

Late Ottoman Visions of Palestine Railroads, Maps, and Aerial Photography

Zeynep Çelik and Zeinab
Azarbadegan

Abstract

This paper examines shifting attitudes in the late Ottoman official culture, with the argument that Palestine was claimed as an indispensable part of the imperial geography through modern technologies of photography, cartography, and warfare. The time period extends from the beginning of the construction of the Hijaz Railway in the 1880s to the British occupation of Jerusalem in 1917. The study is based on visual documents (photographs, maps, and postcards) drawn from the Ottoman archives, as well as from coverage in the Ottoman press of the time, most extensively from *Servet-i Fünun*. The discussion is organized around three key episodes. The first involves the construction of the Hijaz Railway, recorded by maps and a wealth of photographs. The photographs taken from heights, show endless landscapes crossed by rails, bridges, and tunnels – and crowded with Ottoman officers. The second explores how the Ottomans claimed Palestine through cartography. The topographic, ethnic, and touristic maps surveyed, organized, and conveyed a range of information on the district. The third focuses on the battles of the Gaza Front in 1917, tracing the advances and defeats of the Ottoman army as recorded by a series of maps accompanied by Hüseyin Hüsnü Emir's daily reports published in *Yıldırım* 1921. Significantly, World War I brought Palestine to the forefront of Ottoman military and political agendas, as conveyed through illustrated publications, most notably *Harb Mecmuası*, a periodical dedicated exclusively to the war.

Keywords

Photography; cartography; Late Ottoman Empire; modernity; Hijaz railway; tourism; World War One; Yıldırım (thunderbolt) army.

Photography, Railroad Construction, and a New Perception of Palestine

Photography and railway construction, two new technologies, made good companions during the second half of the nineteenth century. In Europe and America, photographs of infrastructure projects featured prominently in thematic albums. The innumerable photographs of infrastructure projects carried out in the Ottoman Empire fall into this universal genre. The extensive documentation of the Hijaz Railroad testifies to the privileged space that this project occupied (figure 1). With the goal of reaching Mecca and Medina, the railroad's main intention was to facilitate pilgrimage. In addition to the north-south line that directly served this purpose, links to the Mediterranean were built both to encourage agricultural development of the area and to facilitate another kind of religious tourism to Palestine, this time for Christians.¹



Figure 1. Map showing the railways and land roads in the Ottoman Empire (*Anadolü'da icrası muktezi olan yollarla inşaat-ı saireye dair haritadır*). Source: Başbakanlık Osmanlı Arşivi (BOA) HRT_377.

Photographs celebrated not only the completed bridges, tunnels, and tracks, but also the construction processes themselves. They were collected in albums that focused on a particular region at a particular time, and sometimes appeared as individual prints in various publications. An elegantly bound album with Abdülhamid II's *tuğra* (sultan's signature) on the back cover, most likely produced in 1905 or 1906, was dedicated to two branches of the Hijaz Railroad: the 460-kilometer north-south stretch from Damascus to Ma'an, and the 161-kilometer segment from Dar'a (Müzeyrib) to coastal Haifa, both completed in 1905. It also commemorated the Jaffa-Jerusalem branch that was completed a few years later.² The album was organized into two sections, starting with the Ma'an line, moving southward, and then shifting to the Haifa line, moving westward, from inland to the Mediterranean. Through photographs, each section depicted the infrastructure under construction and completed, ending with the terminal point stations.

Of the forty photographs presented, nine depict the Damascus-Ma'an segment, while thirty-one are of the Haifa branch (Hayfa Şubesi). Differences in the geography of the two regions most likely drove the decision about how many images to include. The area to the south of Damascus, which was a relatively flat desert, contrasted sharply with the comparatively short distance between Dar'a and the Mediterranean Coast, which was defined by mountains, valleys, rivers, cascades, and rich vegetation. Palestine's complex landscape necessitated the construction of bold structures crossing dramatic natural settings; these structures and the landscape itself were also conducive to spectacular views that could be photographed from different angles. A view of the "stone sections" of the 110-meter long iron bridge at the 110th kilometer on the Haifa line and another bridge of the same length at the 94th kilometer (figure 2) emphasized the height of the piers, set smartly against the humble scale of human figures.



Figure 2. "The Haifa branch of the Exalted Line and construction of the stone column at the beginning of the three arched 110-meter-long railway bridge at the 94th kilometer of the Haifa branch" (*hat-ı ali Hayfa şubesinde ve Hayfa mebde itibarıyla doksan dördüncü kilometre dahilinde üç gözlü yüz on metre demir köprüünün bir kargir ayağının inşası*) shows workers on top of the temporary wooden bridge connecting the two main stone pillars of the bridge over the river in the Haifa branch of the Hijaz Railway. Source: Ömer M. Koç Collection.

While these photographs gave some idea of the surrounding landscape, others presented the projects in their broader contexts that often dwarfed the monumental interventions. As Hamburg, Heilburn, and Néagu argued in reference to Nadar's photographs of Parisian air views, altitudes enhanced both "feelings of domination and power" and "gigantism and superhuman grandeur."³ The effect is more pronounced when the observer is challenged to identify the projects in wide-angle views.



Figure 3. "The Haifa branch of the Exalted Line and the entrance on the Haifa side of the 227-meter-long tunnel number one at the 104th kilometer of the railway line" (*hat-ı alı Hayfa şubesinde ve yüz dördüncü kilometre dahilinde iki yüz yirmi yedi metrelik bir numarolu tünelin Hayfa cihetinden medhalı*) shows the landscape and curve of a river on the Haifa line of Hijaz Railway with four arches of tunnels at the middle right-hand side of the photo. Source: Ömer M. Koç Collection.

For example, one photographic caption refers to the 224-meter long "tunnel number 1" at kilometer 104 (figure 3), but the photograph shows the slope of a massive waterfall falling sheer to a river valley. The tunnel entrance is a barely noticeable black dot at the left; only a careful search reveals at far right the tiny arches of a bridge that is not even mentioned. Geography dominates.

At a time when the Ottomans were redefining their imperial domination in the Arab provinces, the camera's ability to record large expanses of land served them well. The dissemination of photographs that captured landscapes from man-made and natural heights confirmed Ottoman possession of these territories. In albums collated according to different narratives (for example, to record a certain path, to provide information about the construction process, or to celebrate the sultan), photographs of the railway projects reinforced notions of imperial power. Regardless of whether such views were included in popular illustrated periodicals as single shots or as part of a series, or even if they circulated as single prints, the message was the same. From the empire's center to its provinces to international viewers, these photographs made clear the territorial and political reach of the Ottoman Empire.

Furthermore, imperial power was asserted by the depiction of people crowding the views that the cameras captured: these images conveyed valuable data about social hierarchies and the labor landscape. While the human scenes do not lend themselves to conclusive arguments and remain provocative, teasing the observer's interpretative tendencies, they are useful nevertheless for broadening our vision. Inevitably, the men made to pose for the camera (in some cases, simply to indicate scale) impose their long-lasting presence on the scene, triggering thoughts of social dynamics. They are clearly divided into two hierarchical groups: Ottoman officers identifiable by their European costumes, fezzes, and fancy boots stand alongside ordinary laborers. The latter occupy two categories: soldiers of the Ottoman army (*asker-i şahane*), who were salaried and whose military service was reduced by one year as compensation for this arduous work, and local laborers (*amele-i mükellife*).⁴ The Ottoman officers always appear in the forefront; because the same figures are recognizable in several photographs; they break through the generic category of administrators and overseers and acquire individual identities (figure 4). Adding to their prominent placement in the photographs, their erect postures exude self-confidence and control of the work being accomplished. In contrast to the relatively few official figures, the laborers in the background are numerous and are often featured in action, albeit choreographed for the shot: they carry stones on their backs, and axes in their hands. In another image they are shown completing the roof of the Ma'an station (figure 4). When they stand still, their locations say something about the difficulty of the work they do (figure 5). The message of imperial pride is conveyed clearly in one shot in which an officer points with his finger to the tracks over a bridge. Collectively, the photographs declare an imperial claim on Palestine, showing the control over the land and alluding to a social hierarchy.



