

Urban Environmental History of Ankara in the 19th Century: Challenges, Connectivity, Expansion

19. Yüzyılda Ankara'nın Kentsel Çevre Tarihi: Zorluklar, Bağlantısallık, Yayılma

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Abstract

The aim of this study is to write a comprehensive urban environmental history of Ankara in the 19th century within the contexts of the diverse contingent challenges, connectivity of challenges and spaces, and the expansion of the city. The diverse urban environmental challenges faced by Ankara were the influential and determinant factors in the processes of ensuring spatial and conceptual connectivity and the city's expansion. The concept of "connectivity" is reproduced for both challenges and spaces. A nested, wrapped, and intertwined conceptual connectivity is established among diverse urban environmental challenges such as defense, changing circumstances, wars, immigration, fatalities, drought, famine, and external dynamics. The spatiality in the city and a complex connectivity among spaces could also be established through the situations that arise from such challenges, which have also led to the current and further expansion of the city. Spatial formations of spaces, including military barracks, planned and organic neighborhoods, graveyards, linear extensions such as roads and the railway at the periphery of the city, as well as immigrant settlements in the hinterlands, provided a spatial integrity and spatial transition between the city and its hinterlands. The contribution of this study to the literature is not only to explore the urban environmental history of Ankara, but also to reveal the city's connectivity and expansion through the building, conceptualizing, and deciphering of diverse challenges, spatiality of sites, and the connectivity of spaces and challenges.

Keywords: Urban environmental history, 19th century, Challenges, Connectivity, Expansion, Ankara

Öz

Bu çalışma, mekânsal bağlantısallık, çeşitli kentsel çevresel zorluklar ve kentsel yayılma bağlamlarında 19. yüzyılda Ankara'nın kapsamlı bir kentsel çevre tarihini yazmayı amaçlamaktadır. Ankara'nın karşılaştığı çeşitli kentsel çevresel zorluklar, mekânsal ve kavramsal bağlantısallık ve kentsel yayılma süreçlerinin inşasında etkili ve belirleyici faktörlerdir. Bağlantısallık kavramı hem zorluklar hem mekânlar için yeniden üretilmektedir. İç içe geçmiş, sarılmış ve dolaşmış kavramsal bağlantısallıklar, savunma, değişen koşullar, savaşlar, göç, ölüm, kuraklık, kıtlık ve dış etkenler gibi çeşitli kentsel çevresel zorlukların arasında kurulmaktadır. Bunun da ötesinde, kentin güncel ve ilerideki yayılmasına neden olan kentteki mekânsallıklar ve mekânlar arasındaki bağlantısallıklar, bu zorluklardan doğan durumlar aracılığıyla kurulabilir. Genellikle, kentin çeperlerinde konumlanan kışlalar, planlı ve organik yerleşimler, mezarlıklar, yollar ve demiryolu gibi lineer uzantılar ile göçmen yerleşimlerinin mekânsal oluşumları, kent ve hinterlandı arasında mekânsal bütünlük ve mekânsal geçiş sağlar. Bu çalışmanın literatüre katkısı, yalnızca Ankara'nın kentsel çevre tarihini yazmak değil, aynı zamanda, çeşitli zorlukları, mekânsallıkları ve mekânlar ve zorlukların bağlantısallıklarını inşa etmek, kavramsallaştırmak ve deşifre etmek aracılığıyla kentin bağlantısallığını ve yayılmasını da ortaya çıkarmaktır.

Anahtar sözcükler: Kentsel çevre tarihi, 19. yüzyıl, Zorluklar, Bağlantısallık, Yayılma, Ankara



Introduction

Ankara is commonly studied, especially in terms of urban and architectural history perspectives, as it is an Ottoman city where 19th century urban developments are explicitly visible. These developments include (1) examination of civic buildings with a special focus on government buildings, (2) focusing on new types of building, such as train stations on the Anatolian Railway, educational buildings with reference to the modernization of education, as well as new settlements such as planned neighborhoods built for immigrants and country houses, (3) discussion of the new trade and administrative center of the city, and (4) analysis of the urban infrastructure, including the reorganization of streets and the construction of roads which connect the city with its environs. As related discussions of natural disasters, natural resources, gardens, infrastructure, and population have contributed to studies of urban and architectural history, the theoretical framework of this study is based on research into natural and environmental dimensions, as well as of urban studies and theories.

There is a great deal of interest in the literature about the connection between issues such as immigration, transportation, and agricultural development (Arıcanlı, 1991; Kasaba, 1991; Ortaylı, 2000; Quataert, 2005, 2008; Kaynar and Koraltürk, 2016). The natural resources management processes through agricultural regulations (Pamuk, 1987; Sunar, 1987; Arıcanlı, 1991; Kasaba, 1991; Quataert, 2005; Karpaz, 2019) and the combination of nature with pre-industrial and industrial means of production (Faroqhi, 1984; Quataert, 1993; Faroqhi, 2011), are also studied in the context of the urban environment. Studies in the literature have shown that it has been possible to construct a multi-dimensional connectivity. This study makes reference to the Ankara studies of Mustafa Yavuz Erler (2010), Emrah Çetin (2017), and Eylem Tekemen Altındaş (2018), to focus on the question of whether the urban environment of Ankara would have undergone a transformational process if environmental challenges such as drought, famine, wars, fires, fatalities, and population increase, as well as changing circumstances and external dynamics in the field of agriculture, production, and transportation, had not been experienced.

A common concern in the research of William Cronon (1991), Alan Mikhail (2011), and Eve Blau (2018) is also to study city and country as complementary and integral

entities. In his fascinating book, *“Osmanlı Kenti”* (Ottoman City), Maurice M. Cerasi (1999) also conceptualizes an Ottoman house as a living entity that connects to the street as part of his visualization of the relationship between the idea of a city, particularly urban open spaces such as graveyards and open gardens, and the idea of nature. In the article, *“Open Space, Water and Trees in Ottoman Urban Culture in the XVIIIth-XIXth Centuries”*, Maurice M. Cerasi (1985) also establishes an association between environmental components and urban culture. In her book, *“The Remaking of Istanbul, Portrait of an Ottoman City in the 19th Century,”* Zeynep Çelik (1993) also elaborates on the “interconnected systems” of diverse forms of transportation. The transportation systems which connect cities with their environs also create the idea of “connectivity.” Rather than studying cities according to building typologies, urban environmental approaches as well as urban studies and theories open new horizons. The literature on urban environmental history therefore encourages scholars to consider the relationship between environmental challenges and attempts at urbanization.

Urban studies and theories are also utilized in this study in the conceptualization of the idea of “connectivity.” Such studies and theories have also provided insight in the construction of connections among spaces and challenges. In the introduction to his book, *“Urban Assemblages: How Actor-Network Theory Changes Urban Studies,”* Ignacio Fariás (2010) sees cities as being “multiple objects.” İlhan Tekeli (2016, p. 40) also refers to Fariás and Bender (2010), along with many sources, in terms of the “assemblages” theory, in his discussion of the “assemblages” that offer “rhizomatic networks” among events. He prefers to do this rather than discussing issues through a consideration of causes and reasons, and emphasizes the formations in these networks which are different from the accumulation of events. The actor-network theory (2004), as specified in A-Ritzer-Encyclopedia, conceptualizes the actants, their contingent characteristics, and the networks and claims that the actants are able to enter the networks and “develop as networks.” Regarding the “actor-network” theory, the study searches for contingent challenges, as uncertain and unexpected circumstances, and the possibilities in Ankara. The study also conceptualizes challenges as being actants of the city’s expansion, instead of merely studying actors as heroic transformers of urban development, and the



heroizing of signs, images, actors, and any other forms of representations. In their book, *Cities: Reimagining the Urban*, Ash Amin and Nigel Thrift (2002), see “the city as a resource rather than a cause”. Thus, without further delving into these studies as they are mostly contemporary urban studies and theories, only the way they see the city is utilized and indirectly referred to in this study.

