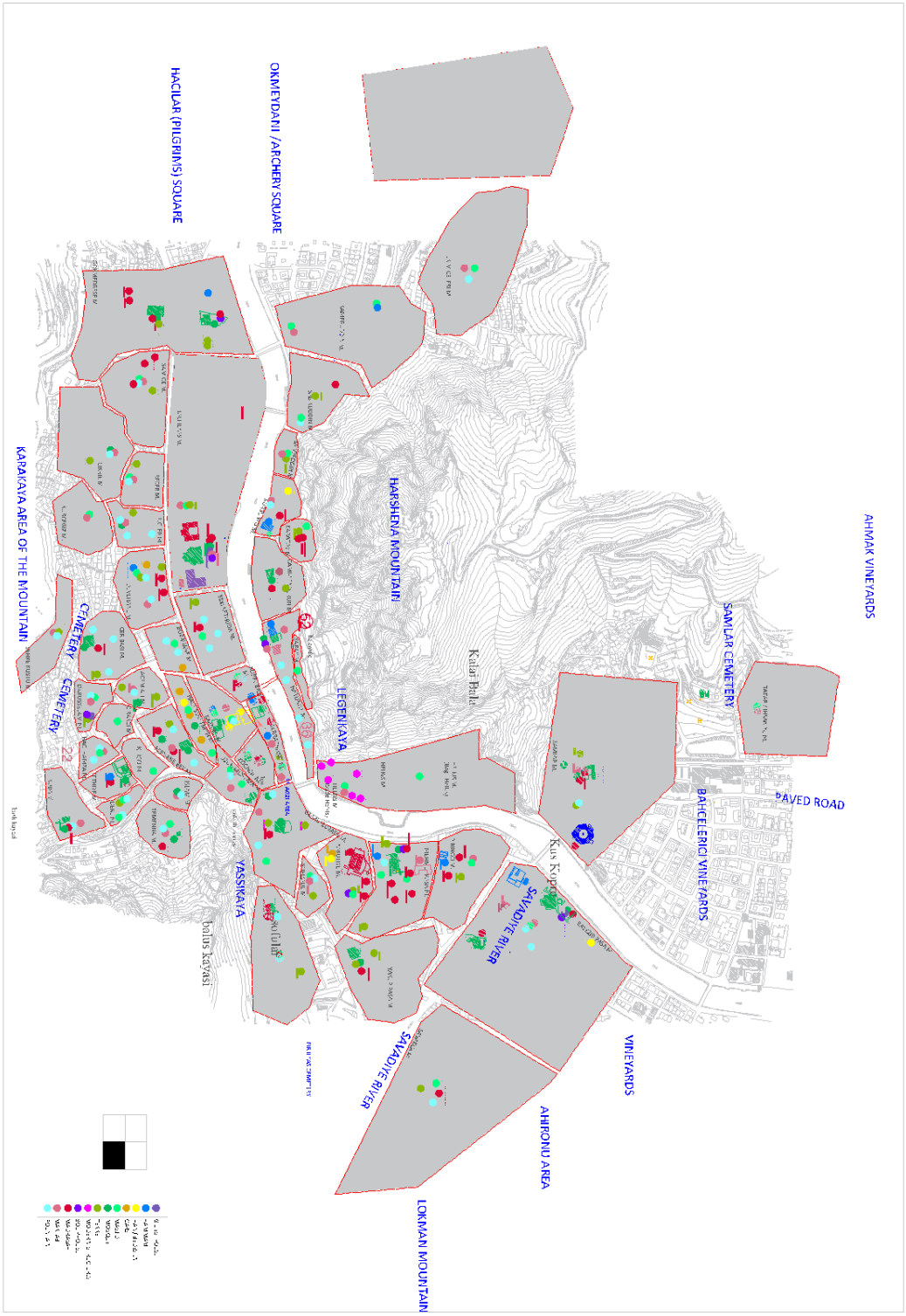
NA	after 1854	NA	NA	NA	NA	NA	NA	NA	NA
D	D	D	D	D	D	D	D	NA	D
x	1897	x	x	x	x	X	X	x	x
x	empty land	x	x	x	x	X	X	x	x
x	x	x	x	x	x	X	X	x	x
x	x	x	x	x	x	X	X	x	x
x	after 1854	x	x	x	x	x	x	x	x
x	demolished	x	x	x	x	X	X	x	x
X	x	x	x	x	x	X	X	x	x
X	x	x	x	x	x	X	X	x	x
X	x	x	x	x	x	X	X	x	x
X	x	x	x	x	x	X	X	x	x
X	x	x	x	x	x	X	X	x	x
X	x	x	x	x	x	X	X	x	x
X	x	x	x	x	x	X	X	x	x
X	x	x	x	x	x	X	X	x	x
X	x	x	x	x	x	X	X	x	x
NA	NA	1439	1439	NA	NA	NA	1898	1473	1473
Seljuk Era	1553-4	1439	1439	1432	NA	before 1898	1898	1469	1469
Emir Mubaruziddin Behramsah	NA	Sahbula Hatun	Sahbula Hatun	Teacher of the Sultan Mehmet Han, Mahmud Celebi	NA	Locals	Z. H. V. e.H. Hasan Efendi	Kethuda Husameddin Aga	Kethuda Husameddin Aga
NA	NA	NA	NA	NA	NA	NA	NA	NA	Stone
No name	Seyh Abdul Tekke	No name	No name	No name	No name	No name	No name	No name	No name
Fountain	Tekke	Fountain	Maktab	Masjid	Tekke	Masjid	Maktab	Spring	Fountain
1	s	1	1	1	s			1	1
Sofular	**Sofular**	**Sofuzade**	**Sofuzade**	**Sofuzade**	**Sofuzade**	**Tatar**	**Tatar**	**Temenna**	**Temenna**

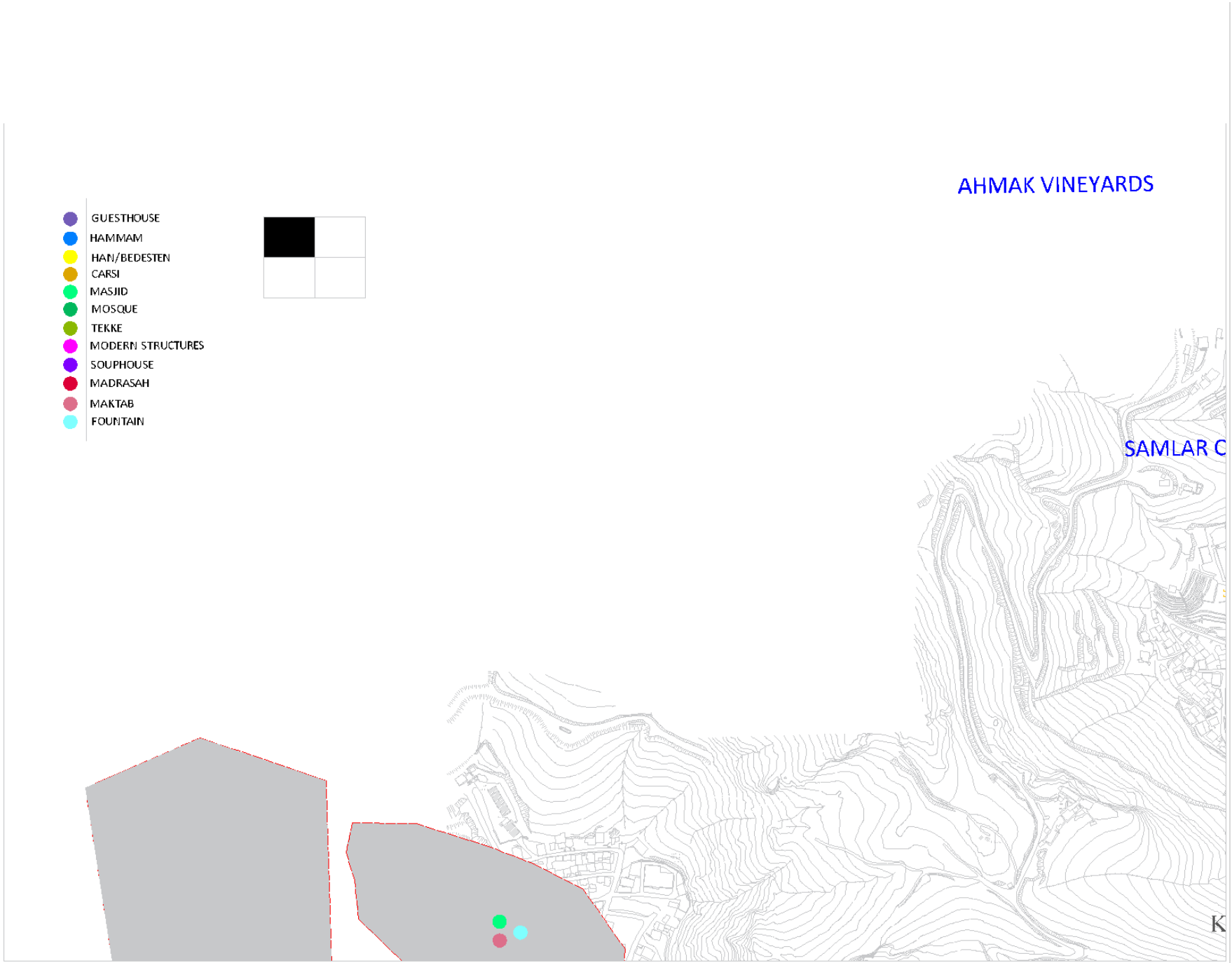
19th century	x	x	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
D	E	E	D	D	D	NA	NA	NA	D	NA	NA	D
x	x	x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x	x	x
x	x	vgm	x	x	x	x	x	x	x	x	x	x
x	x	1975-77:1987	x	x	x	x	x	x	x	x	x	x
x	x	NA	x	x	x	x	x	x	x	x	x	x
x	x	repair needed	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x	x	X
x	x	x	x	x	x	x	x	x	x	x	x	X
x	x	x	x	x	x	x	x	x	x	x	x	X
x	x	x	x	x	x	x	x	x	x	x	x	X
x	x	x	x	x	x	x	x	x	x	x	x	X
x	x	x	x	x	x	x	x	x	x	x	x	X
x	x	x	x	x	Saadi Celebi	x	x	x	x	x	x	X
x	x	x	x	x	1018	x	x	x	x	x	x	X
x	x	x	x	x	1602	x	x	x	x	x	x	X
1473	1567	NA	1630	1630	1630	NA	NA	NA	NA	NA	NA	1494
1469	1567	1523	1609	1609	NA	1822	NA	NA	NA	1468	1468	1494
Kethuda Husameddin Aga	Kaya Pasa	M. O Haci Ahmet	Feyzullah Celebi	Feyzullah Celebi	Feyzullah Celebi	NA	K. E. E.H. Osman Aga	S. E. H.Mehmet	NA	NA	NA	Haci Mustafa Celebi
Stone	Stone	NA	Stone	NA	Wooden / Stone	NA	Stone	Stone	NA	Stone	Stone	NA
Temenna	Temenna Mosque	Temenna Masjid	No name	No name	No name	Ucler Tekke	No name	No name	Mesudiye	Acem Ali Aga Fountain	Torumtay-Seyma Street	No name
Maktab	Mosque	Masjid	Fountain	Maktab	Mosque	Tekke	Fountain	Fountain	Madrasah	Fountain	Fountain	Fountain
1	s	s	1	1	1	s	s	s	s	s	s	1
Temenna	**Temenna**	**Temenna**	**Ucler**	**Ucler**	**Ucler**	**Ucler**	**Ucler**	**Ucler**	**Ucler**	**Ucler**	**Ucler**	**Uzun Mustafa**