Figure 4. "The general view of the Ma'an station and other structures on the Hamidian Hijaz route, glories of the imperial buildings and beneficences of charitable foundations of the Protector of the Caliphate." (*Celayil-i asar-ı Senniye ve ahasin-i mü'essesat-ı Hayriye-yi cenab-i hilafatpanahiden olan Hamidiye Hicaz demir-yolu Maan istasyonu ile sair-i mebanisi manzarayı umumiyesi*) shows Ma'an train station with seven men in fezzes at the front wearing different colored uniforms. There are numerous other figures standing behind them around the station building and three figures on top of the roof finishing off the tiling. Source: Ömer M. Koç Collection.

Cartography and Empire Building

Documentation by cartography also served colonial and imperial ideologies well. Matthew Edney stated it blatantly regarding British control of India: “As geography and empire are intimately and thoroughly interwoven ... knowledge of the territory is determined by geographic representations and most especially by the map.” He concluded that, “imperialism and mapmaking intersect at the most basic level. Both are fundamentally concerned with territory and knowledge.”⁵ Furthermore, as Daniel Foliard argued, again in reference to British cartography, maps say a great deal about “imaginations and ideologies.” However, their meanings are associated more with those who demarcate them, and not necessarily about the lands depicted or, especially, the people who live there. Their “compilation, semiotics, publication, and reception” give clues about the “imaginations and ideologies” behind their production.⁶

Recent scholarship on cartography proposes to examine maps as “performances and processes,” that is, paying attention to their transformations as they are circulated, used, and interpreted. Unpacked by Karen Culcasi, this means, “situating and critiquing maps with the complex historical discourses from which they evolved, while looking for continuities and changes.” Among the examples Culcasi gives that relate to maps of the Ottoman Empire, the “Sykes-Picot” map of 1916 makes the clearest point. Superimposed on an older map created in 1910 by the Royal Geographic Society and titled “Maps of Eastern Turkey in Asia, Suria, and Western Persia,” the Sykes-Picot map transformed the earlier one to serve a new purpose by crudely dividing the Arab territories between the French and the British. The Sykes-Picot map served as the base for further negotiations, although many other maps followed proposing other territorial divisions.⁷

Late nineteenth- and early twentieth-century Ottoman maps of the Middle East do not fall outside the general framework of this empire-cartography relationship. The construction of the Haifa section of the Hijaz Railway in 1905 provides a good platform on which to investigate a broader systematic attempt by the Ottomans to map the entirety of Palestine. The maps of the Hijaz Railway can be analyzed from three different perspectives. Firstly, the Hijaz Railway appears in imperial maps that show how the constructed and projected railways were meant to connect the entire expanse of the Ottoman Empire. Yuval Ben-Bassat and Yossi Ben-Artzi have identified five such map collections illustrating the empire’s veins, namely its roads and railways.⁸ The large production of railway maps demonstrates their importance to the empire’s centralization and its projection of power over provinces both near and far. While most of these maps were produced in Ottoman Turkish, some also include French toponyms, reflecting the influence of French cartographers in geographic and cartographic education in the Ottoman Empire.⁹

Secondly, the blueprint plans of railway construction include a detailed topographic survey of the region, noting the towns and cities through which the railway passed or was meant to pass.¹⁰ Although the blueprints were written and marked in French, Europeans may not necessarily have produced them since Ottoman surveyors and cartographers

were actively involved in the process of surveying the land.¹¹ For example, a map showing the projected railway line on a detailed topographic survey of the Imperial Hajj Route from Damascus to Mecca clearly demonstrates the instrumental role that the Ottoman surveyor, Hajji Mukhtar Bey, and cartographers, Captain of the Artillery ‘Umar Zaki and Lieutenant Hasan Mu‘ayyin, played in developing the construction plans. More importantly, the navy produced different versions of the map in Arabic and Ottoman Turkish, pointing to the multiple purposes and audiences targeted within and beyond the empire.¹²

The mass production of maps demonstrates the Ottoman state’s attempt to disseminate cartographic knowledge about the empire to the public. This speaks to the third and final aspect of analysis of the Hijaz Railway: its use as a tool of Ottoman

state propaganda during the Hamidian era. Before the Haifa branch of the Hijaz Railway was constructed in 1905, Ottoman lithographic maps of the Hijaz Railway were mass produced and sold for 100 para¹³ (figure 6). The map shows the main Hijaz Railway line fully constructed from Damascus to Mecca, although the railway between Medina and Mecca was never built. It also illustrates the District of Jerusalem in an enlarged insert of the Jerusalem-Jaffa line constructed in 1892. The latter map also includes a large text box in Ottoman Turkish, reading like a guidebook full of practical information for pilgrims making their way to Mecca. When considered next to the reproduction of photographs as postcards, this map was part of the larger attempt by the Hamidian state to mobilize and control visual knowledge production and dissemination about the Hijaz Railway. It was, in short, propaganda on a global scale.



Figure 5. “The bridge built under the waterfall at the Yarmuk creek near Zizun village at the 133th kilometer of the manufactured Haifa branch of the Exalted line” (*hat-ı ali Hayfa şubesi imalat-ı sanayisinden olup yüz otuz üçüncü kilometre dahilinde Zizun karyesi civarında Yarmuk deresine münhadir şelâle altında inşa olunan köprü*) shows the beginning of a railroad bridge with three figures, two in fezes and dark uniforms, with one of them pointing to the railroad. Source: Ömer M. Koç Collection



Figure 6. Lithograph printed map of the Hijaz Railway sold for 100 kuruş. The map has three sections. On the left, a map of the railroad and the roads leading from Damascus to Mecca is depicted illustrating the main cities and towns on the route. On the top right, a close-up of a section of the Beirut to Jerusalem route is depicted, with the railway between Jerusalem and Jaffa shown. On the bottom right, a detailed guide for pilgrims appears in Ottoman Turkish. Source: BOA, Hrt_1932.

The mass-produced map of the Hijaz Railway is connected to at least three earlier maps. It does not note the empire's administrative divisions, since it was published by the navy for "the benefit of the public" (*umumun istifadesi*) and intended to show a united empire. In contrast, an earlier map titled "The Land of Syria," published in Arabic in Beirut in 1889, clearly notes the administrative divisions through lines demarcating the borders and color-coding each province (figure 7).¹⁴ This map was filed in the archive with an earlier map entitled the "Province of Syria" published in Ottoman Turkish in 1880; the latter map shows Jerusalem as a subprovince of Syria, rather than as an independent district.¹⁵ There is a fourth map of the region from 1890, titled "Map of the Province of Beirut" and produced in both Ottoman Turkish and French by the engineer of the Beirut province (signed as "Bechara" on the map).¹⁶ It is similar to the previously mentioned maps, apart from two distinct features. First, it includes detailed topographic features, which might have been compiled by Bechara himself, his surveyors in the region, or even copied from circulating European maps or Hajji Mukhtar Bey's map of the projected Hijaz Railway. Second, it notes in detail the population of the province of Beirut in a table placed at the bottom right. The "Province of Syria" (1880) and the "Land of Syria" (1892) maps were mass-produced at the provincial level and found their way to the Yıldız Palace archive. The "Map of the Province of Beirut" (1890) was produced for state and administrative purposes and had limited circulation, and the later Hijaz Railway map (between 1902 and 1905) was published in Istanbul and circulated widely. These maps clearly indicate the compilation of cartographic knowledge in the Ottoman Empire: information from the earliest map on the Province of Syria was reused and updated in the later maps for different purposes.

