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The Eastern Telegraph Company in the Ottoman Empire at the End of the Nineteenth Century: A History of Imperial and Foreign Technology

Ondokuzuncu Yüzyılın Sonunda Osmanlı İmparatorluğu'nda Şark Telgraf Kumpanyası: İmparatorluk ve Yabancı Teknolojinin Bir Tarihçesi

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ABSTRACT

This article examines the relationship between the Ottoman Telegraph Administration and the Eastern Telegraph Company, a British firm that built and managed the majority of the empire's submarine telegraph cables. With telegraph stations along the empire's shores, this company came to play a central role in intra- and trans-imperial communication. While on a superficial level the company appears to have controlled the underwater infrastructure in the empire, an examination of how the technology was actually operated reveals another story. By connecting company records with sources from the imperial administration from the 1860s until World War One, this article argues that the submarine telegraph network prompted an entangled relationship between the Ottoman state and the foreign company, whereby Ottoman actors affected company practice and the company mediated the Ottoman state's emergence as a telegraphic power.

Keywords: Aram Margosyan, Margossian, çıkarımsal istatistik, Matematik tarihi, Sihirli kareler, Euler subay problemi, Osmanlı İmparatorluğu, Türkiye

Öz

Bu makale Osmanlı telgraf teşkilatı ile, imparatorluğun denizaltı telgraf ağının büyük kısmını inşa eden ve işleten İngiliz firması Şark Telgraf Kumpanyası (Eastern Telegraph Company) arasındaki ilişkiyi incelemektedir. İmparatorluk kıyılarında kurulan telgraf istasyonları üzerinden bu şirket, imparatorluk içi ve dışı iletişim hizmetlerinde merkezi bir rol oynamıştır. Her ne kadar şirket, imparatorluğun denizaltı kablo ağının altyapısında söz sahibi olmuş gibi görünse de, teknolojinin fiilen nasıl uygulandığı incelendiğinde, durumun farklı olduğu anlaşılır. 1860lardan başlayan ve Birinci Dünya Savaşı'na kadar uzanan süre içinde şirket kayıtları ile imparatorluk kaynaklarının birlikte inceleyen bu çalışma, denizaltı kablo ağının Osmanlı devleti ile yabancı şirket arasında girift bir ilişkiye sebep olduğunu ortaya koymaktadır. Bu ilişki

çerçevesinde, Osmanlı yöneticileri şirketin uygulamaları üzerinde etkili olurken, şirket de Osmanlı Devleti'nin telgraf alanında bir güç olarak doğmasına aracı olmuştur.
Anahtar sözcükler: Telgraf, denizaltı kabloları, Şark Telgraf Kumpanyası, Osmanlı İmparatorluğu

Introduction

In 1890, a British electrician by the name of H.W. Ansell visited the Ottoman telegraph station at Jeddah on the Red Sea. He was the chief electrician on the *Chiltern,* a British cable ship belonging to the Eastern Telegraph Company, and he was in town to repair the Ottoman submarine cable that connected Jeddah to Suakin in East Africa. During his time at the modest station, which comprised a forty-eight square foot corrugated iron structure and surrounding stone wall, Ansell created a series of watercolor paintings that offer a rare glimpse into life at the remote outpost and the acts of work, big and small, that went into managing the infrastructure.

Figure 1. "Sketches on Djedda Cable Repair" by H.W. Ansell, January 1890. Housed at Telegraph Museum Porthcurno Archive, DOC/3/119.

In one, a figure sits under a parasol on the roof of the structure; while his face is obscured, his hands peek out from the shade, holding a mirror and flashing a heliograph to a distant cable ship on the horizon. Another takes the perspective from the water, placing the station in the middle of a vast desert landscape, connected to the world only by a terrestrial telegraph line that continues off the canvas, and by a chain of porters standing knee deep in the water, carrying supplies ashore.[1] The final painting reveals the real star of Ansell's work: the submerged telegraph cable. In it, a crew of men in a rowboat haul the long cable up from the water. One of them waves a bright red flag, signaling the successful cutting of the line in preparation for its repair.

1 "Sketches on Djedda Cable Repair" by H.W. Ansell, January 1890. Housed at Telegraph Museum Porthcurno Archive, DOC/3/119.