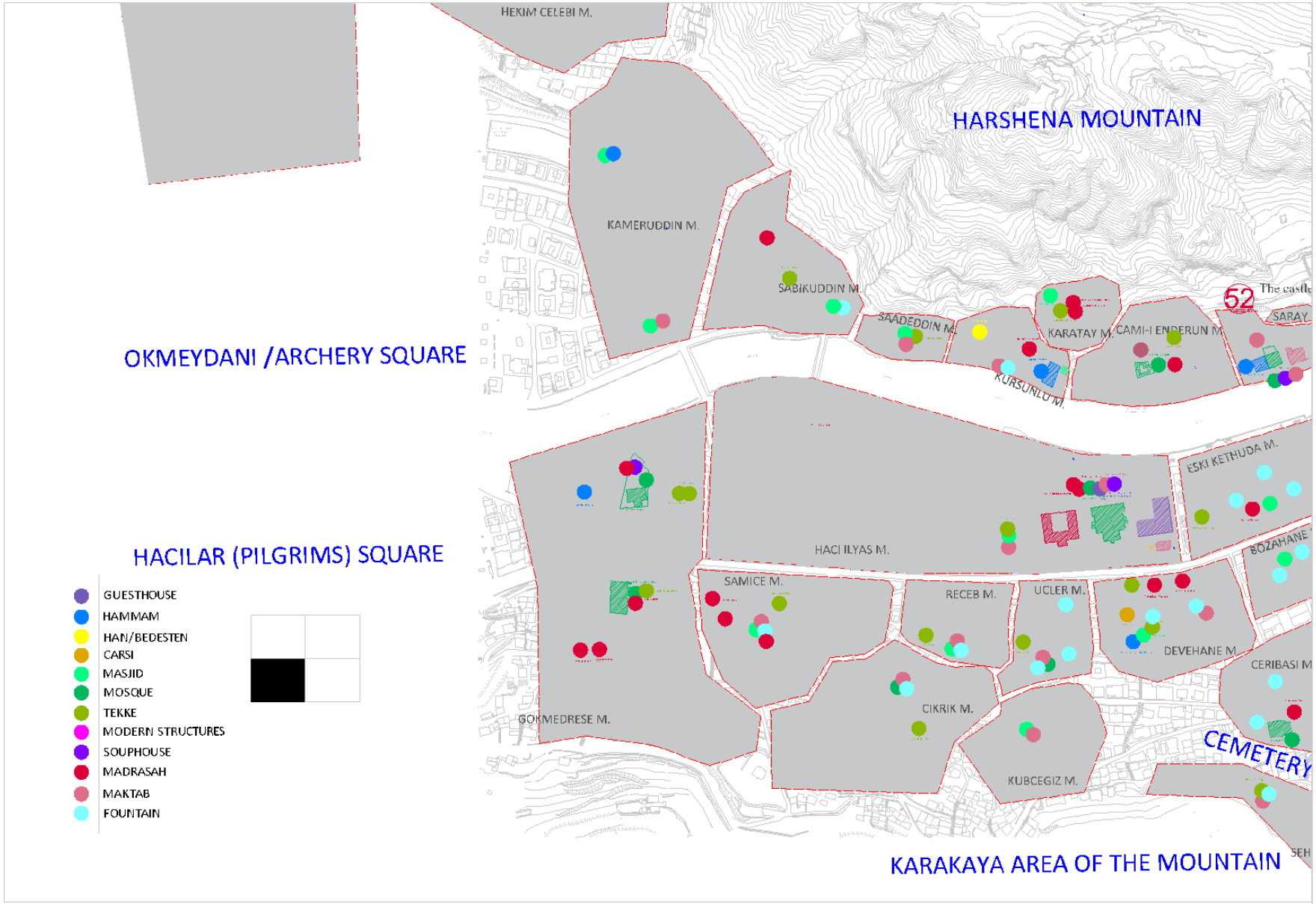
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
D	D	E	D	D	D	E	E	E	D
x	x	x	x	x	x	1622	x	x	x
x	x	x	x	x	x	Madrasah	x	x	x
x	x	x	x	x	x	x	x	NA	x
x	x	x	x	x	x	x	x	ii. Abdulhamit era	x
x	x	x	x	x	x	x	x	1688; 1892	NA
x	x	x	x	x	x	x	x	repair needed; demolished	Demolished
X	X	x	x	x	x	x	x	x	x
X	X	x	x	x	x	x	x	x	x
X	X	x	x	x	x	x	x	x	x
X	X	x	x	x	x	Government	Government	x	x
X	X	x	x	x	x	1967	1967	NA	x
X	X	x	x	x	x	1939	1939	YES	x
X	By grandsons of founder	x	x	x	x	x	x	x	x
X	NA	x	x	x	x	x	x	x	x
X	No date	x	x	x	x	x	x	x	x
1494	1494	NA	NA	NA	NA	1412	1412	1482	x
1494	1494	end of 15 c.	1703	1909	1670	1412	1412	1482	1554
Haci Mustafa Celebi	Haci Mustafa Celebi	NA	NA	NA	NA	Yakup Pasa	Yakup Pasa	Gumusluzade Ahmet Pasha	Yakup Efendi
NA	NA	NA	NA	NA	Stone	Stone	Stone	Stone	NA
No name	No name	Pir Mehmed Celebi (Pazar) Mosque	H. B.Hac Hafiz Hasan Efendi	H. Mehmed Emin Efendi Madrasah	No name	Yakup Pasa Tekke	Yakup Pasa (Cilehane) Mosque	Pir Ilyas Masjid and Tomb	Kusbaz Tekke
Maktab	Masjid	Masjid	Maktab	Madrasah	Fountain	Tekke	Mosque	Masjid / Tekke	Tekke
1	1	1	s	s	s	1	1	s	s
Uzun Mustafa	**Uzun Mustafa**	**Uzun Mustafa**	**Uzun Mustafa**	**Uzun Mustafa**	**Uzun Mustafa**	**Yakup Pasa**	**Yakup Pasa**	**Yakup Pasa**	**Yakup Pasa**