The last map in the "Land of Syria" series includes a distinctive feature that reflects how the Ottoman state imagined Palestine, as well as the impact that the global circulation of ideas and cartographic knowledge had on Ottoman cartography (figure 7). In the left middle section of the map, we see a division of the coastal region stretching from Sayda to Gaza, together with the label "the Division of Twelve Tribes of Israel" (*aqsam asbat israil al-isna ashar*). This section of the map served to indicate where the Twelve Tribes would have lived on both sides of the River Jordan and beyond the contemporary Ottoman administrative divisions that separated Palestine into the Province of Beirut and the District of Jerusalem. One of these twelve divisions, in the area around the port city of Gaza, is labelled "al-Filistin," referring to the biblical Philistines. This detail supports Salim Tamari's argument that the delineation of Palestine in Ottoman cartographic culture corresponded, at certain levels, to European designations of the "Holy Land," as a clear awareness and utilization of biblical references and cartographic delineations in this map demonstrates.¹⁷ Apart from the wide circulation of cartographic knowledge and ideas, we can trace their impact on the implementation of administrative divisions. The Ottomans not only considered the District of Jerusalem as part of Palestine, but also intentionally divided Palestine into two separate administrative divisions, with the northern section included in the Province of Beirut. Palestine's division versus its unification into a single province was a key component of the debates that focused

on the goal of gaining full control over the province and resisting foreign intervention. These debates occurred at the central and provincial levels between 1872 and World War I – during which time the separate Province of Jerusalem was first created, then retracted, and finally replaced by the establishment of an independent District of Jerusalem in the same year under Midhat Pasha's premiership.¹⁸ The construction of the Haifa branch of the Hijaz Railway encouraged Christian pilgrimage to Palestine; however, the administrative division of the region was intended to assert higher levels of control from Istanbul over the District of Jerusalem while limiting European influence and intervention.

Two cartographic postcards of the region further illustrate the mass dissemination of maps showing the Ottoman Empire's administrative

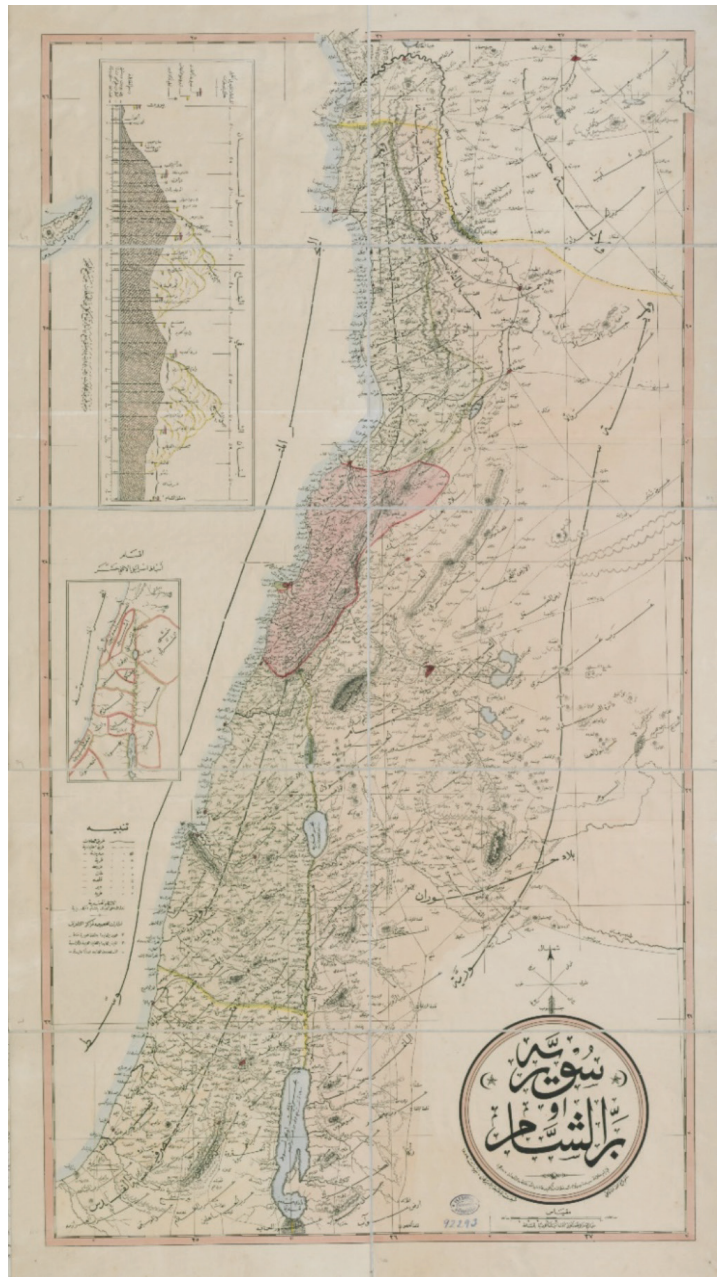


Figure 7. Map of the administrative divisions of the Province of Beirut at the coastline of the Mediterranean with the District of Jerusalem depicted at the southern section up to the end of the Dead Sea. At top left of the map is the elevation and distance of the main towns and cities in the Province of Beirut. At middle left, a division of the tribes of Israel is depicted around the Sea of Galilee and the Dead Sea. Source: *Suriye Berr al-Şam* [The Land of Syria] (Al-Amirakan Publication House, 1892), IUMK 92293_1.

divisions and the significance of the Hijaz Railway to the empire. While the first postcard depicting the Province of Beirut looks like a simplified version of the Land of Syria map (figure 7),¹⁹ the second, focusing on the District of Jerusalem (figure 8), mirrors the mass-produced map of the Hijaz Railway of the same region (figure 6).²⁰ The fact that the Hijaz Railway and its Haifa branch are marked clearly in red in both postcards demonstrates the significance that the railways had to the Ottoman state and its projection of power. The postcards are part of a larger collection published by the army's library (Kütüphane-i Askeri) and Tüccarzade İbrahim Hilmi, which includes every single province of the Ottoman Empire.²¹ While scholars have already established that the Ottomans used postcards to disseminate photos of the Hijaz Railway, the publication of this series of postcards illustrates how the Ottomans employed cartographic knowledge on a mass scale to project their sovereignty over the spaces they showcased pictorially, including Palestine.²²



Figure 8. “District of Jerusalem (Kudüs-ü şerif mutasarıflığı), the postcard shows the District of Jerusalem and its southern borders with the Sinai Dessert not clearly demarcated. The railway from Jerusalem to Jaffa is depicted with a red line. It was published by the Army’s Library (Kütüphane-i Askeri) and Tüccarzade İbrahim Hilmi. Source: Atatürk Library, AK Krt_028343.