The space syntax theory can also be referred to in terms of using “connectivity” and understanding the idea of “spatial configurations.” In her compilation of articles on “space syntax,” Ayşe Sema Kubat (2014), acting as a dossier editor, draws attention to the studies on “space syntax” while emphasizing the relationship between special configurations and societies. The term connectivity is also defined by Björn Klarqvist (1993) in *A Space Syntax Glossary* as follows: “connectivity measures the number of immediate neighbors that are directly connected to a space” and “this is a static *local* measure.” In his inspiring article, *Anadolu’da Kent Tarihi Yazıcılığı Üzerine Bir Yöntem Önerisi*, İlhan Tekeli (2007, p. 53) also emphasizes the role of the external connections of cities on the formation of internal relations.

The diverse theoretical research elaborated on above has a deep conceptual framework. Although this research has contributed to the preliminary conceptual thinking, this study makes a different original contribution. This article does not directly use or claim to improve these theories as a method, but rather draws inspiration from these theories to devise an approach for the study of the urban environmental history of Ankara. The method used in this article is to discuss the contingent challenges, their role in the formation of the city’s expansion, and the building of connectivity between spaces and challenges. The literature review on the urban environmental history, urban studies, and theories have aided this study in enabling full appreciation of the concept of “connectivity” and “the expanding city.”

Conceptual Framework

Following the theoretical basis explained above in the introduction, the article addresses two complementary conceptual studies in the consideration of the urban spatial structure of the 19th century city: (1) connectivity of spaces and challenges and (2) the city’s expansion. To that end, the study delves into three key conceptual discussions: (1) defensive tendencies, (2) timing for construction, and (3) ensuring productivity.

The themes of wars and immigration that made it necessary to take defensive measures are discussed under the key concept of “defensive tendencies.” The theme of city walls and military barracks are also elaborated on as an architecture of defense, while the issue of planned neighborhoods for immigrants is discussed in connection to the idea of defense, and is reviewed as a form of the city’s expansion. As military barracks and planned neighborhoods were constructed at the periphery of the city for its expansion, this led to the creation of various forms of spatial connectivity between the city and its hinterlands.

As the development of infrastructure was contingent upon environmental problems such as drought, famine, and fatalities, the timing of construction became paramount. To follow worldwide developments, the Ottoman government took precautions against the effects of these natural challenges. Linear extensions, such as roads and the railway, realized due to both technological developments and challenges due to the environment, are discussed in this study under the key concept of “timing for construction”. Fatalities, which were mainly caused by diseases, necessitated the reorganization of graveyards, and the image of graveyards surrounded by cypresses has become a typical Ottoman landscape.

Interventions made in the 19th century of the Ottoman Empire in the field of agricultural development aimed at ensuring productivity. Changes in circumstances and external dynamics promoted the development and mechanization of agriculture, which also fostered the formation of country houses and immigrant villages. Country houses within organic neighborhoods caused an expansion of the city, while most immigrant villages were located along the railway. This ensured expansion of both agricultural productivity and the city’s connectivity within the hinterlands and the neighboring cities. The establishment of an agricultural school with its model farm also aided in this development of agriculture and the spatial transformation of the hinterlands. The architecture of agriculture, including country houses with their gardens, farm-like structures, the agricultural school with its model farm, and immigrant villages, are all discussed under the key concept of “ensuring productivity.”

A shared feature of the afore-mentioned challenges is that they are all environmental contingencies. On the other hand, a common feature of construction activities is that they are an essential way of overcoming the challenges



located at the periphery of the city. This led to the further expansion of the city, and this expansion provided a connectivity of city spaces with its hinterlands.

The Expansion of Ankara in the 19th Century within the Context of “Connectivity”

The city of Ankara was established at the conjunction of the streams of Hatip, İncesu, and Çubuk (Georgeon, 1999, p. 101; Avcı, 2016, p. 115) and is defined by the castle, settlements, and agricultural hinterlands, which were all constructed in the 16th century (Alemdar, 2000, p. 98) and the railway built in the late 19th century (Figure 1) (Günel and Kılıç, 2015, p. 81). The previous appearance of Ankara as a castle-city was supported with the later additions of city walls, constructed in the 17th century, to protect the city against revolts (Georgeon, 1999, p. 101; Özdemir, 1986, p. 263). Although the spatial structure of the Ottoman city of Ankara in Anatolia between the 17th and the mid-nineteenth centuries was constant, the spatial organization of the city underwent considerable transformation in its urban development process in the second half of the 19th century (Aktüre, 1975, p. 125). This openness could be observed through an overlapping of the late 19th and the early 20th century maps of Ankara (Figure 1). Although the city walls surrounding the city of Ankara defined the edges of the city,¹ the dissolution of this city limit was an inevitable component of the formation process of the periphery of the city and the establishment of spatial connectivity between the city and its hinterlands. In support of this, as a modern form of defense in the 19th century was not city walls, but safety for cities, Ankara did not actually need to be surrounded by city walls in the 19th century (Özdemir, 1986, p. 263). The openness of the city, which expands from city walls towards the hinterlands, also defined its productive and commercial character (Aktüre, 2001, p. 35).

Between the seventeenth and mid-nineteenth century, the city of Ankara maintained its constant urban form with a composition of dense and congested urban housing, with

this form being dynamically transformed in the 19th century through the construction of new buildings (Aktüre, 1981, p. 129).² The new urban components and their contribution to the city's expansion can also be observed by looking at Ankara maps of different periods (Figure 2). The reform process that emerged with the innovations of *Tanzimât* (Reorganizations) was also an influential development in this urban formation. The urban reforms could not be implemented in each province of the Empire at the same time, and so their implementation was initiated by calculating the prosperity and population in major cities such as the ones in the provinces of Edirne, Bursa, Ankara, Aydın, İzmir, Konya, and Sivas (Çadırcı, 2000, p. 89-93). Ankara, as one of those major cities, also underwent a significant modernization process. The construction of new buildings and infrastructure, and the institutionalization of the regulation process of cities, was conducted by new institutions in 19th century Ottoman Empire. The establishment of the Directorate of Buildings and the municipalities, for instance, aimed to prepare city maps, reorganize streets, and reconstruct infrastructural affairs while considering the replanning of areas destroyed by natural disasters (Ortaylı, 2000, p. 199-201; Denel, 1982, p. 55-60; Çadırcı, 2013, p. 275). As argued by Ersoy (2020, p. 34-36), the primary factors behind these efforts varied, and included environmental problems, technological developments, the reorganization of governmental structure, increases in population, changes in social structure, willingness to become urbanized, reformation of urban centers as well as the “spirit of the period”. With the Provincial Law of 1864, councils were established that were responsible for administrative reorganizations and renovation of the cities in the Ottoman Empire in terms of tax collection, the appointment of local governors to smaller towns, and the construction of buildings (Köksal, 2002, p. 118).

New building types, such as government buildings, train stations, immigrant neighborhoods, military barracks, a new trade center, and country houses, that emerged in

- 1 The term, edge, is used by Kostof (1992). For detailed interpretation, see: Kostof, S. (1992). *The City Assembled: The Elements of Urban Form through History*. Boston: Little, Brown, p. 11-46. For studying city maps, also see: Mihçioğlu Bilgi, E. (2010). *The Physical Evolution of the Historic City of Ankara Between 1839 and 1944: A Morphological Analysis*. PhD Thesis. METU, Department of Architecture.
- 2 With reference to the literature, the significant role of these new constructions such as immigrant neighborhood, military barracks, country houses, roads, railway, agricultural school, and graveyards in the city's expansion, as well as the transformation of the constant urban form of Ankara into a dynamic urban form, was also presented in an international conference (Aslan, 2021a). Different kinds of constructions, such as immigrant neighborhoods, railways, and agricultural schools, which were part of the developments of the 19th century, are also discussed in my PhD Thesis (Aslan, 2020).