While Ansell may have taken some creative license in his sketches, his paintings and his presence at Jeddah reveal an important aspect of the story of Ottoman telegraphy: the intimate role of submarine cable companies in the imperial network. The Ottoman government owned the Jeddah-Suakin line, but it had relied on the Eastern Telegraph Company to lay the cable in 1882 and to maintain it in the following decades. In spite of the Ottoman state's desire to fully control telegraphic activity in the empire, the imperial telegraph administration had been compelled to partner with foreign, private entities to build and operate the underwater sections of its telegraph network.[2] While the Ottoman government continued to own some of these lines, such as the Jeddah line, most of the submarine cables in the empire's waters were actually owned by these companies. By the turn of the twentieth century, the largest of these firms, the Eastern Telegraph Company, owned twenty-two of the forty-two submarine cables in the empire.[3] In addition, the company had also established twenty-five stations throughout the Ottoman coastlines of the Aegean, Mediterranean, Black, and Red Seas. As a result, these privately owned and operated cables sustained the everyday flow of telegraphic communication in the empire, and stood as anomalies in what was otherwise a state-run network.

What was the significance of the Eastern Telegraph Company in Ottoman telegraphic operations? Should the history of the company in the empire be understood as another instance of "railway imperialism," or was it something else? In order to answer these questions, this article proposes to examine the history of the Eastern Telegraph Company in Ottoman lands and waters with a focus on the management and operation of the infrastructure, examining the ordinary, humdrum practices and routines that were necessary to maintain the social and technical system of sea cables in the empire. As argued by Steven J. Jackson, Andrew Russell, and Lee Vinsel, studies that focus on the quotidian acts of repair, maintenance, and operation can better capture the complexities of past and present technical systems, which depend on constant labor and attention by a variety of actors.[4] This article draws inspiration from this

2 In considering concessions for the proposed Euphrates Valley Project, Fuat Pasha expressed to the Ottoman council of ministers that company management of terrestrial lines was counter to the principle of government control of telegraphy in the Ottoman Empire. See Soli Shahvar, "Concession Hunting in the Age of Reform: British Companies and the Search for Government Guarantees; Telegraph Concessions through Ottoman Territories, 1855-58," *Middle Eastern Studies* 38, 4 (2002):179.

3 SALT 384/Tel/C/1, no. 21. *Telgraf ve Posta Nezareti Saltanat-ı Seniye-i Telgraf Merakizine Mahsus Resmi Rehberdir* = Administration impériale des Postes et Télégraphes : Guide officiel à l'Usage des Bureaux télégraphiques de l'Empire (Dersaadet = Constantinople: Asır Matbaası = Imprimerie Assir, 1905). The Ottoman government owned 19 of the lines, 6 of which were in Istanbul waterways; 1 cable, connecting Fao-Bushire, was owned by the Indo-European Telegraph Administration.

4 Steven J. Jackson, "Rethinking Repair," in *Media Technologies: Essays on Communication, Materiality and Society*, eds. Tarleton Gillespie, Pablo Boczkowski, and Kirsten Foot (Cambridge MA: MIT Press, 2014); Andrew L. Russell and Lee Vinsel. "After Innovation, Turn to Maintenance," *Technology and Culture* 59 (2018): 1-25. This turn toward repair, maintenance, and operation was inspired in part by David Edgerton's seminal work, in which he called for moving beyond the narrow confines of histories of innovation. David Edgerton's "Innovation to Use: Ten Eclectic Theses on the Historiography of Technology," *History and*

call to examine "all of the *work* that goes into preserving technical and physical orders",[5] and argues that the daily acts of management and operation reveal the power and limitations of the Eastern Telegraph Company within the Ottoman imperial telegraph network. As this article will describe, these instances of maintenance, management, and operation point to a reality in which the private, foreign firm had outsized influence within the Ottoman telegraph system, but not unchecked power.

In order to make this case, this article will first provide the reader with a brief description of how telegraphic infrastructure developed in the Ottoman Empire, highlighting both the new government institutions that governed and managed the state-run terrestrial network, described collectively as the Ottoman telegraph administration[6], as well as the emergence of a privately owned submarine network within the empire's waters. To provide additional context, the article will also explain how this particular history fits into the larger history of infrastructure in the Ottoman Empire in the second half of the nineteenth century, which is closely connected to the historiography regarding the empire's final decades.