Like other regions in the Arab provinces, Palestine's newly gained importance was reflected on the maps. Various state institutions mapped Palestine for different purposes: the navy produced maps of the port cities,²³ the state produced maps of the Hijaz Railway, and provincial governments and the Hamidian Privy Purse (Hazine-yi Hassa) produced maps for tax purposes.²⁴ Among them, the map of Sayda from 1848–49 (AH 1265) roughly identifies the stretch between Ramla and Jaffa as “Filistin ülkesi” (the land of Palestine), notably without any boundaries at all.²⁵ Another set of important maps underline the dispute regarding the Palestine-Egypt border, which was set in 1906 through negotiations between the Ottomans and the British.²⁶ A set of six maps point to the cartographic ambitions and utilization of maps by the Ottoman state. They predate 1872, as they represent Palestine as a subprovince of the Province of Syria. Information for the subprovince of Jerusalem was provided, demonstrating the significance the region had for the Ottoman state even before creation of the independent District of Jerusalem. The maps convey various types of information about the entire expanse of the Ottoman Empire, from demographics to crime rates and agricultural land use.²⁷ Noteworthy are the demographic maps, which distinguish the population distribution by age only, not according to religious affiliation.²⁸ While Ottoman surveys collected information about religious affiliation, its visual representation in maps only appeared in the Young Turk period (1908–18). The charter of the Council of Cartography (Harita Kurulu) within the Department of Cartography, established in 1909, listed as its main goal “to produce a map of the entire Ottoman lands”; one of its secondary goals called for “geographic research from the ethnographic perspective on Ottoman lands.”²⁹

Within this context of Ottoman cartography, *Filistin Risalesi* is a salient booklet that responded to the parameters set by the department, albeit with a significant delay. Reflecting the shift in Ottoman policies toward the Arab provinces and published in 1915 by the Eighth Army, under the tutelage of Mersinli Cemal Pasha, the Commander of the Eighth Army, and Ahmet Cemal Pasha, the governor of Syria and commander of the Fourth Army, it was intended for use by military forces.³⁰ The publication was packed with geographical, historical, ethnic, religious, and infrastructural information, for example, geographical specifications on water conditions and the range of agricultural production. The history section combined data on the important events of the past with random references to the Canaanite, Philistine, Hebrew, Babylonian, Arab, and Islamic conquests. Architectural monuments from the various eras and their current states were listed; in addition to major monuments (such as Dome of the Rock and the Church of the Holy Sepulcher in Jerusalem), the text also referred to less significant remains. Along the way, even vernacular culture was touched upon, such as a 33-meter deep well from the time of Jesus Christ, with waters that purportedly never dried up.³¹

The three maps (in color) at the end charted and summarized the data: the first, *irtifa haritası* (map of heights, accompanied with sectional drawings), showed topography; the second identified the zones where different ethnic groups lived (figure 9); and the third indicated the roads. In remarkable detail, the major human settlements featured in the textual discussions of geography and history and were marked on the geographic and infrastructural maps. The complexity of the empire's ethnic structure, which included

Syrians, Arabs, Druze, the Nusayri, Greeks, Armenians, Copts, Shiites, Turks, and Jews, was the focus of the second map. Here, the map drew a more complicated picture than the text, calling attention to overlays between ethnic settlements and their blurred boundaries.³²

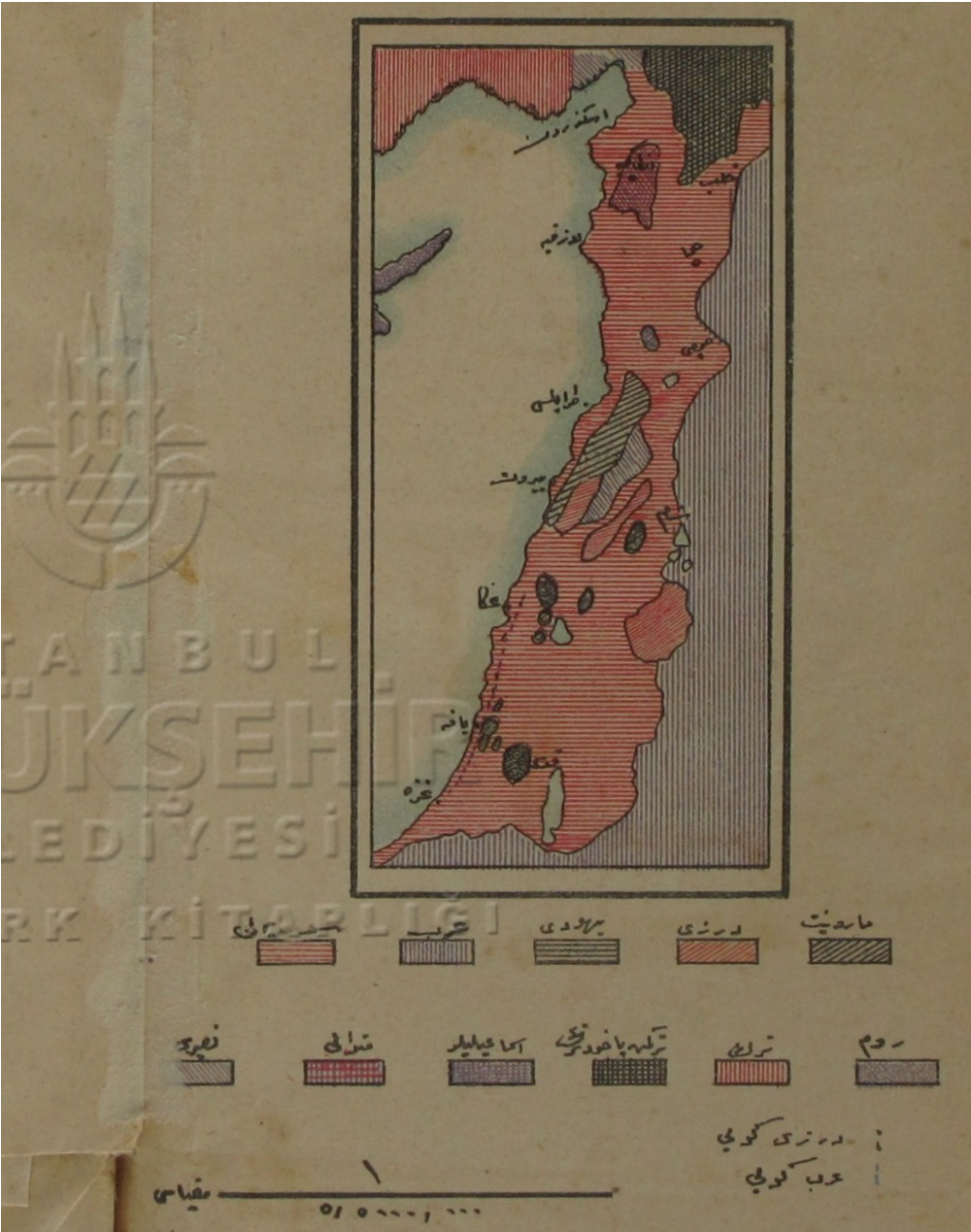


Figure 9. Map of religious and ethnic distribution. Source: *Filistin Risalesi* (Jerusalem: Kolordu Matbaası, 1915) [8th Army Publishing House].

World War I intensified cartographic focus on the Middle East from all sides. Even before the war, the British had produced many maps that interlaced with their religious interests in the Holy Land; but they also demonstrated a growing eye for conquest. For example, the Palestine Exploration Fund made systematic surveys between 1872 and 1877 and, increasingly, the British War Office became involved in PEF's work.³³ In a parallel venture, during the war years, the Cartography Department of the Ottoman Army continued to do field work and produce maps of the empire. The activity was intense and continued through all of 1917, first starting with Rumeli and Anatolia, then moving to the Gaza war front in May and July. Again, with the support of Cemal Pasha, maps of Gaza, Jerusalem, Jaffa, Nablus, and Haifa in Palestine (in addition to other cities in the region) were printed at a scale of 1/200,000.³⁴

An interesting set of maps charted the daily operations of the "Yıldırım Ordusu" (Thunderbolt Army Group), the latter named after its abrupt attacks against the British forces and their "trench warfare" strategy. An integral part of the military aid provided to the Ottoman Empire, "Yıldırım" was headed by German General Erich von Falkenhayn. According to Hüseyin Hüsnü Emir, the deputy chief of staff of the Yıldırım Army Group, Yıldırım was organized pursuing German rules and with German officers in key positions. Its leadership was comprised of sixty-five German officers and nine Turkish officers, only one of whom was of a high rank. In his detailed account produced in the war's aftermath, Hüseyin Hüsnü Emir linked the loss of Palestine to this unbalanced command structure and to the fact that "the Thunderbolt came to Turkey as German and kept its German-ness to the end." The Turkish army, he said, increasingly distrusted Thunderbolt's German character.³⁵ Hüseyin Hüsnü Emir's book, *Yıldırım*, offers a detailed and valuable account of the Palestine Front. First published in 1921, it is a primary source for the Syria-Palestine Front and the Thunderbolt Army Group.³⁶