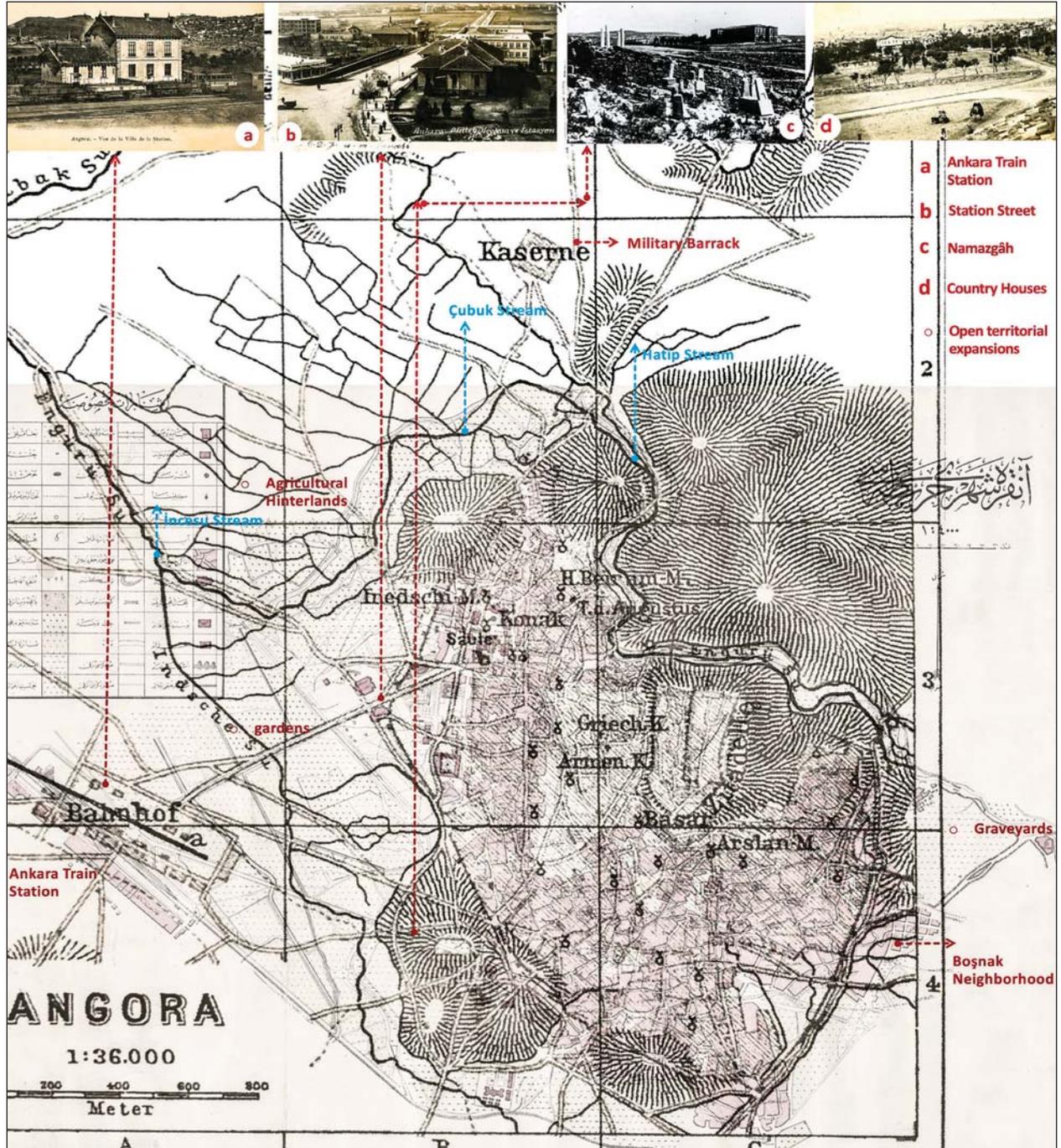
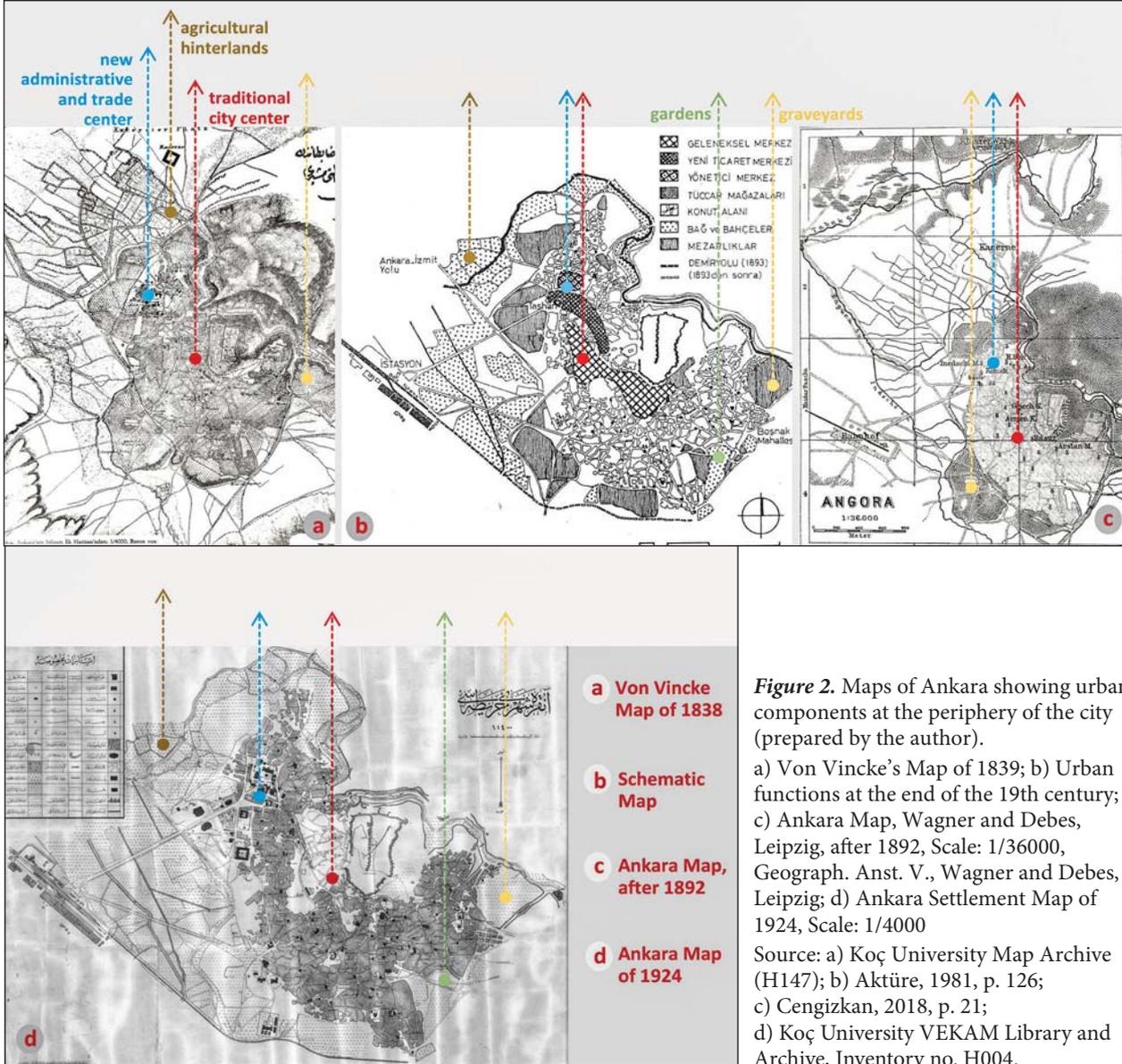


Figure 1. Two overlapping maps of Ankara which show the city's expansion (prepared by the author). Ankara Map (black & white), Wagner and Debes, Leipzig, after 1892, Scale: 1/36000, Geograph. Anst. V., Wagner and Debes, Leipzig. Ankara Map of 1924 (colored), Scale: 1/4000.

Source of Base Maps: (black & white), accessed from: Cengizkan, 2018, p. 21; (colored), Map Archive. [map] Koç University VEKAM Library and Archive, Inventory no. H004.