The article will then examine a series of interactions related to the construction, maintenance, management, and operation of company lines that showcase both the agency of the Ottoman state in engaging with the Eastern Telegraph Company, as well as the outsized power of the private company in shaping telegraphy within imperial lands. It will conclude by briefly discussing how the case of Ottoman submarine telegraphy compares with other state-run networks at that time, and the implications that this study offers on understanding the place of the Ottoman Empire in a globalizing world at the turn of the twentieth century.

The Ottoman telegraph network

For a polity that was born in the fourteenth century, the Ottoman telegraph network was a striking symbol of the empire's transformations in the modern era. The emergence of the Ottoman telegraph network in 1855 marked the beginning of a new era of electrical communication for the empire. Messages that had taken days or even weeks to travel now took minutes, and as suggested by the troves of telegrams in the Ottoman archives, the technology became a foundational part of governmental, military, and business communications from the 1860s until the empire's violent dissolution after World War One.

Technology 16, 2 (1999): 111-136.

5 Russell and Vinsel, "After Innovation, Turn to Maintenance," 7.

6 As will be briefly described, the state telegraphy project was carried out by several imperial ministries and bureaucratic bodies over the decades between the 1850s and the end of the empire. Given that the primary purpose of this article is to discuss the interactions between state and private telegraphic actors, I have opted to use the term "Ottoman telegraphic administration" as a catchall to describe state actors who were involved in telegraphic operations in the empire. For more information on the growing bureaucracy that accompanied Ottoman telegraphy, see Carter V. Findley, *Bureaucratic Reform in the Ottoman Empire: The Sublime Porte, 1789-1922* (Princeton, N.J: Princeton University Press, 1980); Mostafa Minawi, *The Ottoman Scramble for Africa: Empire and Diplomacy in the Sahara and the Hijaz* (Stanford: Stanford University Press, 2016).

The telegraph came to the empire during a time of great social and political change, a period known collectively as the *Tanzimat.* During this period, imperial power became centralized and rationalized, the economy became more incorporated into the world market, and the imperial elite began to look toward Europe as a social and political model. It was also a period of crisis and redefinition, as the state sought to assert control in the restive Balkans, brace against an expanding Russian Empire, and partner with western European powers who feared that Ottoman collapse would upset the continent's delicate balance of power. The technology of the telegraph offered the state a marvelous new tool for managing populations and territory, but it was also closely connected to foreign capital — as well as competing states — that posed a potential threat to the increasingly insecure Ottomans.

In fact, from its origins in the mid-nineteenth century, the telegraph network in the Ottoman Empire was a site for the expansion of both Ottoman state power and foreign, private capital in the empire. For while the Ottoman government was insistent on controlling and managing the terrestrial lines in its domains, it ended up working closely with private companies for the building, maintenance, and operation of the submarine cables throughout the empire's waters.

The very first telegraph line in the empire was one such submarine cable. Built during the Crimean War (1853-1856) by the Electric Telegraph Company and R.S. Newall and Co. this cable connected the battle front on the Crimean peninsula to the Ottoman coastal city of Varna, where newly built land lines extended to the nascent European network and the Ottoman capital of Istanbul. A few months after the completion of the Balaklava-Varna line, the Ottoman government completed construction on its own telegraph lines, with the assistance of French engineers.[7] The completion of the Istanbul-Edirne line in September 1855 marked the first line that was fully managed by the Ottoman government, and the beginning of a new era of technical responsibility for the Ottoman state.

Recognizing the potential of the technology, the Ottoman government set out to assert control over the development of telegraphic infrastructure in Ottoman territory and to develop the indigenous expertise that was necessary to manage the technology. Beginning in 1861 with the establishment of the first telegraph school in the empire, *Fünun-i Telgrafiye Mektebi*, the Ottoman government worked to cultivate a corps of Ottoman telegraphers that had the knowledge and discipline necessary to operate telegraphic communication within the empire's borders. Unlike the rail system that would emerge in the empire, which was largely a conglomeration of private entities, the Ottoman telegraph network was a state-run entity that was part and parcel of the broader effort to consolidate and centralize state power in the late nineteenth century.

7 Dwayne R. Winseck and Robert M. Pike, *Communication and Empire: Media, Markets, and Globalization, 1860-1930* (Durham: Duke University Press, 2007), 30

In the early years of Ottoman telegraphy, from 1855-1871, a high telegraph commission (*telgraf komisyon-ı âlisi)* managed telegraphic operations in the empire, all while being housed within the Ministry of the Interior. In 1871, the telegraph commission merged with the Ottoman postal administration to form a new ministry, the Postal and Telegraph Ministry (*Posta ve Telgraf Nezareti),* an administrative union that would continue until the end of the empire.[8] While this ministry was one of the many new bureaucratic institutions that emerged during this time of administrative reform, it was unique in one important way: the majority of its personnel were technicians as well as bureaucrats, having been trained in the science and practice of telegraphy.