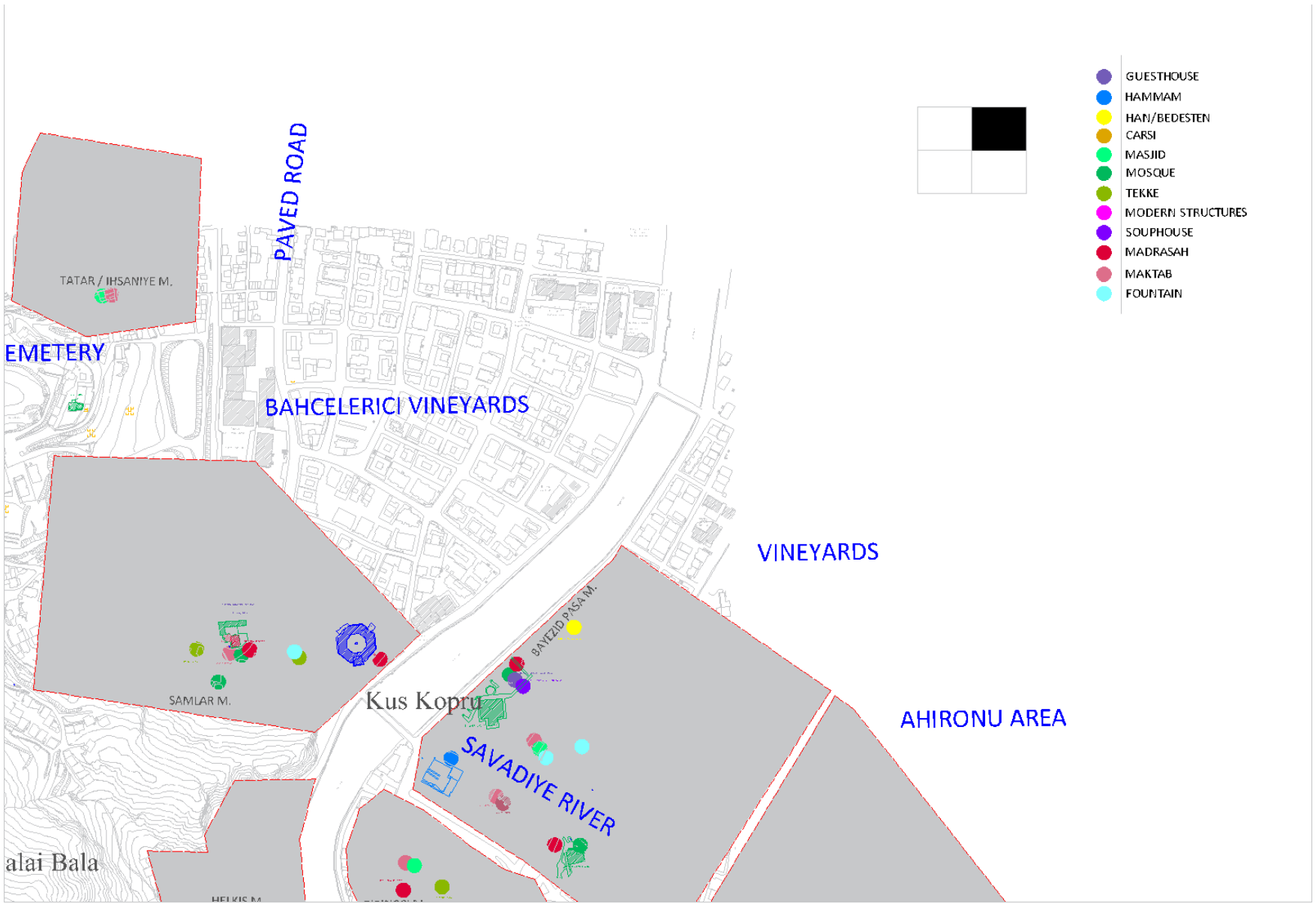
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1649
D	E	D	D	D	D	D	D	D	E	D
x	1412; 16th	1864;1882	x	x	x	x	x	x	x	x
x	tekke; madrasah	Fetvahane; Maktab	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	1991	x
x	x	b. 1882	x	b. 1882	b. 1882	x	x	x	NA	x
x	x	deserted	x	deserted	deserted	x	x	x	restoration	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x
x	Government	x	x	x	x	x	x	x	Turk Tarih Kurumu	x
x	1967	x	x	x	x	x	x	x	1945	x
x	1939	x	x	x	x	x	x	x	1939	x
x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	NO
x	x	x	x	x	x	x	x	x	x	1649
x	x	1413	1413	1413	1413	x	x	x	had waqf 1530	NA
1481-1512	1622	1413	1882	1413	1413	NA	NA	1819	1309	1520
x	NA	Yakut Pasa	Yakut Pasa	Yakut Pasa	Yakut Pasa	NA	NA	NA	Anber Aga and Ahmed Bey	Nuh Bey
Stone	Stone	Stone	Stone	Stone	Stone	NA	NA	Wooden	Stone	NA
No name	Yakup Pasa	Yakutiye Tekke	No name	No name	No name	Asagi Bazaar	Bayram Pasha Han	Copluce Madrasah	Darussifa/ Bimarhane	Nuh Bey Daru' l Kurra
Fountain	Madrasah	Tekke	Masjid	Soup house	Guesthouse	Carsi	Han	Madrasah	Madrasah /Hospital	Madrasah
1	1	1	1	1	1	s	s	s	s	s
Yakup Pasa	**Yakup Pasa**	**Yakutiye**	**Yakutiye**	**Yakutiye**	**Yakutiye**	**Yakutiye**	**Yakutiye**	**Yakutiye**	**Yakutiye**	**Yakutiye**

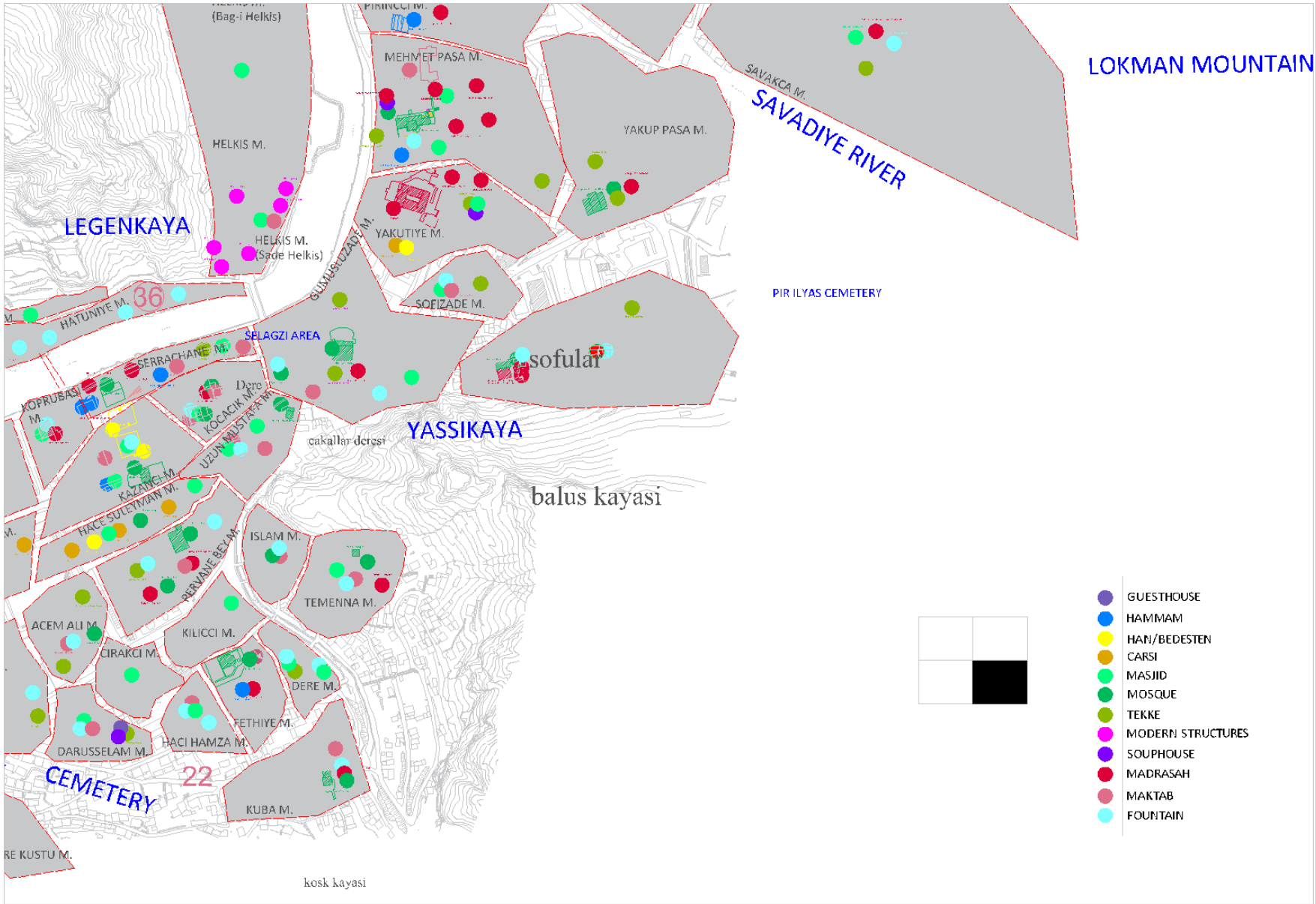
APPENDIX 5.13. Map of Mahallas and Service Buildings in detail




GUESTHOUSE
HAMMAM
HAN/BEDESTEN
CARSI
MASJID
MOSQUE
TEKKE
MODERN STRUCTURES
SOUPHOUSE
MADRASAH
MAKTAB
FOUNTAIN
AHMAK VINEYARDS
SAMLAR C


HEKIM CELEBI M.
HARSHENA MOUNTAIN
KAMERUDDIN M.
SABIKUDDIN M.
SAADEDDIN M.
KARATAY M.
CAMI-I ENDERUN M.
52
The castle
SARAY
KURSUNLU M.
OKMEYDANI /ARCHERY SQUARE
ESKI KETHUDA M.
HACILAR (PILGRIMS) SQUARE
HACI ILYAS M.
BOZAHANE
SAMICE M.
RECEB M.
UCLER M.
DEVEHANE M.
CERIBASI M
CIKRIK M.
GOKMEDRESE M.
CEMETERY
KUBCEGIZ M.
SEH
KARAKAYA AREA OF THE MOUNTAIN
GUESTHOUSE
HAMMAM
HAN/BEDESTEN
CARSI
MASJID
MOSQUE
TEKKE
MODERN STRUCTURES
SOUPHOUSE
MADRASAH
MAKTAB
FOUNTAIN


GUESTHOUSE
HAMMAM
HAN/BEDESTEN
CARSI
MASJID
MOSQUE
TEKKE
MODERN STRUCTURES
SOUPHOUSE
MADRASAH
MAKTAB
FOUNTAIN
PAVED ROAD
TATAR / IHSANIYE M.
EMETERY
BAHCELERICI VINEYARDS
VINEYARDS
SAMLAR M.
Kus Kopru
BAYEZID PASA M.
AHIRONU AREA
SAVADIYE RIVER
alai Bala


LOKMAN MOUNTAIN
SAVADIYE RIVER
SAVAKCA M.
PIR ILYAS CEMETERY
LEGENKAYA
YASSIKAYA
SELAGZI AREA
sofular
balus kayasi
cakallar derasi
kosk kayasi
(Bag-i Helkis)
HELKIS M.
HELKIS M. (Sade Helkis)
MEHMET PASA M.
YAKUP PASA M.
YAKUTIYE M.
SOFIZADE M.
GUMUSLUZADE M.
HATUNIYE M.
36
SERRACHANE M.
KOPRUBASI M.
Dere
KOCACIK M.
UZUN MUSTAFA M.
KAZANCI M.
HACE SULEYMAN M.
PERVANE BEY M.
ISLAM M.
TEMENNA M.
ACEM ALI M.
KILICCI M.
CIRAKCI M.
DERE M.
FETHIYE M.
HACI HAMZA M.
DARUSSELAM M.
CEMETERY
22
KUBA M.
RE KUSTU M.
GUESTHOUSE
HAMMAM
HAN/BEDESTEN
CARSI
MASJID
MOSQUE
TEKKE
MODERN STRUCTURES
SOUPHOUSE
MADRASAH
MAKTAB
FOUNTAIN

APPENDIX 5.14. Lists and details of other mahallas in Amasya

1- Cikrik Mahalla

Mahalla was also called Seyh Kirik and Hankah Mahallas. It was named after Seyh Kirik Mehmet Celebi who lived here. There was a mosque, maktab, a fountain with waqfs. There was a tekke which was built in 1150 (Yasar, 2004).

2- Cirakci Mahalla

This mahalla was originally part of Pervane Bey Mahalla. Cirakcizade Ahmed Celebi lived here and built a masjid with waqfs in 1550, therefore, it was named after them (Yasar, 2004).