Source of Photographs: Photograph and Postcard Archive. [photograph] Koç University VEKAM Library and Archive, Inventory no.: a. (0973), b. (1198), c. (0029), d. (2451).



the 19th century, led to a transformation in the appearance of the periphery of Ankara (Aktüre, 1981, p. vi, 129). Aiming at conducting exemplary modern planning, the governors of Ankara, especially Abidin Pasha, attempted to transcend the traditional boundaries of the city by constructing civic buildings, military barracks, a hospital, warehouses, and schools (Ortaylı, 2000, p. 211). Military and civil bureaucracy, which were responsible for the administration of Anatolian lands, also did not

settle in a socially segregated area in the city, but rather accommodated in rented buildings until the first quarter of the 19th century (Aktüre, 2001, p. 39). However, in the 1830s, the new center of the administrative settlement was formed civil bureaucracy began to settle in the city center (Aktüre, 2001, p. 39). This led to the construction of a new trade center, which was located at a conceivable distance from the core of the city, in the last quarter of the 19th century (Avcı, 2016, p. 117-122).



The building of infrastructure and new buildings as part of the institutional efforts made by the government was reflected in city maps, which are clear indicators of spatial connectivity and *the city's* expansion. By looking at 19th century city maps, the natural and spatial limits are also apparent. In the 19th century, the fundamental functions and institutions were in the urban center, while agricultural hinterlands were located around the stream of Hatip in the north and northwest, and the graveyards were placed in the southern and eastern parts of the city (Aktüre, 1981, p. 129). The agricultural hinterlands can be seen in the 1838 Ankara Map of von Vincke. As mentioned in traveler notes, country houses also appeared in the periphery of the city since the second half of the 19th century (Aktüre, 2001, p. 50-52). A gradual urban development process is apparent in *the city's* considerable expansion, and the incorporation of peripheries into the existing city center within the context of spatial connectivity. The spatial connectivity between the core, including the castle and the surrounding bazaar area, and its periphery began to be formulated through new buildings, while the environs of Ankara also constituted hinterlands where the city expanded beyond its periphery. The remainder of this article is dedicated to establishing a conceptual framework behind these physical and institutional processes. By conceptualizing the diverse contingent challenges and the connectivity among spaces and challenges, the study aims to reveal the city's connectivity and expansion as part of an urban environmental history of Ankara.

Defensive Tendencies

Following the removal of the city walls, the earlier form of defense and the traditional city boundaries, military barracks were constructed on the the peripheries of the city. Wars, representing one of the contingent challenges, also led immigrants to defend themselves by moving into new places in Anatolia during the second half of the 19th century.

As the concept of defense remained a challenging concept for cities throughout the centuries, its changing forms are worth discussion. Ottoman soldiers were housed in military camps (*ordugâh*) previous years of the Empire (Çetiner Dođdu, 2002, p. 179). The sultan's household troops (*Kapıkulu Ocakları*) were established with the emergence of a regular army under the reign of Orhan Gazi (Özcan, 2007, p. 509; Yazıcı, 2011, p. 635). The changes in Ottoman military structure first started

with the military improvements introduced by Mahmud I, were followed by the establishment of an army by Selim III named *Nizam-ı Cedid*, with the most significant change being the abolition of the Guilds of Janissaries by Mahmud II (Yazıcı, 2011, p. 636; Özcan, 2007, p. 509-512). *Redif* Military Army was established after the abolition of the Guild of Janissary to protect the extensive territories of the Empire (Çadırcı, 1963, p. 66). Military barracks were constructed in the center of sandjaks within the Empire for the use of the *redif* army, and military barracks for the *Nizam-ı Cedid* had already been constructed under the reign of Selim III (Çadırcı, 1963, p.69). Following the military reforms made after 1826, the state established military barracks as huge buildings organized around a central courtyard and located near transportation to ensure the troop's circulations in the periphery of the cities (Arnaud, 2008, p. 969). The Ottoman state built military barracks to accommodate the bodies of the new army, especially following military reforms and the dissolution of the Janissary army (Arnaud, 2008).

Military barracks were built in order to not only house soldiers, but also to educate the army (Çetiner Dođdu, 2002, p. 178). Monumentally huge and modern military barracks were constructed, especially during the *Tanzimât* period, both in the capital and in the cities of the Empire (Yazıcı, 2011, p. 636- 637). When plan typologies are examined, similarities can be observed such as the regularly shaped two and three-story buildings which were constructed around a central courtyard in a rectangular plan scheme (Çetiner Dođdu, 2002, p. 180; Arnaud, 2008, p. 969; Yazıcı, 2011, p. 636). These newly constructed buildings organized around a courtyard were built in the surroundings of the cities. These complexes consisted of many other units such as a mosque, a bakery, a bathhouse, a barn, and the sultan's kiosk (*hünkâr kasrı*) for use during his visits (Çetiner Dođdu, 2002, p. 180). 19th century military barracks were unlike previous janissary military camps in that they were different in their plan typologies, housed more troops, and sprawled over large areas of the Empire's territory, with military barracks often being constructed in large gardens outside the settlement areas (Çetiner Dođdu, 2002). In addition, the military barracks which had been previously constructed under the reign of Selim III continued to be used after being renovated (Yazıcı, 2011, p. 637).

In an archival document of that period, Çadırcı (1963) emphasizes public satisfaction with the establishment of



the *redif* military army in Ankara, as well as other provisions of the Empire.³ Two lines of a poem written in that period also stress public satisfaction with the new regulations in the army that contributed to life in the city (Öztekin, 2015, p. 215).⁴ Unlike the centrally located Redif Military Barrack near the Column of Julian, *Sarı Kışla* and *Süvari Kışlası* (military barracks) were constructed in the 19th century as modern defense buildings on the peripheries of Ankara (Erdoğan, Günel and Kılıç, 2007, p. 278). *Sarı Kışla* was opened in 1804, restored in 1844, and was located at the current location of Ankara Anatolian High School in the neighborhood of Ziraat (Erdoğan, Günel and Kılıç, 2007, p. 278). The military barracks located in the north of the city was marked on a map from 1838 produced by Von Vincke. *Süvari Kışlası* was also constructed near the faculty of Pharmacy in Ankara, in the current location of the gardens of *Makine Kimya Endüstrisi Kurumu* (Mechanical and Chemical Industry Corporation) (Erdoğan, et. al., 2007, p. 278). A modern form of defense was represented in the building of military barracks, and became an initiator of the city's expansion with the disappearance of city walls.

Wars and war-related immigration are inevitably challenging concepts which also stimulated connectivity among issues such as the settlement process of immigrants, agricultural regulations, and the expansion of Ankara. As Yavuz (2000, p. 195) cites, although there were different estimations of the population of Ankara during the 19th century, it can be drawn that, including the Greeks, Armenians, Jews, and Muslims, the population was 20,000 in 1830; more than 25,000 in the 1880s; and almost 30000 in 1892, the year in which a railway linking Ankara to other Anatolian lands was constructed. Based on the English Consular Reports and the observations of travelers, Yavuz (2000, p. 196) also argued that Muslims, who often possessed large territories, were mostly engaged in agriculture and husbandry and served as local merchants, while the Christians were generally engaged in trading and acted as international merchants.

After the wars, immigrants from the Balkans settled in the environs of Ankara (Aydın, Emiroğlu, Türkoğlu and Özsoy, 2005, p. 216; Georgeon, 1999, p. 107). It can there-

fore be seen that there was a rapid settling of immigrants, especially in rural areas. A great number of immigrants moved to the vicinity of *Polatlı* and *Haymana* for cultivation of the land, and Crimean immigrants also settled in the villages surrounding the town of *Polatlı* after the Ottoman-Russian War (Aydın et. al., 2005, p. 216).

The process of reconstruction in the late 19th century was actualized by a regulation process. Two different regulations (*nizamnames*) were put into practice at the end of the 19th century (Denel, 2000, p. 133). The first was the *Turuk and Ebniye Nizamnamesi* (Road and Building Regulations) of 1864, which was implemented after 1869, and the second was the *Vilayet Belediye Kanunu* of 1877 (Denel, 2000). These regulations were experienced through the construction of new immigrant settlements in the Ottoman cities, one of which was established in 1878 in the south-eastern part of Ankara for the settlement of Bosnian immigrants (Georgeon, 1999, p. 107; Denel, 2000, p. 136). The initial change in the residential pattern can be seen in this settlement area. The Boşnak Neighborhood, designed with right-angle streets and houses with similar features, also caused the city to expand through its environs (Georgeon, 1999, p. 107). As also cited by Georgeon (1999), the grid-planned settlement can also be considered as a way the traditional boundaries of Ankara were transcended.