This corps of telegraphers emerged as the backbone of the imperial telegraph network. While the first class of Ottoman telegraphers came predominately from the translation office of the Sublime Porte, which ensured a degree of multilingualism, telegraphic training quickly became its own specialty. In addition to the imperial telegraph school, the Istanbul high schools of Galatasaray and Darüşşafaka also introduced curricula that would prepare young men — and only men — to go into the profession. While technical training eventually took priority over language capability, the latter would always remain a necessary skill for Ottoman telegraphers: In his daily duties, an Ottoman telegrapher could expect to encounter messages in a multiplicity of languages (primarily French, Turkish, and English) and at least two primary scripts (Latin and Arabo-Persian). As a result, Ottoman telegraphers were responsible for knowing two Morse codes: one for the Latin alphabet, and one for the Arabo-Persian alphabet.[9] He was also responsible for handling government messages, commercial messages, and personal correspondences, all of which were sent, one letter at a time, over the wires.

Thus, while the Ottoman government quickly consolidated control over the building and management of terrestrial lines in the empire, private companies continued to play an important role in the building and management of submarine cables in the empire's waters. With the success of the Black Sea cable laid during the Crimean War, it was not long before cable entrepreneurs flocked to the Ottoman government for concessions to lay other submarine lines terminating in the empire. Frequently backed by the political support and financial subsidy of the British government—which was eager to establish a telegraphic connection with India—these companies vied to be early entrants in a new market. While underwater cables were more technically challenging than terrestrial lines, their location away from

8 Mustafa Kaçar, "Osmanlı Telgraf İdaresi'nin Kurulması ve İlk Telgraf Sebekesi," in *Çağını Yakalyan Osmanlı! Osmanlı Devleti'nde Modern Haberleşme ve Ulaştırma Teknikleri,* ed. by Ekmeleddin İhsanoğlu and Mustafa Kaçar (İstanbul: IRCICA, 1995), 51.

9 İzzet Bey, an Ottoman telegrapher, is credited with creating a Morse code for the Arabo-Persian alphabet used in Ottoman Turkish. First developed in 1877, it was eventually adopted throughout the Ottoman telegraph system for messages in Ottoman Turkish, Arabic, and Persian. See Nesimi Yazıcı, "Osmanlı Telgrafında Dil Konusu," *Ankara Üniversitesi İlahiyat Fakültesi Dergisi* (Ankara) 26 (1983),763.

potential saboteurs and meddling governments made them relatively attractive investments. The Red Sea offered one particularly appealing location for an Indo-European line, and it proved to be a prime site of interest for submarine cable entrepreneurs. After winning a stiff competition for both the Ottoman concession and British financing of the line, the Red Sea Telegraph Company laid a cable connecting Suez to Karachi over the winter of 1858-59.[10] However, the line failed mere months after its completion, bringing great disappointment to those who had put their faith in the technology and even greater financial loss to the British government, which had sunk significant funds into the project.[11] As the unlucky investors learned, the early technology for submarine cables was not suitable for the depth and the distance demanded by these ambitious schemes. It was not until after 1865 with the success of the transatlantic cable that submarine telegraphy regained its status as a worthy and viable investment.[12]

With the support of a newly-discovered insulation material (Gutta-percha) and improved ships that could bear the unwieldy cables, foreign cable companies returned to Ottoman lands in pursuit of opportunity. The timing could not have been better. The Ottoman government, having undertaken a long series of reforms during the first half of the century, was now firmly on the path of establishing more direct and intensive control of its territory. The promise of rapid communication to provinces in North Africa and southern Europe was compelling, particularly given the new demands of modern warfare and governance.[13] And while the Ottoman telegraph administration sought to have total control of terrestrial lines in the empire, the technical complexity, cost, and technical risk of deep-water submarine cables drove the administration to turn to foreign firms for the underwater portions of its network. Partnering with a slew of companies, such as Newall and Company, Telegraph Construction and Maintenance Company, and the Black Sea Telegraph Company, the Ottoman government granted and commissioned the building of forty-one submarine cables across its coastal waters during the last four decades of the nineteenth century.[14] Nineteen of these lines were owned by the Ottoman government, and twenty-two of them belonged to the foreign companies that built them.[15] By 1905, the Eastern Telegraph Company had acquired all of these privately

10 Soli Shahvar, "Concession Hunting in the Age of Reform," 182.

11 Yakup Bektaş, "The Sultan's Messenger: Cultural Constructions of Ottoman Telegraphy, 1847-1880," *Technology and Culture* 41, 4 (2000), 677.