3- Hace Suleyman Mahalla

This mahalla was named after Hace Suleyman Celebi who built a masjid with its waqf in 1473. Their son built a masjid in 1507. Ali Aga also built a stone masjid with this waqf 1485. On the east of mahalla, Osman Bey built a han in 1748 to donate to a waqf of a madrasah. Sigir Bazar, Saman Bazar, and Bakkallar Carsi were here (Budak, 2015; Yasar, 2004).

4- Hatuniye Mahalla

The mother of Sultan Bayezid, Bulbul Hatun lived here and built a stone mosque, soup house, maktab with its waqf in 1510. Cukur (Yildiz) Hammam in this mahalla was built in c.550 during the Seljuk era, however, later became a part of kulliyah. There was a masjid that was built in 1418. There is also a fountain built by Idizade Akif Mustafa Efendi (Batir 2014; Budak, 2015; Gun, 1993; Sahin, 2020; Yasar, 2004).

5- Hekim Celebi Mahalla

Mahalla was named after Hekim Mahmud Celebi who lived here and built the masjid around 1485. Around the same time, there was a fountain and maktab built by different people. In the 1876 war, this mahalla was destroyed totally and orphans of the mahalla were moved to another mahalla (Yasar, 2004).

6- Islam Mahalla

Mahalla was named after Eslem Hatun (Miss) who founded a waqf to build a masjid, maktab, and fountain together for the mahalla in 1444. They acted as a guardian of this mahalla and provided three main services. This mahalla has one service core (Akbas, 2018; Yasar, 2004).

7- Kilicci Mahalla

Kilicci Yusuf Bey lived here and built a masjid next to the river with its waqf in 1511 (Yasar, 2004).

8- Tatar Mahalla

It was also known as Ihsaniye Mahalla. Tatar[76] people lived here therefore mahalla was named after them. They built a masjid around 1878 and Hasan Efendi built a maktab in 1898 (Yasar, 2004).

9- Savakca Mahalla

There was a tekke of Abdurrahman Halveti and they built a fountain next to it. This mahalla was named after a structure that is part of the fountain. Murad Aga built a masjid here in 1620. There was also a wooden Rahmaniye (Abdurrahman) Madrasah built in 1792. It was demolished in 1859 (Catal, 2009; Yasar, 2004).

10- Sofizade Mahalla

This mahalla was named after Sofi Mahmud Celebi who lived here and built masjid in 1432. Sahbula Hatun built a maktab and a fountain with waqfs next to it in 1439. There was also a tekke here (Yasar, 2004).

11- Sehre Kustu Mahalla

This mahalla was named after the nickname of a religious leader who lived here. When they moved here, their followers built a tekke, masjid, and a fountain here (Budak, 2015; Yasar, 2004).

12- Saray Mahalla

Kursunlu Han by Danishmend era ruler Yagibasan Gazi was built in this mahalla in 1165. The old palace of Seljuk ruler Sultan Mesud was located here. Ahmed bin Mesud built a masjid and

[76] Tatar is ethnicity.

fountain next to River Yesilirmak with its waqf. Yukari Hammam was located here. Ali Celebi Daru'l Kurra was built in 1479 (Yasar, 2004).

13- Saadeddin Mahalla

The mahalla was named after Saadeddin Celebi who lived here. Their son built a masjid and tekke in 1473. Ali Celebi built a maktab close the those in 1478 (Yasar, 2004).

14- Hizir Pasa Mahalla

Hizir Pasha built a mosque, madrasah, and maktab in one structure as a kulliyah in 1466 that is named after them. They also built a hammam called Sunbul Hammam which was named after a flower that blooms the time local women visit the area. Also, Mutesellim Hizir Aga built an Ehlullah, tekke, a maktab, and fountain in 1651 (Er, 2009; Oltulu, 2006; Yasar, 2004).

15- Koprubasi Mahalla

It was located next to the Alcak Bridge which was named the mahalla. In 1748, Governor Osman Bey built a masjid; however, it was ruined later due to lack of maintenance. Another Governor in 1883 rebuilt it. Governor Osman Bey also built Daru'l Hadis, Library, and a fountain. There was a twin hammam called Alaca Hammam in this mahalla (Catal, 2009; Yasar, 2004).

16- Sabikuddin Mahalla

It was named after Sabikuddin Ebubekir who lived here. Nureddin Bey founded waqf to build a masjid and a fountain in 1340. On the east of this masjid, Ehli Hatun built a tekke in 1467 with its waqfs. Also, in 1801, Tayyar Pasa built a madrasa and in 1832, Mahmud Efendi built a library however their waqfs disappeared (Budak, 2015; Yasar, 2004).

17- Uzun Mustafa Mahalla

The mahalla was named after Mustafa Celebi who lived in this mahalla until 1500. They built a masjid, a maktab, and a fountain with their waqfs in 1494. The masjid was burned a couple of times but rebuilt by their grandchildren. Pir Mehmed Celebi mosque is at the east border of this mahalla. It was derelict in 1940 and repaired in 1969 (Yasar, 2004).

18- Samlilar Mahalla

This mahalla was named after people from Damascus who immigrated to Amasya and lived here. There was a mosque by Melik Gazi Bey before the Ottomans but turned into ruins in time. Kapi Agasi Ilyas Aga built a stone mosque, madrasa, and maktab in 1495. Also, Buyuk Kapu Agasi Huseyin Aga built madrasah close to it. There was a tekke built in the second half of the 19th century and it was used as a residential building in 1984. It had a fountain next to it (Urak, 1994; Yasar, 2004))

19- Temenna Mahalla

Temenna mahallas Persian poet who lived in this mahalla in 1417. When Husameddin Aga lived here, they built a stone maktab and fountain and spring founded in 1470 and donated its waqf properties in 1473. This maktab was abandoned in the 19th century. Also, Kaya Pasa built a stone mosque with a waqf in 1567. There was also a Temenna Masjid built in 1523 (Catal, 2009; Yasar, 2004).

20- Kameruddin Mahalla

The mahalla was named after a person who lived here until 1244. Sulu Bey built a masjid and hammam which was destructed in 1668. Governor Ali Aga recovered them. When the masjid was burned in a fire in 1730, it was renovated again. Also, next to the river, there was a masjid and a maktab built in 1508 with their waqfs (Yasar, 2004).

21- Uzun Mustafa Mahalla

Uzun Mustafa mahallas were named after an Ottoman ambassador who lived here. They built a masjid, a fountain, and a maktab with their waqf in 1495. The masjid was burned a couple of times but recovered by the grandchildren of Mustafa Celebi. There was also a maktab (1703), a madrasah (1909), and a fountain (Yasar, 2004).

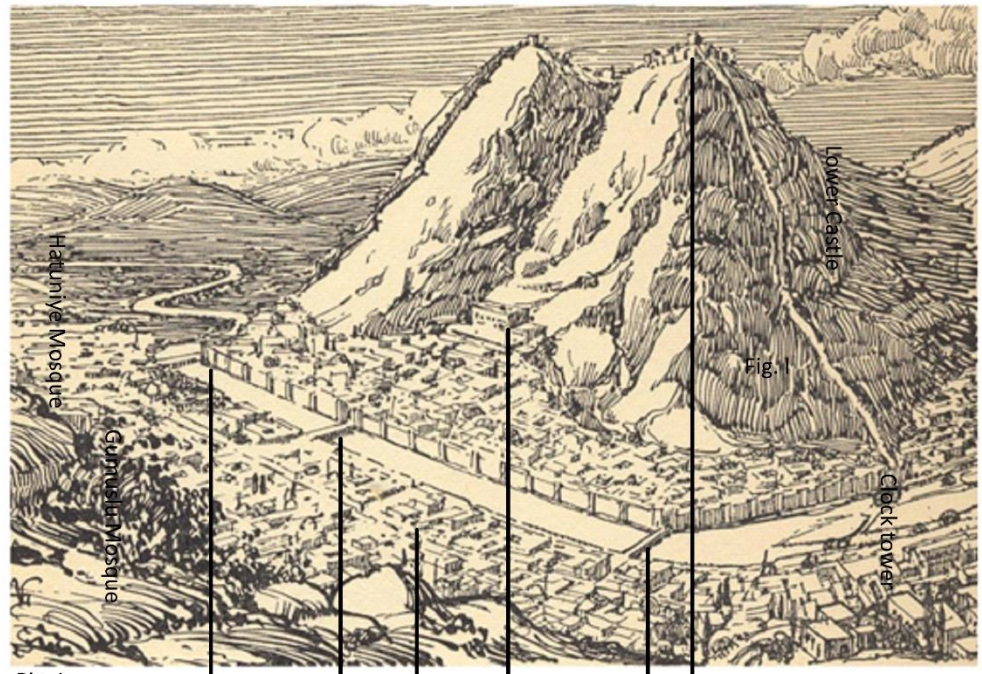
APPENDIX 5.15. List of maktabs in Amasya