A neighborhood was established in the *Ulucanlar* district outside Kayseri Gate between the city walls and a swampy area of *Hatip* stream in 1878 (Denel, 2000, p. 136). Immigrants from the Balkans were settled in Ankara according to *İskan-i Muhaccirin Talimatnamesi* (Regulations for the Settlement of Immigrants), and a total of 300 out of 5000 immigrants engaged in agriculture were settled in this neighborhood (Georgeon, 1999, p. 107; Denel, 2000, p. 136), with the remaining population being settled in the towns of *Çubuk*, *Etimesgut*, *Polatlı*, and *Haymana* (Denel, 2000, p. 136). The neighborhood of Boşnak consisted of plain housing structures, with wide streets and open vistas being designed according to the norms defined by the *Turuk and Ebniye Nizamnamesi* (Denel, 2000, p. 137). In 1892, with the opening of a road which went from Station (*İstasyon*) Street, along

3 Çadırcı (1963) refers to Presidential Ottoman Archive, Hatt-ı Hümayun Tasnifi, No: 1920 B (68).

4 *Bu kışla ile Ankara girdi nizâm-ı pür-fere / Âli binâlar her yere yapsa nola şâh-ı cihân* (written by Ziver Pasha, a poet and statesman of the period; quoted from Öztekin, 2015, p. 215).



the border of the Anadolu Hotel, and extended towards Karaođlan arşıısı, shops, guest houses, and coffeehouses soon sprouted on both sides of the street (Figure 3) (Aydın et. al., 2005, p. 257). Neighborhoods planned on a grid system, such as *Boşnak* in Ankara, *Tac Ahmet* in Afyon, *Varna*, *Ruşuk*, and *Çırpan* in Bursa, as well as regular wide streets such as *Bağdat* in Tokat, which was constructed in 1886, and *İstasyon* in Ankara, which was constructed in 1890, were all significant in allowing transportation, not only by wheeled vehicles, but also along the water and sewage system (Aktüre, 1981, p. 222). The expansion of the former boundaries of Ankara due to the immigrant neighborhood, ensured the city’s connectivity and expansion.

The building of city walls and war-related immigration were due to the desire to provide defenses, and the connectivity of these challenges to the concept of “defensive tendencies” can thus be conceptualized. The architectural and urban reflections of these defensive tendencies prove that the city expanded beyond its former traditional boundaries and established connectivity with its environs.

Timing of Construction

Along with the natural disasters that occurred periodically during the 19th century, and which caused immigration from Ankara towards its environs, drought and famine, hygiene problems, diseases, and fatalities due to inadequate nutrition must also taken into consideration (Tekemen Altındaş, 2018). Fatalities caused by these factors is challenging due to their unexpected occurrence and link with drought and famine. This challenging concept necessitated that land be allocated for graveyards. The irregular pattern of graveyards in Ankara, including small graveyards in the city and large graveyards outside the city, depicted an intertwined view of life and death (Aydın et. al., 2005, p. 256). The graveyards of other communities appeared in between ankırı and Namazgah Gates, and the state decided in 1885 that graveyards should be surrounded by walls due to their disorderly appearance (Aydın et. al., 2005, p. 256).

While special graveyards (*hazires*) were located within the city, large public graveyards were situated far from the city and demonstrated the city’s territorial expansion



Figure 3. Station (İstasyon) Street and general view of Tabakhane Neighborhood, n.d.
Source: Ko University VEKAM Library and Archive, Inventory no. 0711.



(Günel and Kılıcı, 2015, p. 84). In other words, graveyards were located in the south-eastern foothills of the castle, and at the western and southern foothills of *Namazgah Tepesi* (Figure 4), in between the neighborhood of *Hacettepe* and the train station, and in the east of the neighborhood of *Şükriye* (Günel and Kılıcı, 2015, p. 84), which was established to settle immigrants within the borders of *Bent Deresi* in the east of the city (Tamura, 2010, p. 69). These graveyards would be utilized for other purposes in the early 20th century (Cengizkan, 2004, p. 38), which led to further expansion of the city. The periphery of the city can be defined not only by the graveyards, but also by swamp areas, vineyards, fruit, and vegetable gardens. The graveyards which were feathered by cypresses also stimulated city expansion.

In the 19th century, the economic challenges were also experienced in Ankara. This was mainly due to the spread of European industrial products in Ottoman cities (Arnaud, 2008, p. 963) and challenges in the Ankara weaving industry (Georgeon, 1999, p. 105). The emergence of drought in certain years during the 19th century, and the fire in 1891, were also influential factors (Öztekin, 2015, p. 214). Despite this, the Ottoman state implemented initiatives to open new schools, construct a modern bureaucracy, and improve agriculture and the economy of the province during the reform process. When the city demanded provisions from nearby cities,

the reactions of local authorities and local people to this demand was quite negative as they did not want to aid Ankara due to their own fear of starvation, and aid was also suspended because of the undeveloped road network (Tekemen Altındaş, 2018). The roads (*şoses*) connecting Ankara with its environs were constructed in the second half of the 19th century, and this development was addressed in the literature. The development of a road network for transporting agricultural goods produced in Ankara to *Dersaadet* (the capital Istanbul), and especially along the Izmit-Ankara Road, is a demonstration of the role of Ankara in producing agricultural goods for Istanbul, while placing less emphasis on the importance of a road network for supplying Ankara with such goods after drought and famine (Atam, 2012; Tekemen Altındaş, 2020).

The settlement policy of the Ottoman State included the transportation of immigrants via the railway to Ankara, and the settlement of immigrants along the railway in the environs of Ankara (Kaynar and Koraltürk, 2016). Erler (2010) establishes a connection between environmental problems and the food aid policy of the state in dealing with a wide range of issues, such as drought caused naturally and for human-based reasons, as well as the connection of drought with immigration, and the loss of agricultural labor and production. A connection is made by Erler (2010) between famine, diseases, security

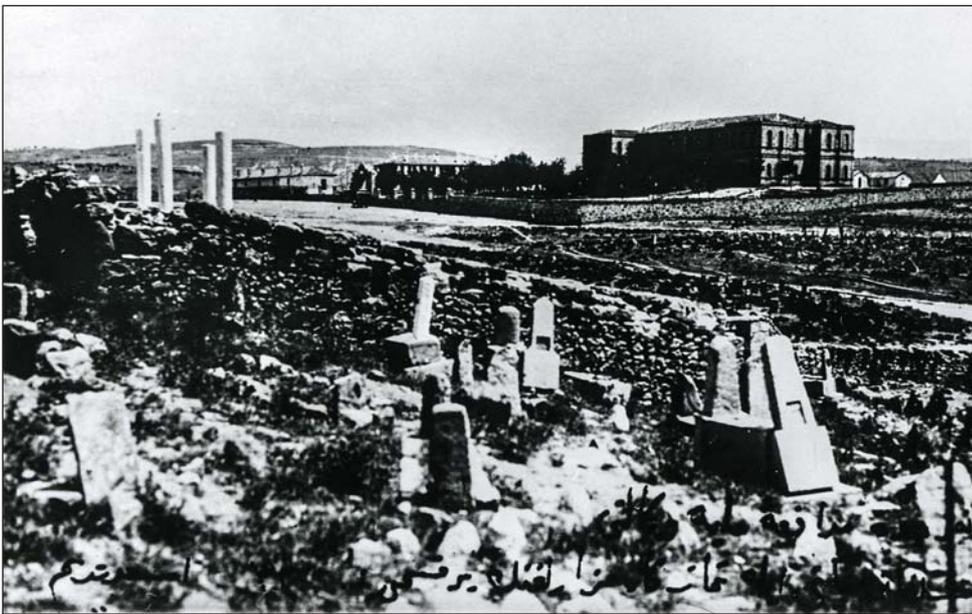


Figure 4. *Taş Mekteb* and *Namazgâh* Graveyard, 1920. Source: Koç University VEKAM Library and Archive, Inventory no. 0029.



problems, food aid policies of the state, and regulations related to this policy, as well as aid provided by foreign states and transportation networks for supplying Konya and Ankara.