The Yıldırım collection of maps looks at Palestine from two scales, both providing war-related data alongside geographical features: large maps show the extent of the land while regional maps zoom into the details of military operations. In the first category is a general map of Palestine (Filistin Haritası), especially striking in its depiction of geographic elements. Details of the infrastructural network are conveyed in another map, titled "Filistin Yol Haritası" (Palestine Road Map), now including the land roads in addition to the railways, along with named settlements, both large and small. In an interesting note, it also located "old ruins" (*eski harabeler*), in the southwestern part especially. A random glimpse at the more detailed maps reveals attacks, gains, and defeats, battle by battle. One map, for example, shows that on 26 March 1917 (26 Mart AH 1333) during the First Gaza Battle, the Ottoman troops (represented as circles) used a three-pointed offense that forced some British troops (represented as black arrows) to retreat (figure 10). On another, the success of the Second Gaza Battle on 11 April 1917 (11 Nisan AH 1333) was tied to the arrival of additional Ottoman troops from Jaffa (indicated in white arrows).³⁷ In a map showing the state of the Seventh and Eighth Armies on 8 October 1917 (8 Kanunsani AH 1333), the date of the pitched Beersheba-Gaza battle, the situation was quite different: here, the Eighth Army (marked in green arrows) registered a major retreat (figure 11). Several months later, on 7–9 December 1917 (7–9 Kanunievvel AH 1333), at the height of

the “Battle for Jerusalem,” the British were at the gates of Jerusalem and moving forward on all fronts.³⁸ This was the beginning of the end for the Ottoman presence in Palestine, as General Allenby made his ceremonial entry into Jerusalem on 11 December. The map summarizing the situation on 27 January 1918 (27 Kanunisani AH 1334) recorded the final defeat, with Jerusalem and Jaffa now sitting comfortably within the region controlled by the British forces. The Ottoman armies were moving away toward the north.³⁹

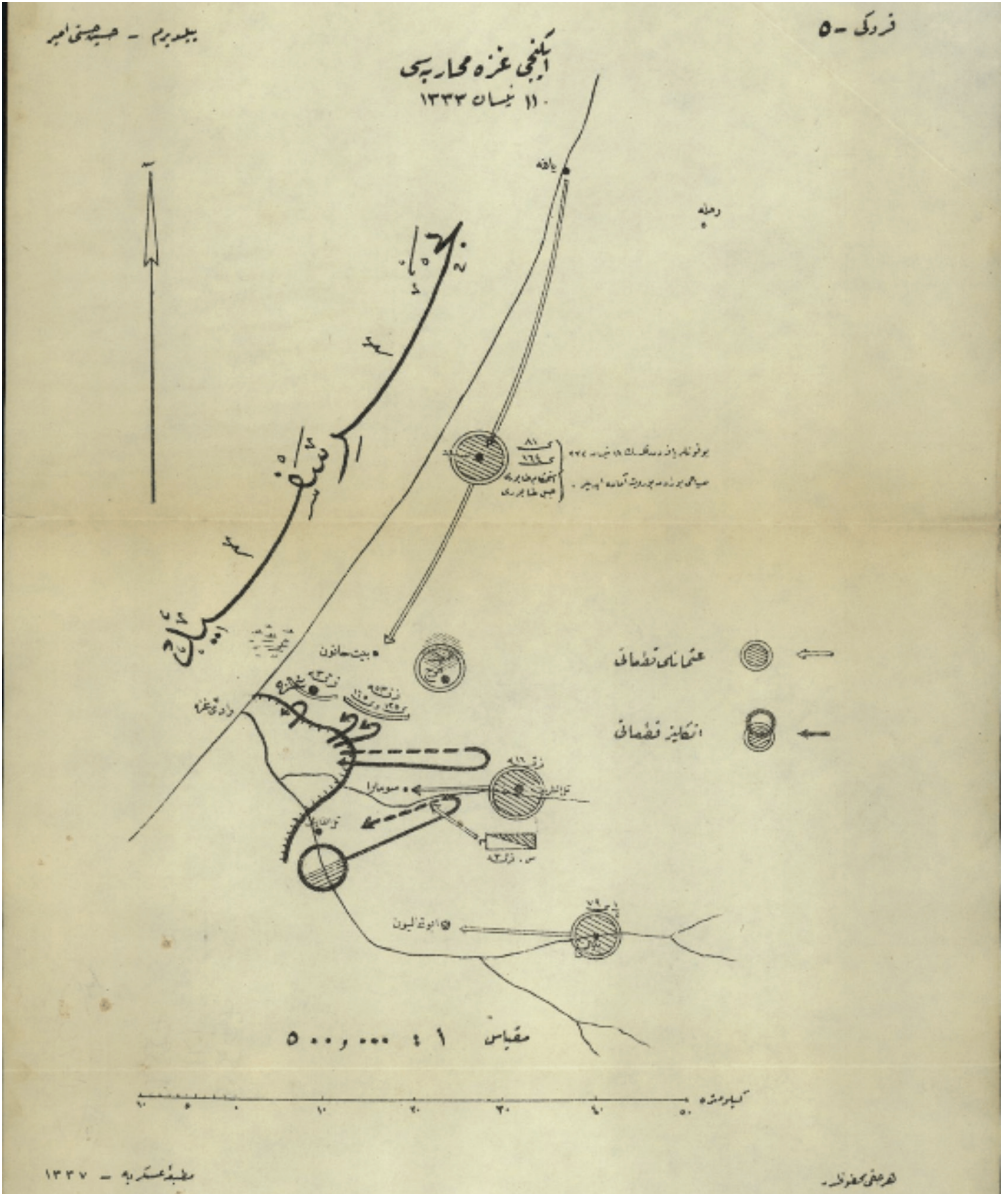


Figure 10. Yıldırım map, recording the action on 11 April 1917. Source: Atatürk Library, Hrt_011271.

Yıldırım maps survey the movements of the Seventh and Eighth Armies during 1917 in meticulous detail. Nevertheless, they also provide a comprehensive record of Palestine, from its geographical elements down to its smallest settlements, all accurately placed in broader contexts and in their immediate surroundings. It would be fair to argue that the Ottomans had not viewed Palestine with such intimacy before, but only did so now, just as it was slipping out of their grasp. Hüseyin Hüsnü Emir's book, *Yıldırım*, published in 1921 on the eve of the declaration of the Turkish Republic, sealed the end of an era.