Table. 1. List of maktabs of Amasya mentioned in the literature

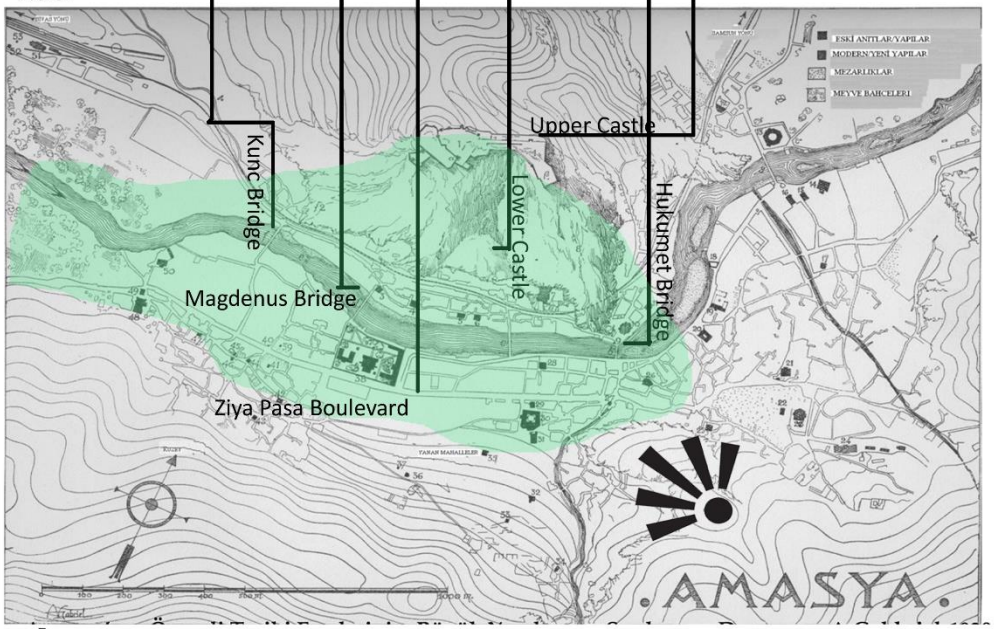
Name of sibyan maktab	Date	Place	Details
1- Temenna	1473	In Temenna Mahalla	• It was abandoned in the 19th century (Catal, 2009; Kaya, 2018).
2- Hatuniye	1509	On the east side of the Hatuniye Mosque	• By the mother of Shahzadah Ahmet Bulbul Hatun (Kaya, 2018) • It was part of a complex (Kulliyah) (Batir, 2014; Yasar, 2004). • It was renovated after damage from earthquakes (Batir, 2014) • It became ibtidai maktab in 1863
3- Hizir Pasa	1466	Next to the Hizir Pasa Mosque in Hizir Pasa Mahalla	• By Hizir Pasa (Kaya, 2018) • It was abandoned later. (Kaya, 2018) • Part of a complex consisted of a mosque a madrasah, a zawiya, 2 hammams, and a fountain (Yasar, 2004)
4- Sultan Bayezid	1485	On the corner of imaret which is on the east of Sultan Bayezid Mosque	• By the order of Sultan Bayezid • It was converted into 'Ibtidai' maktab in 1883 (Kaya, 2018).
5- Sahbula	1437	Next to the masjid in Sofuzade Mahalla	• By Sahbula Hatun (Kaya, 2018) • In ruins (Kaya, 2018)
6- Acem Ali	1468	Next to Acem Ali fountain in Acem Ali mahalla	• By Acem Ali Aga (Kaya, 2018) • Known as Balci Maktab • Built with a fountain (Yasar, 2004),
7- Ali Pasa	1510	On the south of Gumusluzade Mahalla, in Selagzi area	• By Sadrazam (Grand Vizier) Ali Pasha • In 1889, it was converted to women's ibtidai maktab (Kaya, 2018; Yasar, 2004)
8- Kucuk Ali	1495	In Samlar Mahalla	• By Kucuk Kapi Agasi Iyas Aga • In 1909, it was converted to ibtidai maktab • Part of a Kulliyah (Seker, 2011) • It was renovated after damage from earthquakes (Batir, 2014) • Part of a complex consisted of a mosque, a madrasah, and a maktab (Yasar, 2004)
9- No name	848/1444	In Islam Mahalla	• By Eslem Hatun with a masjid, a fountain and its waqfs.
10- No name	900/1494	In Uzun Mustafa Mahalla, on the north of Burma minaret mosque	• Hoca Mustafa Celebi built a masjid, a maktab, and a fountain with their waqfs. • Maktab disappeared (Yasar, 2004).
11- No name	912/1506	Pirincci	• By one of the governors of Sultan, Pirincci Sinan Bey. They lived in this mahalla • Built a masjid and a maktab with its waqfs (Yasar, 2004).
12- No name	1018/1609	Ucler Mahalla	• When the mosque was rebuilt as a stone structure after a fire burnt wooden one, they built a maktab and a fountain next to it with its waqfs properties in different mahallas. • It named the mahalla (Yasar, 2004).
13- No name	937/1530	In Bayezid Pasa Mahalla, On the qibla way of Bayezid Pasa mosque	• It was built with a masjid and a fountain (Yasar, 2004).
14- Jojuyet Maktab	1300/1883	Bayezid Pasa Mosque	• By French Jojuyet with a church, and a fountain. (Yasar, 2004)
15- No name	1316/1898	In Tatar mahalla	• Built by a local next to a masjid (Yasar, 2004).
16- No name	874/ 1469	In Temenna Mahalla	• By Kethuda Husameddin Aga, as a stone maktab and a fountain. Its waqfs were donated in 878/1473 (Yasar, 2004).
17- No name	x	In Cikrik Mahalla	• Mahalla had a mosque, a masjid, and a fountain before the Ottoman era. It existed since the Sultan Mesud era in the Seljuk Empire. Later, a local figure donated its waqfs in the Ottoman era (Yasar, 2004).
18- No name	x	In Haci Ilyas Mahalla	• Haci Ilyas Bey lived in this neighborhood built a maktab and a masjid. And mahalla was named after them (Yasar, 2004).
19- No name	1018/1609	In Haci Ilyas Mahalla	• Maktab was built next to a zawiya and a masjid but disappeared later (Yasar, 2004).

20- No name	x	Haci Hamza mahalla	• Built with a masjid, a maktab, a fountain and its waqfs (Yasar, 2004).
21- No name	x	In Hekim Celebi Mahalla	• A masjid, a maktab, and a fountain were built next to each other by different people a different times (Yasar, 2004).
22- No name	986/1578	In Darusselam mahalla	• When a masjid that was burnt in a fire, was rebuilt, a maktab was added (Yasar, 2004).
23- No name	1259/1843	In Devehane mahalla	• Built with fountain (Yasar, 2004).
24- No name	1029/1619	In Recep Mahalla	• When the mosque burnt in 1011/1602, it was rebuilt in 1029/1619 with a maktab and a fountain (Yasar, 2004).
25- No name	x	In Ziyare Mahalla	• Next to Kecioglu Mosque and a hammam and a zawiya (Yasar, 2004).
26- No name	x	In Ziyare mahalla	• Another maktab, next to a hammam and mosque.
27- No name	883/1478	In Saadeddin mahalla	• Next to a masjid, a zawiya and a pharmacy with its waqfs (Yasar, 2004).
28- No name	847/1443	In Samice Mahalla	• Built with a masjid and a fountain (Yasar, 2004).
29- No name	843/1439	In Sofuzade Mahalla	• After a masjid was built by Mahmud Celebi in 835/1431, a maktab, a fountain, and its waqfs were built next to it in 843/1439 (Yasar, 2004).
30- No name	1105/1693	In Kuba mahalla	• When the madrasa and mosque were ruined in 1079/1668, a mosque was rebuilt in 1080/1669 and a madrasah was rebuilt with a new maktab building (Yasar, 2004)
31- No name	805/1402	In Kazanci Mahalla	• Built with a hammam (Yasar, 2004)
32- No name	914/1508	In Kameruddin Mahalla	• By a local woman with the masjid and its waqfs (Yasar, 2004).
33- No name	871/1466	In Kocacik Mahalla	• Haci Ahmed Celebi known as Kocacik who resided in the mahalla built it with a masjid and a fountain • These structures were burnt and rebuilt (Yasar, 2004)
34- No name	800/1397	In Kubcegiz mahalla	• Built with a masjid (Yasar, 2004)
35- No name	916/1510	In Gumusluzade mahalla, in Selagzi area	• By Ali Pasha with its waqfs (Yasar, 2004)
36- No name	1018/1609	Helkis mahalla	• Built with the masjid and its waqfs (Yasar, 2004) •
37- Copluce Primary School (Yesilirmak primary school)	1906	Not on map	• x
38- Kilicarslan Maktab	1914-1925	Not on map	• It was built as a girl's school then became a mixed school. • In the 1939 earthquake. it was damaged (Kolay, 2013)
39- Mekteb-I Ali-I Idadi		Pirler Park	• After Amasya Mekteb-I Idadi burnt down in 1893/1894, this maktab was built. • It was damaged in the earthquake of 1939 and demolished (Alaca, 2012).

APPENDIX 5.16. Details of Depiction by Albert Gabriel



Pic. J.

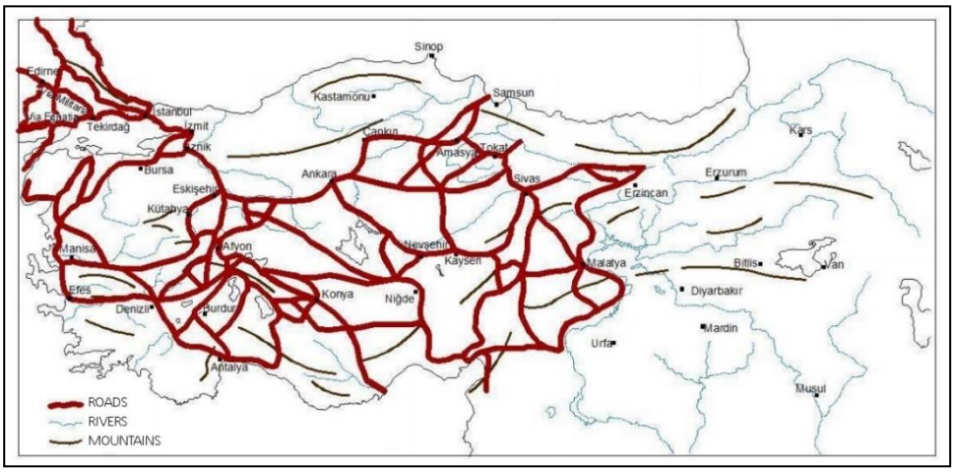


Point of View

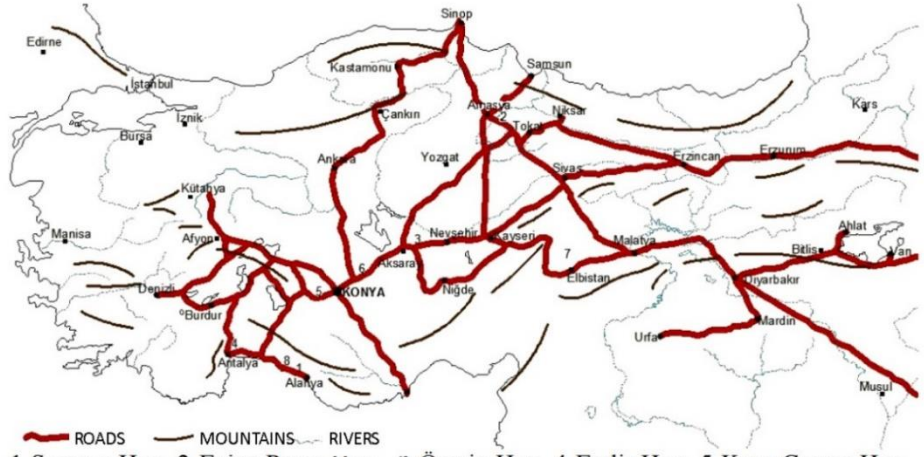
The Area Depicted

References
1- Fig. J. Sketch of Amasya by Gabriel (Tuzcu, 2007)
2- Map of Amasya by Gabriel in 1928 (Tuzcu, 2007)