12 Simone M. Müller, *Wiring the World: The Social and Cultural Creation of Global Telegraph Networks* (New York: Columbia University Press, 2016), Introduction.

13 See E. Thomas Ewing, "A Most Powerful Instrument for a Despot: The Telegraph as a Trans-National Instrument of Imperial Control and Political Mobilization in the Middle East," in *The Nation State and Beyond: Governing Globalization Processes in the Nineteenth and Twentieth Centuries,* eds. Roland Wenzlhuemer and Isabelle Lohr (Berlin: Springer, 2013); Mostafa Minawi, *The Ottoman Scramble for Africa: Empire and Diplomacy in the Sahara and Hijaz* (Stanford: Stanford University Press, 2016).

14 SALT 384/Tel/C/1. *Telgraf ve Posta Nezareti Saltanat-ı Seniye-i Telgraf Merakizine Mahsus Resmi Rehberdir.*

15 In addition, there was also one line, connecting Fao to Bushire, that belonged to the Indo-European Telegraph Department, part of the British Indian administration. In total, there were 42 submarine cables in Ottoman waters.

owned cables, reflecting its status as the world's largest submarine cable firm with possession of nearly half of all oceanic cables.[16]

The politics of infrastructural histories

The Ottoman state's engagement with these foreign cable companies represents an early example of the many public-private partnerships that would mark the empire's infrastructural development in the nineteenth century. While the empire's pre-nineteenth century infrastructural projects, such as the building of canals and public fountains, had been financed and implemented by Ottoman actors, by the 1830s, and particularly after the Crimean War, Ottoman infrastructural projects were predominately the products of concerted effort between the imperial state and European companies.[17] This change occurred for a number of separate but related reasons: changes in Ottoman law—made in part under pressure from European states—that encouraged European companies to operate and invest in the empire; the emergence of Europe as an exporter of new technologies and industrial methods; and a new trend among Ottoman statesmen and administrators to employ European innovations in their efforts to reform and industrialize the empire. From the laying of railway track to the digging of deep-water ports, British, French, and German companies helped forge the transportation and communication links that shaped the modern empire.

While these public-private partnerships were indisputably transformative of Ottoman society, the exact nature of their effects are the subject of ongoing debate. On one hand, these links contributed to social and political fragmentation in the empire and its economic peripheralization in the world: older commercial and transportation practices were disrupted, the empire's agricultural and population resources were oriented toward the global market rather than local needs, and foreign firms gained an outsized amount of influence in Ottoman politics, economy, and society.[18] On the other hand, these infrastructural links were also crucial for the process of state centralization and imperial consolidation, providing the imperial government with a means to mobilize and extract resources, extend state power into the periphery, and shore up defenses against foreign aggression.[19]

16 Daniel Headrick, *The Invisible Weapon: Telecommunications and International Politics, 1851-1945* (New York: Oxford University Press, 1991), 39.

17 For works dealing with Ottoman infrastructural projects in the early modern period, see Alan Mikhail, *Nature and Empire in Ottoman Egypt: An Environmental History* (New York: Cambridge University Press, 2011); Shirine Hamadeh, *The City's Pleasures: Istanbul in the Eighteenth Century* (Seattle: University of Washington Press, 2008).

18 Donald Quataert, *Social Disintegration and Popular Resistance in the Ottoman Empire, 1881-1908* (New York: New York University Press, 1983); Reşat Kasaba, *The Ottoman Empire and the World Economy* (Albany: SUNY Press, 1988); Şevket Pamuk, *The Ottoman Empire and European Capitalism, 1820-1913: Trade, Investment, and Production* (New York: Cambridge University Press, 1987); Zeynep Çelik, *The Remaking of Istanbul: Portrait of an Ottoman City in the Nineteenth Century* (Berkeley: University of California Press, 1986); Jacques Thobie, *Intérêts et Impérialisme français dans l'Empire Ottoman (1895-1914)* (Paris: Publications de la Sorbonne-Imprimerie Nationale, 1977).