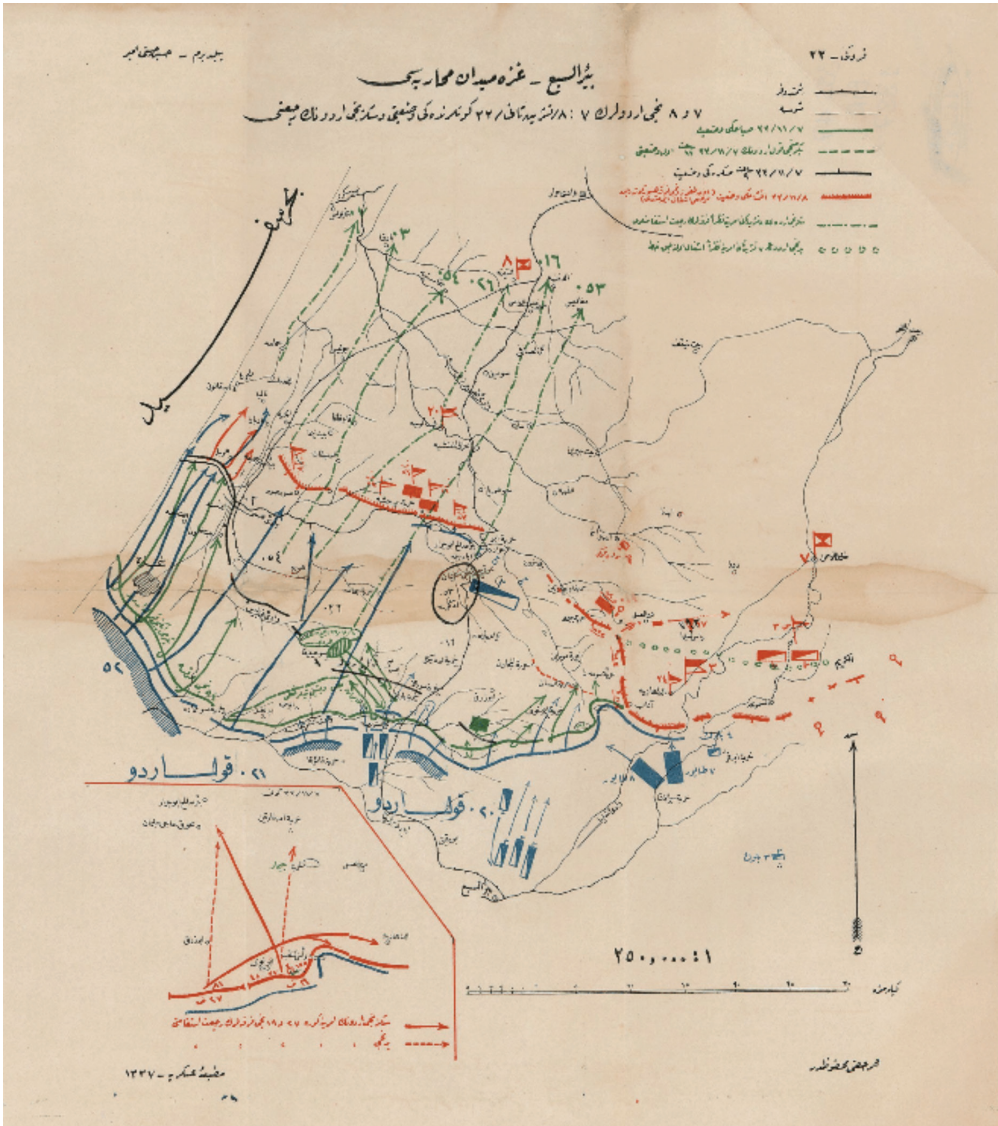


Figure 11. Yıldırım map, recording the action on 7–9 December 1917. Source: AK Hrt_011247.

Aerial Photographs and Cartography

Hüseyin Hüsnu Emir identified one map from the Yıldırım collection that was drawn with the help of photographs taken from German planes on 27 October 1917 (27 Teşrinievvel AH 1333).⁴⁰ In his words, Yıldırım armies desperately needed airplanes and the unfortunately poor state of Ottoman air technology had led to over-reliance on German forces: “All the planes on the Palestine Front” belonged to Germans.⁴¹ Nevertheless, the Ottoman military interest in airplanes goes back to a report from 20 December 1909, which stated that airplanes would be indispensable during pitched battles and that the army should acquire them urgently. The Ottoman initiative to train pilots started in 1911, when two young officers, lieutenant commander Mehmed Fesa and lieutenant Yusuf Kenan, were sent to France for flight training. An aviation school was founded in 1912 in Yeşilköy (figure 12) following their return to Istanbul.⁴² A year later, an article published in the popular illustrated journal *Şehbal* reported on the sight of a plane above Istanbul, flown by another pilot, Fethi Bey, and gave factual data about the experience. It stated, for example, that flying was similar to driving a car at 100 kilometers per hour and that until a plane reached a height of 800–900 meters, pilots could distinguish even people and animals on the ground. A photograph depicted Fethi Bey with a certain “Monsieur Kiray.”⁴³

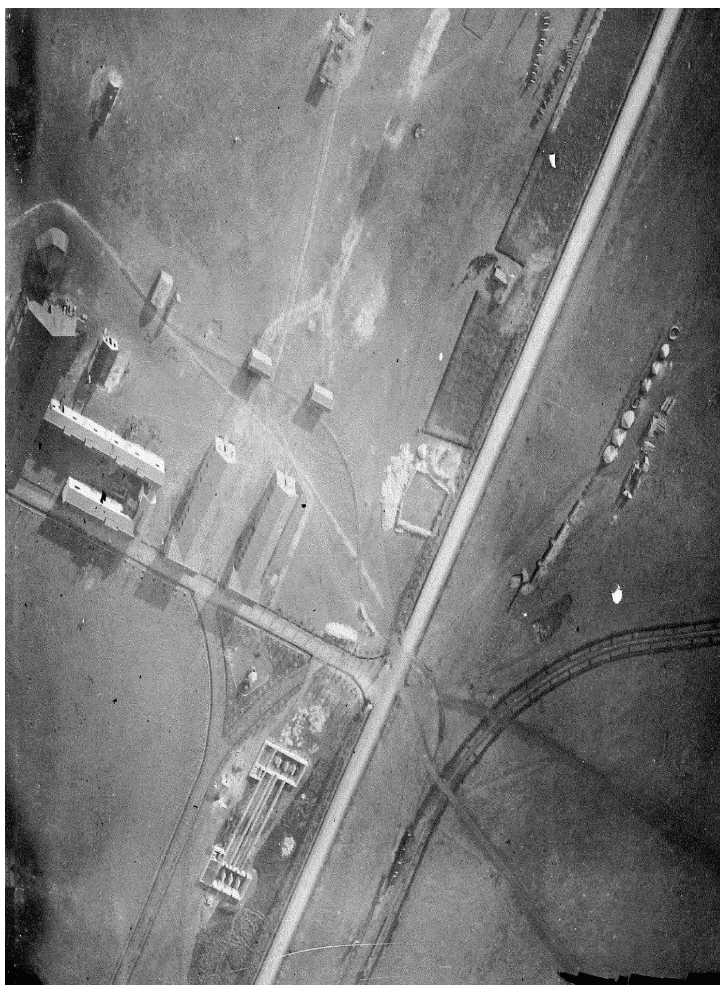


Figure 12. Aerial photo showing the aviation school at Yeşilköy. Source: Bahattin Öztuncay Collection.

Ottoman pilots took part in the Balkan Wars under limited conditions, with planes rented from Germany and France.⁴⁴ Flying was taken seriously and an ambitious journey was planned to link Istanbul to Aleppo via Anatolia and further south to Jerusalem and Port Said. Ultimately reaching Cairo, the flight was scheduled to take place between 8 February and 22 May 1914.⁴⁵ Stretching over a distance of 2,515 kilometers, the expedition would be broken with stops at major settlements; the longest distances to be covered were the 220-kilometer stretch between Istanbul and Eskisehir and the 300 kilometers from Homs to Beirut. The pilots in charge were lieutenant commanders Fethi Bey and İsmail Hakkı Bey and lieutenants Reşid Sadık and Nuri Bey. The flight turned out to be an arduous and deadly venture. Gusty winds on 27 February 1914 caused Fethi Bey and Sadık Bey's plane, *Muavenet-i Milliye*, to crash near Lake Tiberias on the Damascus-Tiberias stretch. Both men were killed. Another crash in Jaffa two weeks later, on 11 March, resulted in the death of Nuri Bey. All three pilots were buried in the graveyard cemetery of the Umayyad Mosque in Damascus and a memorial was erected in Istanbul. The final stretch to Cairo was not realized due to weather conditions.⁴⁶