APPENDIX 5.17. Maps of Trade Routes pass through Amasya

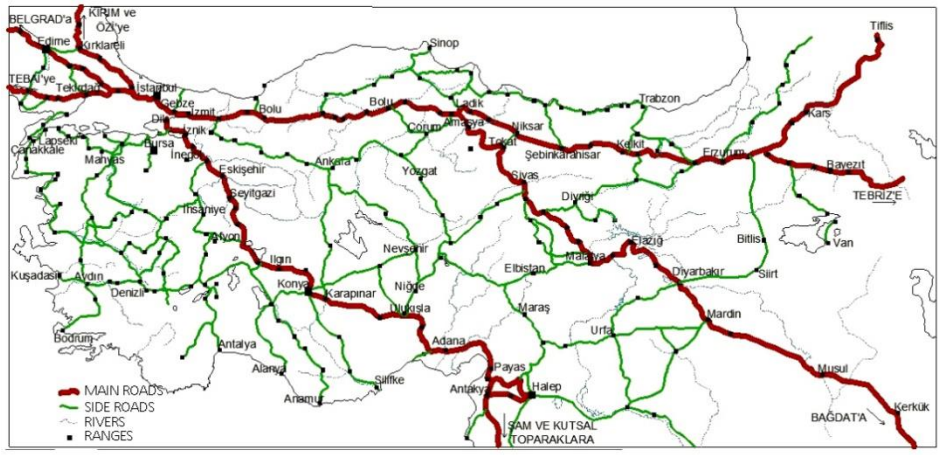


Important roads in Roman Era (Guzelci, 2012)



1-Şarapsa Han 2-Ezine Pazar Han 3-Öresin Han 4-Evdir Han 5-Kuru Çeşme Han
6-Sultan Han 7- Eshab-ı Keyf Han 8-Alara Han

Seljuk Era important caravan roads and hans (Guzelci, 2012)



Important roads of Ottoman Era (Guzelci, 2012)

APPENDIX 5.18. List of hans and market areas in Amasya

Table 1. List of hans and bedesten of Amasya

NAME OF HAN or BEDESTEN	WHEN	WHERE	BY WHO
Rahtvan Mehmet Pasa Han	1699	Hoca Suleyman Mahalla	Rahtvan Mehmed Pasa
Haci Osman Bey Han	1748	Hoca Suleyman Mahalla	Haci Osman Bey
Kapan Han	x	Yukari Bazaar	x
Bayram Pasa Han	x	Yakutiye Mahalla	x
Bedesten	1485	Yukari Bazaar area	Kapi Agasi Huseyin Aga
Yagibasan Han	Danishment Era	Kursunlu Mahalla	*Named mahalla

Table 2. List of market areas in Amasya

NAME OF CARSI or BAZAAR	WHEN	WHERE
Kagni Bazaar	x	Devehane Mahalla, around Aydin Masjid and Hammam
Kanli Bazaar		Hoca Suleyman Mahalla
Ibadullah Carsi	1525	Bozahane Mahalla
Bakkallar Carsi	x	Hoca Suleyman Mahalla
Ekin/Saman Bazaar	x	In Hoca Suleyman Mahalla
Sigir Bazaar/Hayvan Bazaar	x	x/Around Pir Mehmed Celebi and Atabey Madrasahs, Hace Suleyman Mahalla
Asagi Bazaar	x	Yakutiye Mahalla, Bayram PAsah Han Area
Yukari Bazaar	x	on Tokat Samsun road, close to Halife Gazi Madrasah to Selagzi area
Kuyumcular Carsi	x	Around Tashan
Hallaclar Carsi	x	Around Tashan
Ipekciler Carsi	x	Around Tashan
Kavukcular? Carsi	x	Around Tashan
Manifaturacilar /Bezzaz Carsi	x	x
Saraclar Carsi	x	x
Hazain/ayakaabilcilar carsi	x	x

APPENDIX 5.19. List of madrasahs in Amasya

Table 1. Lists of madrasahs of Amasya

Name of Madrasah`	Date	Place	Details
1- **Sultan Bayezid Madrasah**	1486	In front of Magdenus bridge, on the west side of Sultan Bayezid Mosque	Built by the order of Sultan Bayezid, therefore also known as 'Medreseyi Sultani' (Catal, 2009). Earthquake in 1579 damaged the madrasah and the imaret of the Kulliyah (Senol, 2010).
2- **Sultan Daru'l Kurra**	891/148	On the north of imaret and south of the guesthouse in the complex.	Became deserted in 1264/1847. 1296/1878 became residents of officials (Yasar, 2004).
3- **Kasifiye**	1762	In Eski Kethuda Mahalla, the west side of the Cukur church, on the east of Abdullatif Library	It was built because of the will of a local in 1761 (Catal, 2009). It was wooden and rebuild in 1244/1848 (Yasar, 2004). When it was damaged it was rebuilt in 1304/1886 by a local woman (Yasar, 2004)
4- **Cami-I Enderun**	x	X	(Catal, 2009)
5- **Yukari Yakacik**	x	X	(Catal, 2009)
6- **Asagi Yakacik**	x	X	(Catal, 2009)
7- **Sarachane**	1883	On the west of Sarachane Mosque, inside a residential house (konak), next to Yesilirmak River.	Built by a local as a wooden building (Catal, 2009; Yasar, 2004)
8- **Recep Efendi**	x	X	(Catal, 2009)
9- **Pirincci**	x	X	(Catal, 2009)
10- **Atabey**	1327	Next to the river, in Sigir Bazaar	Built by a high-rank soldier (Catal, 2009). In 1877, it is not in use (Catal, 2009; Er, 2009). It was damaged by the earthquake (Yasar, 2004). The building disappeared and later in the area shops were built (Yasar, 2004). In 1294/1877, the area became an empty land (Yasar, 2004).
11- **Osman Baba**	x	X	(Catal, 2009)
12- **Benderli**	1871	In Kocacik Mahalla, in the street behind Ignecizade Tomb	Built by the merchant with its waqfs (Catal, 2009). It was damaged in a fire in 1893 and rebuilt as a madrasah in 1900 (Catal, 2009).
13- **Bayezid Pasa**	x	X	(Catal, 2009)
14- **Ayas (Kucuk Aga)**	1495	In Samlar Mahalla, in front of Iyas Aga Mosque property, located on the northwest of the mosque	By Iyas Aga with its waqfs (Catal, 2009; Er, 2009). Part of Kulliyah with a mosque and a maktab (Oltulu, 2006)
15- **Osman Bey**	x	X	(Catal, 2009)
16- **Yakup Pasa**	1622	In Yakup Pasha Mahalla	It was built as a *halvetiyye* order tekke by Yakup Pasha in 1412 and converted into a madrasah in the 17th century (Alaca, 2012; Catal, 2009)
17- **Abdullah Pasa**	1485	In Sofular Mahalla, in the courtyard of Abdullah Pasa Mosque	It was built as a *Daru'l Hadis* and its waqfs were donated in 1501 by a son of Abdullah Pasha (Catal, 2009)
18- **Abdullah Pasa Daru'l Kurra**	911/1505	In Sofular mahalla, on the east of the Abdullah Pasa mosque	(Yasar, 2004).
19- **Hizir Pasa**	1466	In Hizir Pasa Mahalla, in a konak(residence) in Ok Meydani (Square)	It was built by the son of commander, Hizir Pasha (Catal, 2009; Er, 2009). Survived until today (Oltulu, 2006)
20- **Devehane**	x	x	(Catal, 2009). It was a stone structure (Kaya, 2018)
21- **Mehmed Pasa**	1495	In Mehmed Pasa Mahalla, in the courtyard of Mehmed Pasa Mosque on the north and east of the mosque	By Mehmed Pasa with these waqfs (Catal, 2009; Yasar, 2004). Stone structure (Yasar, 2004)
22- **Yakutiye**	x	x	(Catal, 2009)
23- **Alaca Yahya**	1373	On the east side of Sarachane Mosque, next to Yesilirmak River	Built by Amasya Emiri Sahgeldi Pasha with its waqfs (Catal, 2009). It was rebuilt by Alaca Yahya, teacher of Shahzadah, in 1470 (Catal, 2009; Yasar, 2004). In 1855, it was demolished and replaced by a 'rustiye' maktab. That