19 Necla Geyikdağı, *Foreign Investment in the Ottoman Empire: International Trade and Relations, 1854-1914*

Understanding the paradoxical effect of foreign-backed infrastructure is made more difficult by two assumptions that preclude the possibility of symbiosis, however limited, between the Ottoman state and foreign, private companies. First, there remains an overriding belief in the connection between state power and the ownership of infrastructure. Most associated with the work of Michael Mann, this theory holds that modern states derive much of their autonomy and power from maintaining control over infrastructure, which allows them to extend political authority throughout a defined territory. Conversely, weak states are those that have either outsourced control over infrastructure or which have never fully developed such systems.[20]

The second factor that obscures the history of European capital in Ottoman infrastructure is the eventual defeat and dismemberment of the Ottoman Empire by European powers. This later development casts a long shadow over the nineteenth century, leading European financiers and companies to be viewed as Trojan horses of eventual aggression.[21] As part of this narrative, the history of European capital in the empire has typically been presented as a story of coercion and "penetration," rendering the Ottoman state and society as little more than passive recipients of western European dominance.[22] While recent scholarship on the Ottoman Public Debt Administration has complicated this picture by revealing the active role of the Ottoman state in mediating and encouraging the flow of European capital in the empire,[23] most scholarship on European financing of Ottoman infrastructure positions the

(New York: Tauris Academic Studies, 2011); Murat Birdal, *The Political Economy of Ottoman Public Debt: Insolvency and European Financial Control in the Late 19th Century* (London: I.B. Tauris, 2010); Murat Özyüksel, *The Berlin-Baghdad Railway and the Ottoman Empire: Industrialization, Imperialism, Germany and the Middle East* (New York: I.B. Tauris, 2016); Ali Coşkun Tuncer, *Sovereign Debt and International Financial Control: The Middle East and the Balkans, 1870-1914* (Houndsmill: Palgrave Macmillan, 2015); Edhem Eldem, "Ottoman Financial Integration with Europe: Foreign loans, the Ottoman Bank and the Ottoman Public Debt," *European Review* no. 13 (2005): 431-445.

20 Michael Mann, "The Autonomous Power of the State: Its Origins, Mechanisms and Results," *European Journal of Sociology /Archives Européennes de Sociologie / Europäisches Archiv für Soziologie* 25, 2 (1984): 185–213.

21 For works that present foreign-backed infrastructure as a source of imperial power, see Mostafa Minawi, "Telegraphs and Territoriality in Ottoman Africa and Arabia during the Age of High Imperialism," *Journal of Balkan and Near Eastern Studies* 18, 6 (2016): 567-587; On Barak, *On Time: Technology and Temporality in Modern Egypt* (Berkeley: University of California Press, 2013); Sean McMeekin, *The Berlin-Baghdad Express: The Ottoman Empire and Germany's Bid for World Power* (Cambridge: Belknap Press, 2010); Clarence B. Davis, Kenneth Wilburn, and Ronald Robinson, *Railway Imperialism* (New York: Greenwood Press, 1991).

22 For more on the historiography and politics surrounding the nature of foreign capital in the modern empire, see Darina Martykánová and Juan Pan-Montojo, "Discussing the Public Debt of the Eastern Mediterranean Countries (1820s-1910s), *Journal of European Economic History* no. 2 (2019):10-19; Murat Birdal, "Fiscal Crisis and Foreign Borrowing in the Ottoman Empire: Historical and Contemporary Discourses and Debates," *Journal of European Economic History* no. 2 (2019): 83-107.

23 For more on the role of the state in the integration of the Ottoman economy into the European-dominated world market, see Pamuk: *The Ottoman Empire and European Capitalism*; Birdal, *The Political Economy of Ottoman Public Debt*; Ali Coşkun Tuncer, *Sovereign Debt and International Financial Control: The Middle East and the Balkans, 1870-1914* (London: Palgrave Macmillan, 2015).

phenomenon as a loss of state sovereignty and a precursor to foreign intervention.[24] This is partially due to the predominance of rail infrastructure in the literature, a history that was marked by predatory concessions that resulted in the independence and enrichment of European companies at the expense of the Ottoman state.[25]

In comparison to the extensive literature on rail, there are few studies on the role of submarine cable companies in the empire.[26] And while concessions for rail and telegraph lines are often mentioned in the same breath, there were important differences in how these systems emerged in the Ottoman Empire, departures that suggest that different power dynamics were at play in the relationship between the state and the private companies involved. The most important difference was that the telegraph network in the Ottoman Empire was predominately a state-run enterprise: the privately-owned, submarine cables were a supplement to this network, rather than constitutive of it. This was very different from the case of rail infrastructure in the empire, as there was no substantive system of state railways. Instead, up until the Hijaz Railway project of 1908, the entire rail network in the empire was a conglomeration of privately owned and managed lines.