The development of railway networks led to the formation of settlements outside cities in the 19th century (Arnaud, 2008, p. 970), and a railway system was also established in the Ottoman Empire. A connection can be made between the arrival of the railway in Ankara and the development of agriculture, which was certainly improved thanks to the immigrants who settled along the railway. There is no doubt that these immigrants contributed to the development of agriculture with their knowledge of agricultural techniques, and this knowledge was increased still further by engineer Hermann's lectures to the farmers on the methods of agricultural production (Ortaylı, 2000, p. 212). This improvement in agricultural knowhow led to an increase in agricultural activities and fueled the expansion of the city. As the production of grain overtook the production of mohair (Günyol, Başaran and Öneş, 1981, p. 543), Ankara became a reservoir of wheat (Georgeon, 1999, p. 110). Furthermore, the regions the railway line passed through became valuable due to the immigrants who had settled alongside the railway line and who were contributing to the development of agriculture. According to an archival document⁵, the state (*miri*) land suitable for harvesting grain was allocated by Muzaffer Pasha for the settlement of Bosnian immigrants along the Anatolian Railway (BEO, 21-1502-5-1, BOA). However, the provision of timber and food for the immigrants became a more urgent issue than the settlement of immigrants. It was therefore planned that the money necessary for the immigrants would be provided by the Agricultural Bank. According to the same archival document dated 1892 (BEO, 21-1502-5-1, BOA), the land lying along the Anatolian railway was deemed suitable for not only the settlement of immigrants, but also for the storage of grain. According to the same document (BEO, 21-1502-6-1, BOA), a report was prepared to determine the proper land in the environs of Hüdâvendigâr and Ankara provinces for the settlement of immigrants. Natural

problems, such as famine and grasshopper infestation, were especially stressed in the afore-mentioned document. The document is therefore crucial for verifying the claim that the natural disasters witnessed in 19th century Ankara had a strong impact on the settlement process of immigration, as well as the contribution of immigrants to agricultural development. The arrival of the railway and the timing of the agricultural season also affected the settlement process. The Agricultural Bank, which provided financial support for cultivators, peasants, and immigrants, certainly played a crucial role in the adaptation of immigrants to their new location.

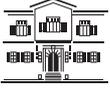
According to a petition presented by the public to the sultan, the urgent demand for the cultivation of the land could only be met by the construction of a railway (Ortaylı, 2000, p. 207; Aydın et. al., 2005, p. 231).⁶ The petition reflected the current demand for a railway network at that time in Ankara. Indeed, a project was implemented of which the first step, whose purpose was to connect Istanbul with the gulf of Basra and which later was called *Anadolu Demiryolu*, was taken in 1871 (Günyol, et. al., 1981, p. 544). An agreement between the Ottoman state and Deutsche Bank was signed in 1888 to manage the Haydarpaşa-Izmit Railway line and to extend the line towards Ankara (Günyol, et. al., 1981, p. 544; Georgeon, 1999, p. 109; Ortaylı, 2000, p. 207).⁷ The transportation network, which included both the roads and the railway, was a significant attempt to strengthen the connection between the state and the local population, as well as the connection between the city and the hinterlands, and was implemented for three reasons (Köksal, 2002, p. 121): (1) security, (2) tax collection, and (3) the transportation of agricultural products to the urban market at the center of the city. The construction was completed in 1892, and the tenure of almost 486 km of the new line was granted to the company of "*Societe du chemin de fer Ottoman d'Anatolie*" for ninety-nine years (Günyol, et. al., 1981, p. 544).

The construction of the railway therefore led to the expansion of agricultural land, the development of agricultural productivity, and the exportation of agricultural goods. With the construction of the railway line in 1892,

5 The archival documents (BEO, 21-1502-5-1, BOA and BEO, 21-1502-6-1, BOA) are also discussed in my PhD thesis (Aslan, S. 2020). Archival documents related to "immigrant villages" were also presented at an international conference (Aslan, S. 2021b), and the designation of drought as an environmental challenge was also emphasized during the same presentation.

6 As stated by Ortaylı (2000, p. 207), the petition was published in *Ankara Vilayet Gazetesi* in 1885.

7 The tenure of the railway from Izmit to Ankara was given to Alfred Kaulla in 1888 (Ortaylı, 2000, p. 207).



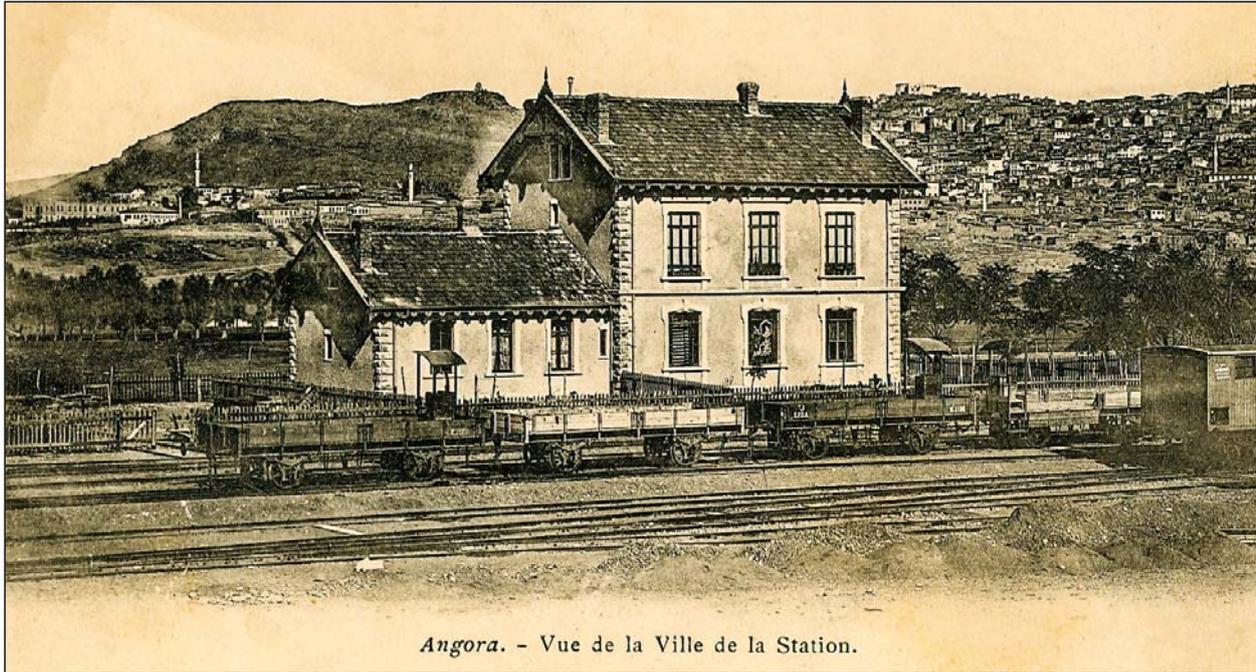
warehouses also began to be built in a short time around Ankara train station in the southwest of the city (Figure 5) (Aktüre, 2001, p. 53). Additionally, before the arrival of the railway, industrial raw materials such as mohair and tobacco had been exported to the world, although cereal was not exported before the 1890s (Günyol, et. al., 1981, p. 543). The export of crops, particularly to Istanbul, London, and Marseille surpassed even the export of angora goat, especially after 1896 (Günyol, et. al., 1981, p. 543). On the other hand, agricultural goods such as grain, fruit, and vegetables were also transported to Europe with the introduction of the railway, (*Salnâme*, 1895, as cited in Aktüre, 2001, p. 53), which provided an alternative income for families who had previously been engaged in viticulture at the country houses on the periphery (Aktüre, 2001, p. 53).