				building burned in a fire in 1893 and was replaced by 'ibtidai' maktab in 1910 (Catal, 2009).
24-	**Bekir Pasa**	1751	In Koprubasi Mahalla, on the east side of Rum Church.	It was funded by a high-rank soldier with its waqfs (Catal, 2009). It was built as a 'Daru'l Hadis'. 1883, it was in detrimental condition. In 1891, the front façade was demolished. Shops were built below, and rooms were built in the upper part (Catal, 2009).
25-	**Burma Minare**	1909	It was next to the fountain on the east side of Burma Minare Madrasah, next to Ignecizade tomb	It was a courthouse, then became a sibyan maktab in 1703 by a local architect (Catal, 2009). In 1909, a local funded a madrasah in the place of the maktab (Catal, 2009). Its waqfs owned shops (Yasar, 2004)
26-	**Tekke Madrasah**	1832	Next to the Pir Ilyas Cemetery.	It was built in the place of Cevikce Tekke in 1832 (Catal, 2009).
27-	**Copluce Madrasah**	1819	In Yakup Pasa Mahalla, next to the 'ibtidai' maktab, in front of Bimarhane	Built by a governmental official with its waqfs It was wooden. Its waqfs had 6 shops (Yasar, 2004).
28-	**Haci Hamza Efendi**	1894	In Bayezid Pasa Mahalla, the west of Karabagli el-Hac0 Hamza Efendi Mosque (Catal, 2009).	It was a wooden structure (Yasar, 2004)
29-	**Husamiye**	1453	In Kuba Mahalla, On the qibla side of the mosque in the south	Built by a 'halvetiyye' order sheik with its waqfs (Catal, 2009). It was damaged from the 1011/1602 fire. Converted into a tekke after but burnt again in 1099/1687 and converted back into madrasa in 1125/1713 and since 1241/1825 it is disappeared totally and became green empty land (Yasar, 2004). It was deserted since 1826 (Catal, 2009).
30-	**Halifet**	1225	In Samice Mahalla, on the west of Halifet Gazi Tomb	The second madrasah was built in Amasya (Catal, 2009). By a Seljuk ruler (Catal, 2009). It was damaged in the earthquake in 1647 and renovated in 1888 (Catal, 2009; Duman, 2010; Er, 2009; Senol, 2010). Renovated as a wooden structure (Senol, 2010). 1011/1602 fire and 1057/1647 earthquake damaged it in a great deal, but it was rebuilt as a wooden structure (Yasar, 2004). Later it was renovated a couple of times over time and the final restoration took place in 1305/1887 (Yasar, 2004)
31-	**Hayriye**	1795	In Gokmadrasah Mahalla	Built by Amasya Mutesellim (governor) (Catal, 2009). Known as 'Yukari Bakacak Madrasah' (Catal, 2009). It was wooden and surrounded by gardens (Yasar, 2004)
32-	**Darulhadis**	1527	In Pirincci Mahalla,	Funded by the son of a qadi as a 'Daru'l Hadis' (Catal, 2009). It was damaged in a fire in 1730 (Catal 2009). In 1738, it was rebuilt and today it is in ruins (Catal, 2009). It was a wooden structure (Yasar, 2004). 1011/1602 burnt, 1018/1609 rebuilt, 1098/1686 and 1143/1730 burnt, 1100/1688 and 1151/1738 rebuilt (Yasar, 2004)
33-	**Dograkiye**	1224/1495	On the west of Mehmed Pasa Mosque, next to Yesilirmak River and next to the Inekler Tomb, in Pirincci mahalla	A Seljuk Governor was built as a masjid, then a mosque was built next to it in the Ottoman era. In 1495, the masjid was converted to madrasah (Catal, 2009; Duman, 2010; Er, 2009). It was demolished by a flood of the river in 1875 (Senol, 2010)
34-	**Rahmaniye**	1792	On the east of Savakca Mahalla, in the skirts of a mountain, around Abdurrahmani Erzincani Tombs	It was demolished in 1859 (Catal, 2009). It was a wooden structure and disappeared in 1275/1858 (Yasar, 2004)
35-	**Sungurlu**	1750	On the west of Burma Minare Mosque, in Pervane Bey Mahalla.	Built by a local and named after them (Catal, 2009).
36-	**Sofular**	x	In Sofular Mahalla, on the west of Abdullah Pasa Mosque, behind the Darulhadis.	There is a classroom behind here, which was built in 1892 (Catal, 2009).
37-	**Torumtay**	1267	On the west of Gokmadrasah Mahalla, in the mosque which is located on the qibla side of the Torumtay Tomb	Built by Amasya Governor Seyfeddin Torumtay (Catal, 2009; Er, 2009)
38-	**Tayyar Pasa**	1803	On the northwest of the Meydan Bridge, next to	Built by a pasha with its waqfs and named after them (Catal, 2009). Wooden building with a garden surrounding it. It was repaired by a pasha in 1871 and repaired again by another pasha in 1895 (Catal, 2009). It is

	Hatun Tekke, next to Yesilirmak	known as a 'meydan koprusu medresesi' (meydan bridge madrasah) (Yasar, 2004). In 1288/1871 it was renovated (Yasar, 2004)	
39- Osmaniye	1736	In 'Icerisehir' In Karatay Mahalla, next to the Haci Mahmud Celebi Tekke	It was built by a local figure with its waqfs and is known as 'Tekke Medrese'. First, rooms were added to the tekke, and later, the tekke was converted to a madrasah (Yasar, 2004). Totally disappeared (Yasar, 2004)
40- Fatimiye	1740	On the southeast of the Gumusluzade Mosque, in the place of the Gumusoglu Tekke	By an Ottoman lady in 1740 and its waqfs were donated in 1745. Known as 'Medrese-I Fatimiye' after patron or Gumuslu Medrese (Catal, 2009). It was built as a wooden structure (Yasar, 2004)
41- Feyziye	1151/1738	In Gokmadrasah Mahalla, opposite to Hayriye Madrasa	In the name of a soldier from Amasya with its waqfs. It was damaged after its waqfs disappeared (Catal, 2009). It was a wooden building. it was burnt in 1207/1792, in 1208/1793 rebuilt and 1209/1794 waqfs donated. It was renovated in 1288/1871 (Yasar, 2004). Its waqfs owned houses and shops (Yasar, 2004).
42- Kadi	1495	In Fethiye Mahalla, close to the mosque	By a military judge (kazasker). It waqfs were donated by their son in 1505 (Catal, 2009). It is disappeared (Catal, 2009). Some parts were stone, some parts were wooden, and wooden parts were damaged later (Yasar, 2004). Waqfs were donated in 911/1505. Kadi Hamam was its waqfs. In 1031/1621 it was repaired (Yasar, 2004)
43- Kapancizade	1842	In Devehane mahalla, on the northwest edge of Kagni Bazaar, around Sultan Bayezid Maktab	By a famous teacher from Amasya with its waqfs and named after them (Catal, 2009). It was a wooden building (Yasar, 2004). In 1325/1907, it was burnt in fire became an empty land (Yasar, 2004).
44- Mehmed Bey Medrese	1891	On the northwest of the Mehmed Pasa Mosque	By Mehmed Bey, grandson of Mehmed Pasha. It was a wooden structure (Yasar, 2004)
45- Seyh Mehmed Aga Daru'l Kurra	1073/1662	On the south of the Mehmed Pasa Mosque, on the street behind the Mustafa Hammam	Built with its waqfs 10 shops and a mill (Yasar, 2004)
46- Narli Bahce	1653	On the west side of a cemetery in front of the Shahzadahs Tomb	Amasya city Kethuda (chief steward) with its waqfs. Known as Suleymani Madrasah (Yasar, 2004).
47- Yorguc Pasa	1431	In Gokmadrasah Mahalla, in the Yorguc Pasa Mosque, in front of it	It consisted of a couple of rooms next to the mosque. By Yorguc Pasha. 12 wooden room was added in 1634. It was demolished in 1855 (Catal, 2009; Yasar, 2004).
48- Gokmadrasah	1267	In Gokmadrasah Mahalla	Built in the Seljuk era (Duman, 2010). Part of a kulliyah consisted of a tomb and a mosque (Seker, 2011). It gave its name to the mahalla (Inan Ocak, 2018)
49- Darussifa/ Bimarhane	1309	In Yakutiye mahalla	It was madrasah for medical education (Duman, 2010). First Darrussifa in Anatolia (Duman, 2009; Er, 2009). Many doctors are educated here (Ocak Inan, 2018). Its waqfs were founded in 1312 (Unver, 1938, cited in Inan Ocak, 2018). It was built in the Ilhanli period (Batur, 2014)
50- Buyuk Kapi Agasi Madrasa (Huseyin Aga)	1489 or 1488	In front of Kurtoglu Han in Pirincci mahalla (Kozanoglu, 2006).	Survived today. Built by Kapi Agasi Huseyin Aga (Er, 2009). Restored after earthquakes (Oltulu, 2006). It waqfs was a Bedesten (Yasar, 2004).
51- Nuh Bey Daru'l Kurra	927/1520	In Yakutiye neighborhood on the right side of Bimarhane next to Yakutiye zawiya	By Nuh Bey. Burnt in 1059/1649 and disappeared (Yasar, 2004).
52- Mahmud Pasa Daru'l Kurra	807/1404	In 'Icerisehir' in Karatay mahalla, next to the Mahmud Celebi tekke	(Yasar, 2004)
53- Ali Celebi Daru'l Kurra	884/1479	In Icerisehir, Kursunlu mahalla, on the west of the mosque	Disappeared now. Built with its waqfs (Yasar, 2004)
54- Ceribasi Daru'l Kurra	1281/1864	In Ceribasi mahalla below the mosque	(Yasar, 2004)
55- Sultan Hatun Daru'l Kurra	911/1505	In Acem Ali Mahalla, close to the Bali Bey mosque	Built with its waqfs. Disappeared (Yasar, 2004)

APPENDIX 5.20. List of tekkes and tombs in Amasya

Table. 1. List of tekkes of Amasya mentioned in literature.