This distinction is important in that the Ottoman state was in a much stronger position with regard to the submarine cable companies than with the railway firms. This difference manifested itself in two ways. First, the financial terms for the underwater cables typically positioned the companies as contractors rather than as entities that had purchased rights in Ottoman territory. As a representative example, in the 1870 concession to the Newall Company for the laying of a series of cables in the Aegean, the Ottoman government provided a fixed subsidy for the building of submarine lines, to be returned in case of cable failure, and did not provide any additional payments or financial guarantees for the company.[27] In contrast, rail concessions were granted or sold to companies, and they typically included "kilometric guarantees:" a contractual term that required the government to make up shortfalls in expected profit, as long as the company ran a certain number of trains on a given track.[28]

24 This perspective is represented by Donald Quataert's work on partnerships between the Ottoman government and foreign companies, by which he described: "At the moment it signed a concession permitting the operation of a European company, the Ottoman government seemed to be surrendering another group of subjects to the jurisdiction of foreigners." Quataert, *Social Disintegration and Popular Resistance*, 10.

25 On the history of railroad concessions in the empire, see Charles Issawi, *The Economic History of Turkey 1800-1914* (Chicago: University of Chicago, 1980); Roger Owen, *The Middle East and the World Economy*, 1800-1914 (New York: I.B. Tauris, 1993); Murat Özyüksel, *The Berlin-Baghdad Railway and the Ottoman Empire: Industrialization, Imperialism, Germany and the Middle East* (New York: I.B. Tauris, 2016).

26 Two notable exceptions that briefly examine the role of foreign companies in Ottoman telegraphy are Shahvar, "Concession Hunting in the Age of Reform," and Minawi, "Telegraphs and Territoriality."

27 POR DOC/ETC/1/84. I use here the contract for the Ottoman Archipelago, discussed in further detail in this paper. Ottoman Archipelago Concession, November 28, 1870.

28 These payouts proved to be quite expensive in the end: in 1899, the Ottoman government paid private rail companies 900,000 pounds in kilometric guarantees, or approximately five percent of total government

Second, as will be further described, submarine cable concessions did not grant companies significant autonomy, but rather required the close coordination between company employees and the Ottoman telegraph administration. This was not the case with rail concessions, which often granted companies discretion over critical aspects of building the lines, such as route selection and decisions over materials and personnel.[29] As a result, while the Eastern Telegraph Company played a role in shaping Ottoman telegraphy, it never achieved the same degree of autonomy or financial leverage that the railroad companies developed. Instead, it was just one of many actors that determined the social and technical dynamics of telegraphic infrastructure in the empire.

Thus, in order to better understand the dynamics of Ottoman submarine telegraphy, this article focuses on the daily operations and management of the sociotechnical network, revealing the connections, tensions, and interdependences between the technology, the Ottoman state, and the private company. This approach captures the shifting nature of the relationship between the state and the private company, which at times included partnership, competition, and even coercion. By examining the making and operation of the underwater network — including laying cables, running stations, managing financial matters, and protecting telegraphic infrastructure — it becomes clear that this relationship was defined more by a convergence of two technological systems, rather than the domination of one over the other.[30] As a result, submarine telegraphy emerges neither as a story of pure foreign domination, nor one of total "indigenous" control. Rather, the public-private network of infrastructure led both to the expansion of Ottoman state power, through its enablement of empire-wide communication, and to the extension of British capital and technical practices into Ottoman society.[31]

Station life

Ansell's watercolor sketches that opened this article present a unique perspective on the daily experiences that an employee of the Eastern Telegraph Company might have had while working at a station in Ottoman territory. The sketches exude a sense of remoteness — and

spending. See Owen, *The Middle East and the World Economy,* 197 and 214.