Harb Mecmuası (War Journal), a bi-weekly published by the Ministry of War (1915–18), proudly reported the activities of wartime Ottoman pilots. These activities included taking critical aerial photographs, including some of the Suez Canal that showed the train stations and various buildings constructed by the British, as well as ships belonging to the British navy. It was with the assistance of these photographs that the “brave” Ottoman pilots had bombed various sites, causing the death of British soldiers and destroying arms and equipment in the depots. As the planes were able to fly quite low, they could open fire on ground forces.⁴⁷ The photographs that accompanied the reporting showed air views of Port Said and an English plant destroyed by Ottoman air forces (figure 13). The British planes grounded by Ottoman



Figure 13. “Süvey ve Havalisinde Tayyarelerimiz Faaliyeti ve Tayyareden Alınan Fotoğraflar” [The Operations of Our Airplanes and Photographs Taken from Airplanes in and around Suez] *Harb Mecmuası* 1, no. 14 (Teşvirişani 1332 / Safer 1335 / November/December 1916), 220–21.

artillery featured in the pages of other issues of the journal, for example in May 1917 and in August 1917 (figure 14). The first image was paired on the same page with a memorable photograph of a destroyed British tank, qualified as “zırhlı otomobil” (armored automobile). The second showed the remains of two British planes, in addition to an image of the British lieutenant who was taken captive (figure 15).⁴⁸

Early Ottoman successes during the Gaza War, reported by *Harb Mecmuası*, corresponded with Hüseyin Hüsnü Emir’s accounts. However, the situation was soon reversed, and the British air force established its superiority. Casualties to Ottomans on the Palestine Front were considerable and air attacks resulted in the death of many soldiers, especially during the last stages of the war.⁴⁹



Figure 14. A British destroyed “armed automobile” and destroyed plane in *Harb Mecmuası* 2, no. 19 (Mays 1333 / Subat 1335 / May 1917), 291.

Aviation impacted more than just bombing during World War I. The airplane acted as an “eye in the sky” for “aerial reconnaissance information.” It was used to document the land, both serving map-making purposes and enabling the planning of further battles.⁵⁰ The Ottomans acknowledged the importance of such strategies and noted the need for advanced technologies, albeit belatedly. An article in 1927, for example, noted the new Turkish interest in cartography that had been developed with the help of aerial photographs; it explained that with the use of some “special equipment,” European topographers were able to utilize information from photographs to create maps.⁵¹



Figure 15. Remains of two British planes, and a captured British officer in *Harb Mecmuası* 2, no. 21 (Ağustos 1333 / Şevval 1335 / August 1917), 330.

Turks were thus aware of the “perceptive” power of aerial views and their ability to augment the authority, dominance, and control of those who could own and use the technology successfully. The efficiency and the pace in which such new technologies were adopted, however, had created unequal international relations, better serving colonial expansion than Ottoman imperialism. Of course, the story is much larger and much more complex, but if the British gained control over Palestine after the war, this had something to do with the multitudes of ways in which they had capitalized on aviation, as well as other technological advancements. In comparison, Ottoman claims to Palestine – whether military, technological, cartographic, or photographic – paled.

Zeynep Çelik is a Distinguished Professor of Architecture at New Jersey Institute of Technology and adjunct professor of history at Columbia University.

Zeinab Azarbadegan is a PhD candidate in the Department of History at Columbia University, working on a dissertation on Ottoman Iraq.

Endnotes

- 1 There is extensive literature on the Hijaz Railroad. See, for example: Ufuk Gürsoy, *Hicaz Demiryolu* (Istanbul: Eren, 1994); Murat Özyüksel, *Hicaz Demiryolu* (Istanbul: Tarih Vakfı Yurt Yayınları, 2000); Zeynep Çelik, *Empire, Architecture, and the City: French–Ottoman Encounters, 1830–1914*, (Seattle/London: University of Washington Press, 2008), chap. 1; and Vahdettin Engin, Ahmet Uçar, and Osman Doğan, eds., *Osmanlı’da Ulaşım* (Istanbul: Çamlıca, 2012), 237–86.
- 2 The album is housed in the Ömer Koç Collection. For completion dates of the two segments, see Engin et. al., *Osmanlı’da Ulaşım*, 269, 330. For an analysis of this album, on which this section is based, see Zeynep Çelik, “Photographing Mundane Modernity,” in *Camera Ottomana: Photography and Modernity in the Ottoman Empire, 1840–1914*, ed. Zeynep Çelik and Edhem Eldem (Istanbul: Koç University Press, 2015), 154–68.
- 3 Maria Morris Hamburg, Françoise Heilburn, and Philippe Néagu, *Nadar* (New York: The Metropolitan Museum of Art, 1995), 110.
- 4 İbrahim Üsul, ed., *Hicaz Demiryolu Fotograf Albümü* (Istanbul: Albaraka Yayınları, 1999), 14. It was also common to employ European experts.
- 5 Matthew Edney, *Mapping an Empire: The Geographical Construction of British India, 1765–1843* (Chicago: University of Chicago Press, 1997), 1.
- 6 Daniel Foliard, *Dislocating the Orient: British Maps and the Making of the Middle East, 1854–1921* (Chicago and London: University of Chicago Press, 2017), 1, 3.
- 7 Karen Culcasi, “Disordered Ordering: Mapping the Divisions of the Ottoman Empire,” *Cartographica: International Journal for Geographic Information and Geovisualization*, 49, no. 1 (Spring 2014): 3, 6.
- 8 These are in Başbakanlık Osmanlı Arşivi (BOA): BOA Hrt 337, Hrt 374, Hrt 1489, Hrt 406, Hrt 2577. For more detailed discussion, see Ben-Bassat, Yuval, and Yossi Ben-Artzi, “Ottoman Maps of the Empire’s Arab Provinces, 1850s to the First World War,” *Imago Mundi* 70, no. 2 (2018): 199–211.
- 9 As will be discussed later, the Cartography Commission of 1890 was sent to France so that its members could master the latest cartographic methods.
- 10 BOA Hrt 1645. This blueprint includes 14 pages showing the whole of the projected Hijaz Railroad from Damascus to Mecca.
- 11 BOA Hrt 1645 was reproduced in Ottoman Turkish for the Yıldız Palace and Abdülhamid II. The reproduction does not include the topographic features and only shows the route and the stations on it in scale. See İstanbul Üniversitesi Merkez Kütüphanesi, Nadide Eserler İstanbul University Central Library, Rare Works (İÜMK) 92423.
- 12 The Arabic version is housed in the Royal