Name	Date	Place	By	Details
1-Pir Ilyas Tomb	x	In the Sarayduzu area, close to the palace	Gumusluzade Ahmet Pasha	For Halveti Sheikh Pir Sucaeddin Ilyas. Stone had prayer space, damaged by earthquakes, repaired by waqfs, still exists today (Budak, 2015).
2-Yakup Pasa Tekke (Cilehane Mosque)	1412	In Pirler Area, on the north of Pir Ilyas tombs, inside Yakup Pasha Konak	Pazarlioglu Yakub Pasha	For Muftu Gumusluzade Abdurrahman Celebi. Many sheiks were raised here and it was known as a sheik factory. In 1622, it was used as a madrasah (Budak, 2015; Ipek, 2016). It was damaged in different earthquakes. 1939 earthquake damaged it totally and it was repaired in 1967. It survived with its original architecture (Ipek, 2016).
3-Mehmet Pasa Tekke and Mosque	1486	In Mehmet Pasha Mahalla, south of mosque on the road now.	Lala(teacher) of shahzadah, Hizir Pasazade Mehmet Pasa	For Sheikh Habib Karamani, Kulliyah with tekke, tomb, madrasah, imaret, a mosque (Budak, 2015). In 1879 immigrants were brought to tekke, and it became a residential place for them (Budak, 2015; Yasar, 2004). It is a part of a complex consisting of a mosque, madrasah, imaret, tomb, tabhane, Zawiya, fountain, hazire. Some of them disappeared after being burnt by fire. The mosque and some parts of the tabhane survived until today (Ipek, 2016).
4-Kurtbogan Tomb	Ottoman era	In Ok Meydani (a square), closed to the train station	x	Stone, domed. For Pir Şerefeddin Hamza Halvetî (Budak, 2015).
5-Seyh Zekeriya Tomb	x	On the east of Sarachane Mosque	Waqfs set by Pir Zekeriyya Halveti	For Pir Sunullah Halveti and their successor, Pir Zekeriyya Halvetî (Budak, 2015).
6- Kuba Evliyasi Tombs and Husamiyye Madrasah	x	In Kuba mahalla	x	Stone, wooden roof. For Kubalizade Es-seyh Husameddin Huseyin El-halveti. Had many fires and repaired many times. Today, there is a mosque built by a philanthropist and a tomb is in it (Budak, 2015).
7- Ignecizade Tomb		In Kocacik Mahalla, in carsi (market) area.		For Ignecizade Es-seyh Safiyuddin Mahmut Halveti (Budak, 2015).
8- Ak Hasanoglu Tekke	1829	On the East of Sultan Bayezid Mosque, next to Abdullatif Efendi Library, around today's municipality.	By Mutesellim Ak Hasanzade Haci Hasan Aga	In 1886, tekke became madrasah (Budak, 2015; Yasar, 2004).
9- Ehlullah Tekke	1654	In Hizir Pasha Mahalla, upper area of ok meydani	By Mutesellim Haci Hizir Aga	Named after on sheikh (Budak, 2015; Ipek, 2016; Yasar, 2004).
10- Cevikce Tekke	1428	In Mehmet Pasha Mahalla, on the west of Cilehane Tekke	By Çevikçi Şemseddin Mehmet el- Kırtasi	Repaired many times after damage. Sheikh Suleyman Efendi repaired in 1677 and became the sheikh of the tekke. After the death of the last sheikh in 1832, it was converted to madrasah (Budak, 2015; Yasar, 2004).
11- Hizir Pasha Tekke	1564	In Samice Mahalla, on the west of Gokmadrasah Mosque	Hizir Pasha	Burnt in 1730, and disappeared totally (Budak, 2015; Yasar, 2004).
12- Hoca Sultan Tekke	1475	Upper Area of Eski Darusselam mahalla, today, in Fethiye mahalla, on the south-east of the cemetery	Teacher of shahzadah, Semseddin Ahmed Celebi	It had a guesthouse and kitchen with waqfs. In 1759, it was inherited by heirs, and tekke was closed (Budak, 2015; Yasar, 2004; Ipek, 2016).

13- Sadeddin Tekke	1467	In Iceri Sehir, Hatuniye mahalla, old Ahi Saadeddin mahalla, around Meydan gate, Istasyon Bridge entrance.	By Said Efendi	It had a kitchen, dining hall, and guesthouse. After 1844, it was demolished (Budak, 2015; Yasar, 2004).
14- Samlar Tekke	1544	In Samlar Mahalla, around Iyas Aga (Samlar) Mosque	Hoca Haci Salih Celebi	(Budak, 2015; Yasar, 2004).
15- Sehre Kustu Tekke	x	In Sehirustu Mahalla, on the west end of the mahalla, next to a fountain	By the followers of Pir Sinan Halveti	It survived until 1826 but was demolished and became personal property (Budak, 2015; Yasar, 2004).
16- Kutup Tekke	1609	Haci Ilyas Mahalla, On the street of Sultan Beyazid Mosque's west gate opens,	By Seyh Ahmet Efendi (aka Kutup Dede)	Known as 'imaret arkasi' (behind imaret) (Budak, 2015; Yasar, 2004).
17 -Kusbaz Tekke	1554	Around the square on the west of Cilehane mosque	By Yakup Efenendi, the sheik	After being demolished, its waqfs were passed onto the Ministry of Education (Budak, 2015; Yasar, 2004).
18- Gumusluoglu tekke	1407-1408	On the east and south of the Gumuslu Mosque, today on the main road.	By Hace Celal Celebi	The first halvetiye order tekke in Anatolia. In 1740, a madrasah was built in their place (Budak, 2015; Yasar, 2004). It does not exist today (Ipek, 2016)
20- Mahmut Celebi Tekke	1404	In Hatuniye mahalla, in 'iceri sehir', Karatay mahalla	By kadi Ammadzade Bedreddin Mahmud Celebi	It had a guesthouse and a kitchen. It was built for Naqshbandi order, first Naqshbandi tekke in Anatolia, but became the property of the Halvetiyye order (Budak, 2015; Yasar, 2004).
21 -Muftuoglu Tekke	1603	x	By Muftu Taceddin Efendizade Ahmet Efendi	It was burnt down in the fire. In 1688 and disappeared. For halvetiyye order (Budak, 2015; Yasar, 2004).
22- Meydan Tekke (Ehli Hatun Tekke)	1467	In Old Sabikuddin, new Kursunlu neighborhood, at Meydan (Istasyon) bridge	By Amasya Amir Şadgeldi Paşa' s granddaughter Ehli Hatun	In 1740, madrasah was built in their place (Budak, 2015; Yasar, 2004).
23- Nuhoglu /Nuh tekke	1704	In Ceribasi mahalla, on the east of Ceribasi mosque, possibly today's Ataturk Primary School.	By Muftu Mutevellizade Haci Ahmed Efendi	It was built as a madrasah. When madrasah was burnt in 1730, and its waqfs for repair disappeared, built for Halvetiye zawiya. It was disappeared after the fire in 1808 and waqfs disappeared so couldn't be repaired (Budak, 2015; Yasar, 2004).
24- Ucler Tekke	1238/ 1822	In Ucler Neighbourhood	x	For Naqshbandi order, for sheik Isa Efendi (Yasar, 2004).
25- Hicabi Tekke	1212/ 1797	In Ziyare mahalla, next to the Kecioglu Mosque.	x	For Naqshbandi Sheikh, Kirimli Es-Seyyid Es-seyh Abdulbaku Hicabi Efendi. After the last sheik died, it became a maktab (Yasar, 2004).
26- Sehir Kuthedasioglu Tekke	1238 / 1822	In Acem Ali Mahalla, on the east of Acem Ali Pinar (Spring), in a cul de sac.	x	For Naqshbandi Sheikh Şehir Kethüdâsı-zâde es-Seyyid eş-Şeyh Mehmed Arif Efendi (Yasar, 2004).
27- Seyhoglu Tekke	1190/ 1776	On the north of Egri Mosque in Gumusluzade mahalla, in a cul de sac.	By Çorumlu Şeyh Hasan Efendi-zâde Abdullah Vecih Efendi	For Naqshbandi order (Yasar, 2004).
28- Seyh Cui Tekke	817/ 1414	On the west of Amasya, on the north-west of Seyh Cui vineyard, under the Seyh Cui Karye, around the lake.	x	It is mevlihane. It is disappeared (Yasar, 2004). Today, a mosque and imaret exist in the place of tekke (Ipek, 2016).
29- Seyh Abdul Tekke	961/ 1553/4	In Sofular mahalla, on the west of Pir Ilyas cemetery	By Naqshbandi sheik, Abdullah Efendi.	It was damaged regularly but repaired and preserved by 1271 (1854). But eventually disappeared. In 1315 (1897), it was given to the Ministry of Education (Yasar, 2004).
30- Seyh Kirik Tekke	545/ 1150	In Kubcegiz Mahalla, under Kasik Pinari (Spring), on the south of Cikrik Mahalla	By Sultan Mesud of Seljuks	Known as hankah-I mesudi in Amasya. It was damaged but repaired (Yasar, 2004).

31- Darbhaneci Tekke	836/ 1432	In Pervane Bey mahalla, on the east of Bali Bey Mosque, in the street goes to Pervane bey Mahalla, next to the fountain.	By Semseddin Ahmed, known as Ahi Darphaneci.	Two houses are in there now. Only the masjid building survived, but not in a good condition when Yasar wrote the book (Yasar, 2004).
32- Kanli (Kagni) Tekke	1017/ 1608	In Devehane mahalla	By Mutesellim Kanli el-hacc Ali Aga.	For a Kadiri sheik. It was repaired in 1079 (1668) but ruined after the fire in 1143 (1730), rebuilt in 1226 (1811), and called Taskoprulu Tekke. (Yasar, 2004).
33- Gulabi Tekke	973/ 1565	Inside the Icerisehir, in Enderun Mahalla	By Gulabi Pasha	For Kadiri order. After 1100 (1688) became Naqshbandi tekke. It is disappeared now (Yasar, 2004).
34- Melik Gazi Tekke	819/ 1416	On the northeast of Yorguc Pasa mosque.	By Bayram Beg-zâde melikü'l-ümerâ Gâzi İsmail Beg	This building regularly was damaged and repaired, in 1241 (1825), repair, a masjid was built with it and called Sunbul tekke (Yasar, 2004).
35- Mevlevihane	714/ 1414	Around the Hukumet Bridge, next to Yesilirmak.	By Ali Pervane Bey	For Mevlevi order (Yasar, 2004). There is a business center in the place of mevlevihahe (Ipek, 2016)
36- Ya Vedud Tekke	857/ 1453	On the northeast of Pirincci mahalla, on the qibla way of Dersi Tamam Efendi tomb.	By Nizameddin Abdurahman Muslihî's daughter Selâmet Hâtûn	For Naqshbandi order. In 1315 (1897), it was given to the Ministry of Education. Today, only, the tomb of Selamet Hatun Tomb (Yasar, 2004).
37- Yakutiye Tekke	814/ 1411	On the southeast of Timarhane (Bimarhane), next to the Yesilirmak.	By Yakut pasha	It had a masjid, sheik room, guesthouse, imaret. Stone building. In 1281 (1864), it became fetvahane. Because it was deserted, in 1300 (1882), it was converted to maktab. (Yasar, 2004). Today only the tomb of the funder of tekke was left (Ipek, 2016).
38- Hevace Tekke	x	x	x	For halvetiyye order (Erdogan, 1996)
39-Kuftuoglu Tekke	x	x	x	For halvetiyye order (Erdogan, 1996)
40-Halifet Gazi Tekke	x	x	x	X (Duman, 2010)
41- Gokmadrasah Tekke	x	x		Part of the mosque and complex (Duman, 2010).

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