A connection can be made between environmental problems such as drought, famine, and fatalities, while a connection between these problems and the introduction of the railway can also be conceived. However, the link goes beyond the diverse connections provided by the railway network, as drought and famine did not only cause fatalities and the regularization of graveyards, but also necessi-

tated the arrival of the railway. This, in turn, encouraged the land to be allocated to the immigrants and resulted in the cultivation of hinterlands and an increase in agricultural productivity. To overcome contingent challenges, the timing for the construction of the urban infrastructure, including roads and the railway, became absolutely inevitable.

Ensuring Productivity

As agricultural production was contingent upon the development of the railway, a connection between agricultural developments, the introduction of the railway, and immigration can be established within the context of “ensuring productivity”. There were fundamental agricultural problems that caused the collapse of the production of angora mohair in the late 19th century in Ankara (Georgeon, 1999, p. 106). The first was the simultaneous production of angora goat mohair in the region of *Kap* in South Africa in the 1870s (Georgeon, 1999, p. 106; Yavuz, 2000, p. 198). The second problem was the export of angora to meet the growing European demand for raw materials (Georgeon, 1999, p. 106). The city of Ankara had maintained its productive and commercial character until the 1850s, and the production of angora and weav-



Angora. - Vue de la Ville de la Station.

Figure 5. Ankara Train Station on the front, n.d.
Source: Koç University VEKAM Library and Archive, Inventory no.0973.



ing mohair played a significant role in the development of the city in this process (Yavuz, 2000, p. 196). However, with the 1838 Anglo-Ottoman Trade Treaty, the import of English fabrics also led to challenges in the weaving industry in the city (Georgeon, 1999, p. 105-106). This was during a period when the increasing European demands for raw materials led not only to the export of angora mohair, but also of raw materials (Georgeon, 1999, p. 105-106).

Another problem was related to drought and the economic conditions of the city (Georgeon, 1999, p. 107). While agricultural production improved alongside the railway, mohair production developed only in the hinterlands such as *Ayaş*, *Beypazarı*, *Nallıhan*, *Haymana*, and *Kırşehir* in the east, south, and north of the city (Ortaylı, 2000, p. 208, 214-215). Parallel to these changes, particularly with the increase in grain production, livestock farming declined due to the railway line and livestock-farming also simultaneously weakened in *Mihalıççık* and *Sivrihisar* (Ortaylı, 2000, p. 215).⁸

The quality of international trade began to change in Ankara from the beginning of the 19th century. Since other European cities which had already completed their industrialization process were able to protect themselves from the economic penetration of England into their markets, the Ottoman market became the most suitable environment for England with its crowded population, wide territory, and economy (Aktüre, 2001, p. 36). With the opening of the Ottoman markets to Europe, external dynamics became a determinant challenge that the agricultural and industrial field of Ottoman Empire had to overcome (Aktüre, 2001, p. 36). For that reason, agricultural reforms and regulations were implemented through the agricultural schools within Ottoman cities (Quataert, 2008, p. 108; Keskin, 2012, p. 88). Agricultural bureaucracy was also found during this period. *Ziraat ve Sanayi Meclisi* (The Council for Agriculture and Industry) was initially established, and several institutions were also founded to comprehensively devise the strategies for agricultural development (Keskin, 2012, p. 89).

The fundamental aim of these institutions was to encourage the production of agricultural goods, as determined

by European demands and the modernization of agricultural techniques and machines. To achieve modernization in the field of agriculture, an agricultural school was constructed in Ankara. An archival document,⁹ addressing Ankara Government Hall, recognized Selânik and Bursa Agricultural Schools, which had been constructed before the school in Ankara, as a model, especially in terms of the agricultural facilities and equipment they included (Figure 6) (DH.MKT, 993-62-5-2, BOA). The agricultural school was to be constructed on an area of 500 acres, and irrigated by the streams of *Çubuk* and *Tabakhane*, which would later contribute to the development of *Kalaba* Village (Keskin, 2012, p. 91). The construction of *Numune* Farm and *Çoban Mekteb* in 1898 was a measure taken to develop goat breeding and angora mohair production (Figure 7) (Yavuz, 2000, p. 198; Georgeon, 1999, p. 106). Ankara *Çoban Mekteb* was established to train the first agricultural professionals (Ortaylı, 2000, p. 214). Since there were many cattle, the Scientific Committee of Agriculture (*Ziraat Heyet-i Fenniyesi*) (DH. MKT, 993-62-4-1, BOA) suggested that a dairy be constructed and agricultural education be established. According to an archival document, there were plans to construct a dairy in Ankara so that cattle owners could learn about the production of cheese and butter (DH.MKT, 993-62-5-2, BOA; DH. MKT, 993-62-4-1, BOA). Another archival document, written by the Ankara governor to the Ministry of Internal Affairs (*Dahiliye Nezareti*), also pointed out that the construction of a dairy and the education of agriculture in the facility would increase the income of the farm, and it was planned that the construction be funded by *Bank-î Osmani* (DH. MKT, 993-62-3-1, BOA). In addition to the establishment of the school, another precaution taken by the government was to decrease taxes for angora goats (Georgeon, 1999, p. 106).

The agricultural school was established to not only improve production but also to research the best conditions for raising angora goats (Yavuz, 2000, p. 198). According to Keskin (2012, p. 102), the challenges in the establishment of the school development were also experienced due to an insufficient number of students, drought, and a poor choice of territory for its construc-

8 The connection between these towns and the city center was still maintained through caravan transport (Ortaylı, 2000, p. 214; Erler, 2010, p. 300-302). Caravan transport was a complementary agent in addition to the railway transportation (Ortaylı, 2000, p. 208).

9 The archival documents (DH. MKT, 993-62-5-2, BOA; DH. MKT, 993-62-4-1, BOA; DH. MKT, 993-62-3-1, BOA) are also discussed in my PhD thesis (Aslan, 2020).



tion. However, the development of the railway in Anatolia after 1890 led to an increase in the land used for cultivation and in grain productivity (Keskin 2012, p. 100). The construction of the railway, the foundation of agricultural bureaucracy, and the establishment of the agricultural school were all significant attempts to achieve agricultural modernization and subsequent positive effects on urban areas. As can be seen, agricultural regulations and external dynamics, such as economic and military turmoil, were all intertwined in this challenging processes.

Although military barracks, graveyards, and planned and organic neighborhoods were determinants in the expansion of the city, this expansion of the city really increased after alternative methods of transportation and better links to the city's hinterland had been developed. The following section of the paper explores this expansion of the city due the formation of gardens and the changes in agriculture.

Studies which examined the commercialization of agriculture and market orientation towards international trade (Aytekin, 2009, p. 303; Pamuk, 1987; Sunar, 1987) reveal that the reactions of the state to economic problems were to enact agricultural laws and regulations, while assisting cultivators by providing agricultural credit. As stated by Pamuk (1988, p. 133-146), the Ottoman state dominated the agricultural sector, with foreign influence in the field of agriculture remaining limited. Agricultural development was one strategy used by the state to overcome financial problems, and scholars (Kasaba, 1991; Arıcanlı, 1991) who dealt with immigration considered immigrants as a source of agricultural labor. It was also generally believed that agricultural development and Ottoman modernization could both be enhanced by an increase in "the volume of Ottoman external trade"¹⁰ (Quataert, 2005; Karpas, 2019). There is no doubt that the increase in agricultural development made more land available for cultivation (Quataert, 2005, p. 132).



Figure 6. Çoban Mekteb and Model Farm.

Source: Koç University VEKAM Library and Archive, Inventory no. ACF0424.

¹⁰ The "external trade" and "the modernization of the Ottoman Empire" are also discussed in my PhD thesis (Aslan, 2020).