- Geographic Society (London). The Ottoman Turkish version is reproduced in James Nicolson's book on the Hijaz Railway. Nicolson does not cite from which archives the map comes. However, it is noted in the top right corner of the map that it is an "Enclosure in Sir N. O'Connor's no.252 pf 6404." Information has been translated into English with red ink next to the Ottoman Turkish. Nicholas O'Connor was the British Ambassador to the Sublime Porte from 1898 until his death in 1908. See Royal Geographical Society, Ms Asia Div.186; James Nicolson, *The Hejaz Railway* (London: Stacey International, 2007), 13.
- 13 BOA Hrt_806_2 and İÜMK 92293. 100 para is about U.S. \$ 0.25. Currency was converted using 110 as the exchange rate between kuruş and the British pound sterling (1841–1903) as stated in Şevket Pamuk, *Monetary History of the Ottoman Empire* (New York: Cambridge University Press, 2000), Table 12.1, 191, online at www.measuringworth.com/ukcompare/ (accessed 25 May 2020).
 - 14 İÜMK 92293-1.
 - 15 The map shows the administrative divisions of Province of Syria at the coastline of the Mediterranean with the sub-province of Jerusalem in the bottom left. Titled "Map of the Province of Syria" (Suriye vilayeti haritası), drawn by assistant engineer of the province Yusuf Efendi and published as a lithograph by Mustafa Efendi, the head of the provincial lithographic publication house, 1880. İÜMK 92293_2.
 - 16 BOA Hrt_521. This map is discussed in Ben-Bassat and Ben-Artzi, "Ottoman Maps of the Empire's Arab Provinces," 213 (Plate 6).
 - 17 Salim Tamari, "Shifting Ottoman Conceptions of Palestine, Part 2: Ethnography and Cartography," *Jerusalem Quarterly* 48 (Winter 2011): 6.
 - 18 Johann Büssow, *Hamidian Palestine: Politics and Society in the District of Jerusalem 1872–1908* (Leiden: Brill, 2011), 9–11.
 - 19 Postcard showing the administrative divisions of the Province of Beirut with the District of Jerusalem appearing at the bottom left next to the legend. The Hijaz Railway and its Haifa and Beirut branches are illustrated with a red line. The map is titled "Province of Beirut (Beyrut vilayeti)," and published by the army's library (Kütüphane-i Askeri) and Tüccarzade İbrahim Hilmi, AK Krt_016834.
 - 20 AK Krt_028343.
 - 21 Tüccarzade İbrahim Hilmi was a prominent publisher in late Ottoman and early Republican eras
 - 22 In total, forty postcards have been identified from Atatürk Library as part of this collection of cartographic postcards. See: AK Krt_016835 (Egypt), Krt_016839 (Cyprus), Krt_028333 (Crete).
 - 23 İÜMK 93565: Muhiddin, Yüzbaşı "Sur portları: Akka ve Hayfa portları." This shows Haifa and Akka. This is part of a series of maps (93551–93566) of the Mediterranean, 93562 –Trablusşam, and 93564 – Beyrut ve Sida.
 - 24 For maps of the miri (state) lands, see (BOA) Hrt_1501 and Hrt_1568; for maps drawn for the Hamidian Privy Purse (Hazine-i Hassa), see (BOA) Hrt_528 and Hrt_529.
 - 25 BOA Hrt 520. This map is discussed in Ben-Bassat and Ben-Artzi, "Ottoman Maps of the Empire's Arab Provinces," 207.
 - 26 Ben-Bassat, Yuval, and Yossi Ben-Artzi, "The Collision of Empires as Seen from Istanbul: The Border of British-controlled Egypt and Ottoman Palestine as Reflected in Ottoman Maps," *Journal of Historical Geography* 50 (2015): 25–36. Büssow notes that as early as 1882, there were concerns in Istanbul regarding lack of accurate maps of southern deserts of Palestine after the British occupation of Egypt and unclear status of the border between the District of Jerusalem and Egypt. Büssow, *Hamidian Palestine*, 55.
 - 27 The maps in this collection, in order, are: (1) demographic map of the empire; (2) population distribution charts by age for every province; (3) empire-wide crime statistics maps; (4) public schools map of the empire; (5) land under agricultural use in 1313 (1895-96); (6) chart of imports to each province; (7) map of existing railways and roads of the empire; and (8) map of imperial administrative divisions, including some topographic information. See BOA Hrt_2577.
 - 28 BOA Hrt_2577_2.
 - 29 Abdurrahman Aygün, *Türk Haritacılık Tarihi*, Ankara: Harita Genel Müdürlüğü, ۳۰, ۱۹۸۰. It is in the aftermath of the Tanzimat, and associated with the reform agendas, that documenting the imperial lands through cartography emerged as a priority within the military structure. As Aygün reports, the efforts to institutionalize modern cartography

- go back to the late 1830s, when the idea for a Department of Cartography (Harita Dairesi) originated, even though the establishment of the Department only took place in 1909. Throughout the seven decades in between, during the reigns of Sultan Abdülmecid (1839–61) and Sultan Abdülhamid II, map making was introduced by courses on topography, geodesy, and astronomy into the curricula of higher-level military schools. A Cartography Commission was founded in 1887, and students were sent to France to be trained in mapmaking.
- 30 For an astute discussion of this context, see Salim Tamari, “Shifting Ottoman Conceptions of Palestine, Part 1: ‘Filistin Risalesi and the Two Jamals,’” *Jerusalem Quarterly* 47 (Fall 2011): 28–38.
- 31 *Filistin Risalesi* (Jerusalem: Kolordu Matbaası [8th Army Publishing House], 1331 /1915), 1–13, 18.
- 32 This point is made by Tamari in “Conceptions of Palestine, Part 2,” 10–11.
- 33 Foliard, *Dislocating the Orient*, 9, 247.
- 34 Aygün, *Türk Haritacılık Tarihi*, 94–95.
- 35 Hüseyin Hüsni Emir (Erkilet), *Yıldırım*, (Ankara: Genelkurmay Basım Evi, 2002), 13–15. The maps in this edition are drawn over the original ones, which are held in the Atatürk Kitaplığı in Istanbul. Hüseyin Hüsni Emir is a controversial figure, remembered for his extreme nationalism and his admiration of Hitler.
- 36 Hüseyin Hüsni Emir, *Yıldırım*, (Dersaadet: Matbaa-i Askeriye, AH 1337, 1921). This edition included the reproductions of the original maps.
- 37 Yıldırım map, recording the action on 8 October 1917. AK Hrt_011270.
- 38 Yıldırım map, recording the action on 27 January. AK Hrt_011253.
- 39 Yıldırım map, showing a map drawn with the help of photographs taken by German pilots. AK Hrt_011254.
- 40 AK Hrt_011260.
- 41 Hüseyin Hüsni Emir (Erkilet), *Yıldırım*, 33.
- 42 Stuart Kline, *Türk Havacılık Kronolojisi / A Chronicle of Turkish Aviation*, (Istanbul: Havaş, 2002), 55, 60.
- 43 “Osmanlı Tayyareciliği Hakkında” [On Ottoman Aviation], *Şehbal*, year 5, v. 4, no. 75 (1 Mayıs 1329 / 14 May 1913), 15.
- 44 Osman Yalçın, “Türk Hava Kuvvetleri Tarihinde Hava Okulu ve Harp Okuluna Geçiş Süreci” [Aviation School and the Transition to the Military School in the History of the Turkish Air Forces], *Akademik Bakış*, 9 no.17 (Winter 2015): 230–31, 235–36.
- 45 *Crowd around Turkish military biplane*, Jerusalem, 1914 [1 May], American Colony, Photo Department, photographer, online at www.loc.gov/item/mpc2004003714/PP/ (accessed 25 May 2020).
- 46 Osman Yalçın, *Türk Hava Gücü: Kuruluşu, İlk Seferleri ve Yükselişi* (Istanbul: Türkiye İş Bankası Kültür Yayınları, 2014), 55–72; Kline, *Türk Havacılık Kronolojisi*, 86, 88, 90.
- 47 “Süvey ve Havalisinde Tayyarelerimizin Faaliyeti ve Tayyareden Alınan Fotoğraflar,” [The Operations of Our Airplanes and Photographs Taken from Airplanes in and around Suez] *Harb Mecmuası* 1, no. 14 (Teşrinisani 1332 / Safer 1335 / November/December 1916): 220–21.
- 48 *Harb Mecmuası* 2, no. 19 (Mayıs 1333 / Şubat 1335 / May 1917): 291 and *Harb Mecmuası* 2, no. 21 (Ağustos 1333 / Şevval 1335 / August 1917): 330.
- 49 Yalçın, *Türk Hava Gücü*, 276, 311.
- 50 James Streckfuss, “Why the Air War Really Mattered: A Guide to Understanding the Significance of Aviation in World War I,” in *Images of Conflict: Military Aerial Photography and Archaeology*, ed. Birger Stichelbaut, Jean Bourgeois, Nicholas Saunders, and Piet Chielens (Newcastle upon Tyne: Cambridge Scholars Publishing, 2009), 50–51.
- 51 Mühendis Rahmi, “Tayyare ile Harita Almak Usulü Memleketimiz İçin Nafi Midir?” [Is the Method of Making Maps from Airplanes Useful for our Country?] *Şehir Emaneti Mecmuası* 3, no. 29 (Kanunisanı 1927): 265.