In the 1880s, the agricultural character of Anatolia was largely maintained as the majority of the population was engaged in agriculture (Quataert, 2005). The transport of grain was related with the arrival of the railway in Anatolia, which contributed to the advancement of production and commerce (Quataert, 2008, p. 182-184). These advancements were not the sole factors in these developments. If the agricultural knowledge of immigrants had not been utilized in the cultivation of lands, the remarkable efforts of the Ottoman state in the settlement of immigrants had not progressed, and diverse challenging concepts, such as environmental problems, wars, immigration, and technological developments had not been experienced during the 19th century, there would not have been spatial development of the city of Ankara.

The changing circumstances, especially in land-human relations, were also experienced as challenges. Land-human relations in the agricultural hinterlands surrounding the city began to be regulated, and the construction of country houses became widespread, due to the Land Law (*Arazi Kanunnamesi*) of 1858 (Aktüre, 2001, p. 50). As stated by Aktüre (2001, p. 52), the law meant that lands which had had the status of *miri* (state) land became

private property for small farmer companies. Restrictions for foreigners were also eradicated in 1869, and this allowed foreign farmers to purchase an estate in rural and urban areas of Ottoman lands (Aktüre, 2001, p. 50). The introduction of the laws of 1858 and 1869 led to more rapid acquisition of lands within the periphery, with the new owners of these lands predominantly being upper-class administrators and Greek and Armenian minorities (Aktüre, 2001, p. 50). Outside of the city walls, the city was covered by hills and vineyards in the north and east; while in the south and west was covered by gardens and agricultural lands where grain was widely planted (Lenep, 1870, as cited in Aktüre, 2001, pp. 51-52).

In the 19th century, the new country houses with vineyards became an important urban component of the surroundings of the city (Figure 7) (Gökçe and Özgönül, 2001; Aktüre, 2001). After the mid-nineteenth century, European travelers owned country houses in the peripheries of the city (Aktüre, 2001, p. 50). These houses were mainly located in *Çankaya*, *Dikmen*, and *Ayrancı* in the south; in *Keçiören*, *Ayvalı*, and *Etlük* in the north; and in *Tuzlu Çayır*, *Kayaş*, and *Mamak* in the east (Atay, 1969, as cited in Gökçe and Özgönül, 2001, p. 270). Wealthy



Figure 7. Keçiören Mektebi and Country Houses.

Source: Koç University VEKAM Library and Archive, Inventory no.2451.



Greek and Armenian merchants owned country houses in *Keçiören* and *Etlik* in the north, and *Çankaya* in the south of the city (Georgeon, 1999, p. 105; Aktüre, 2001, p. 50).

The urban life, which could be observed during the winter within the castle area or in the surrounding neighborhoods near *Hisar*, continued in the country houses in the summers of the 19th century (Gökçe and Özgönül, 2001, p. 270). In addition to husbandry, viticulture was also a source of income for many people who lived in Ankara in the 19th century (Georgeon, 1999, p. 105). In addition to their houses in the city, families also owned country houses with a vineyard suitable for gardening far from the city center, and there were also cottages and poultry houses in the vineyards of wealthy villages (Georgeon, 1999, p. 105). The country houses in the periphery of Ankara were not only used as summer houses, but also as places for living, or where people produced agricultural goods (Georgeon, 1999, p. 105; Gökçe and Özgönül, 2001, p. 271). Country houses were scattered around the vineyards in the periphery, were planned according to the view and slope, and were surrounded by vineyards, vegetable, and fruit gardens (Atay, 1969, as cited in Gökçe and Özgönül, 2001, p. 272). These houses had two functions: (1) as summer houses, and (2), as the stores of the goods produced by viticulture (Aktüre, 2001, p. 50). Each house consisted of several service units, such as storage areas, a toilet, and a kitchen located only in one building (Gökçe and Özgönül, 2001, p. 273). The units outside the building were only those related to outdoor use, such as pergolas and garden pools (Gökçe and Özgönül, 2001, p. 277). Two-story buildings contained a basement, a mezzanine, and an upper floor, while the basement floor usually included a stable, a store, a stony ground, and a living room integrated with the front garden (Gökçe and Özgönül, 2001, p. 273; Aktüre, 2001, p. 50-51). The mezzanine floor included a kitchen and other rooms, while the upper floor included a *sofa* and more rooms (Gökçe and Özgönül, 2001, p. 273).¹¹ Unlike many houses in the *Hisar* region, country houses often had the typical physical characteristics of traditional Turkish houses, although they were different in having service areas such as toilets, bathrooms, and kitchens (Gökçe and Özgönül, 2001, p. 273-374). Country houses on the periphery were acces-

sible for people living in Ankara due to agricultural laws and advanced transportation. The scattered structure of country houses across the periphery also facilitated *the city's* expansion.

The economic and agricultural development processes, worldwide developments, and the regularization of education and agriculture through reforms and the establishment of schools, were all changing circumstances experienced by townsmen. Furthermore, the continuing and connected influxes into the urban life of townsmen were diverse methods of ensuring productivity.

Conclusions

The aim of this article was to write an urban and environmental history of Ankara, an expanding city in the 19th century. As diverse contingent challenges fostered the spatial transformation and the expansion of the city, a spatial connectivity between the city and its environs was provided through the construction of infrastructure and new buildings. This spatial connectivity was also ensured through the conceptualization of a connectivity among diverse contingent challenges, and by the utilization of natural resources as an instrumental building process of connectivity and productivity. The timing for construction of infrastructure not only contributed to the process of ensuring the productivity of the peasants, but also enabled them to transport their goods (Figure 8). The original contribution of this article to the literature is not to extend the research already done on the spaces and buildings of Ankara in the literature, or to scrutinize them in detail. Rather, it is to conceptualize the effects of the buildings and infrastructures that emerged in the 19th century on the expansion of the city, and to reveal the diverse contingent challenges, as well as the connectivity among spaces and challenges. As emphasized by Tekeli (2007, p. 52), the spatial framework of cities could be drawn by analyzing the “expansional area of cities,” the “quality of infrastructure,” the “urban pattern,” and the “macro features of urban structure.” As has been seen, the connections built through the construction of infrastructure and the expansion of cities are the main concerns which are to be scrutinized in urban history research.

The expansion of Ankara within the context of connectivity was ensured through diverse contingent chal-

¹¹ *Sofa*: The main living room in traditional Ottoman houses.



lenges. Instead of building a binary association between “defense - walls and barracks,” “wars and immigration - planned immigrant neighborhoods,” “changing circumstances - organic country houses,” “fatalities - graveyards,” “drought and famine - roads and railway,” “external dynamics - agricultural school,” a connectivity was established among spaces and challenges. The direct correlation between challenges and constructions may also transform into a network including diverse indirect connectivity. Instead of involving articulation of these binary and single-layered connections, this study attempts to draw a configuration of a stockwork connectivity among them. Each challenge may interrelate to each other, and each construction may become ways of overcoming more challenge. For that reason, linking challenges and

spaces together have become a conceptual method for this article.

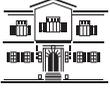
As inspired by the literature on urban environmental history discussed in the introduction, it is intended that a comprehensive urban environmental history of Ankara will be written considering the challenges which were the peculiar experiences for the city. As also inspired by the literature on urban studies and theories introduced at the beginning, the contingent challenges became the actants of the urban environmental history of Ankara. These actants, such as drought, famine, fatalities, reforms, regulations, and the events/experiences themselves, differ from actors such as state, foreign investors, merchants, and guilds. The actants as challenges are conceptualized as a method of building connectivity and the city’s



Figure 8. Angora, a peasant bringing his goods to the city via a cart.

Photograph by: Jean Weinberg.

Source: SALT Research Online Archive, [photograph] (AHANKA188).



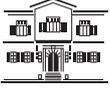
expansion. The conceptualization of the actants in the case of Ankara is the contribution of this study, and differs from the studies on architectural history which often consider the actors as the agents for urban development and transformation. This conceptualization has therefore enabled “connectivity” of spaces and challenges. However, as maintained by Bruno Latour (2017), a network can neither be reduced into an engineering and technical network defined by diverse ways of infrastructure, nor be related merely to nature. This study, therefore, avoids these kinds of approaches, but rather tries to produce multiple dimensions of connectivity. However, these dimensions could be multiplied still further, and the multiplication and diverse patterns of connectivity could be a topic for further research.

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