29 Owen, *The Middle East and the World Economy,* 113.

30 These activities are all included in the "technologies-in-use" paradigm, put forward by David Edgerton. See his "Innovation to Use: Ten Eclectic Theses on the Historiography of Technology." *History and Technology*, 16, 2 (1999): 111-136. For more on the literature on the transformation of technological systems into infrastructural networks, see Brian Larkin, "The Politics and Poetics of Infrastructure," in *Annual Review of Anthropology* 42 (2013): 327-43, 330.

31 By emphasizing the negotiated and co-constructed nature of the relationship between the Ottoman state and the British submarine cable companies, I seek to offer an alternative framework to that presented by advocates of World Systems Theory, in which the Ottoman Empire is presented as a peripheralized entity in the European-dominated world order of the nineteenth century. See Immanuel Wallerstein, *The Modern World System* (New York: Academic Press, 1974); Huri İslamoğlu-İnan, *The Ottoman Empire and the World Economy* (Cambridge: Cambridge University Press, 1987); Roger Owen, *The Middle East in the World Economy, 1800-1914* (New York: Methuen & Co, 1981); Reşat Kasaba, *The Ottoman Empire and the World Economy: The Nineteenth Century* (Albany: SUNY Press, 1988).

even loneliness — that company telegraphers may have felt while working these posts, while also capturing a feeling of adventure that certainly came with the opportunity to travel and work in locations deemed exotic in the European imagination.[32] The sketches give the viewer the sense that these stations were outposts, cut off both from the employee's home country as well as any local society. Indeed, the only reference to the local society is a derogatory joke about "Oriental" technical practices, in reference to a sketch of a creative solution in the station house to ensure that a galvanometer could rest evenly on a non-level surface.

Figure 2. "View of Galvanometer in Same Test. Oriental and 'Eastern' ideas of a 'level'" by H.W. Ansell, January 1890.
Housed at Telegraph Museum Porthcurno Archive, DOC/3/119.

As is the case with most works of art by travelers, particularly those in an imperial context, these depictions of life overseas likely reveal more about the perspective and prejudices of the author than of the reality on the ground. In fact, these portrayals of a station in stark isolation from the surrounding society belie the many close connections that existed between company workers and the local environs, particularly regarding the everyday experiences of station life. While these histories are difficult to uncover, due to the quotidian, repetitive, and seemingly unremarkable nature of the work, traces of the day-to-day life at the stations can be found in the financial records of the company, and they reveal the company's dependency on the local society.

32 Müller discusses the unique travel opportunities and perception of cosmopolitanism that characterized the profession of submarine telegraph engineers and operators. See Müller, *Wiring the World*, Chapter 5.

For instance, the Eastern Telegraph Company rented space for its stations and staff quarters from both the Ottoman state and private landowners; relied on local resources for food, water, and fuel; and even buried its dead in local cemeteries. Company telegraphers turned to local cooks as well as laundrymen to help with their domestic needs. The company also paid for subscriptions to local newspapers, such as the *Cercle de Salonique* and the *Levant Herald*; budgeted for regular donations to local charities; and retained local physicians to attend to the medical needs of staff.[33]

The company also hired local employees to work as telegraphers, line inspectors, and messengers. While local company employees were treated separately from their British counterparts, in many regards they had similar rights and obligations. The company required both sets of employees to take secrecy oaths, and it forbade all employees from engaging in any acts of business investment or speculation while in company service. Local employees, as with British employees, were also subject to fines and docked pay for lost messages, erroneous repetitions or corrections, word omissions, and errors in station name.[34] In contrast to British employees, who were hired for five-year periods, Ottoman employees were hired for indefinite periods of time, subject to the needs of the company. However, like British employees, Ottoman employees were also entitled to prior notice for termination, and in lieu of such notice, a severance package of one month's pay.[35]

In addition, the status of being a local employee did not automatically connote subordination. While in most cases local employees of the Eastern Telegraph Company worked under the supervision of British staff, in the Salonica and Dardanelles station Ottoman employees managed the entire operation.[36] Furthermore, when Ottoman employees worked alongside British telegraphers, they often did so as equals and even as companions. A tragic story of the murder of two company employees in Candia (Heraklion) in Ottoman Crete gives insight into the social dynamics of station life. In the early days of the 1889 uprisings in Crete, two company telegraphers, one British and one Ottoman-Greek,[37] were murdered while out for an evening stroll together. In reporting the tragedy, a British colleague of the deceased described how the practice of walking together had become critical for providing

33 POR DOC/ETC/2/31, Financial Memoranda, Eastern Telegraph Company Limited. C.D. Adye, Reports for Tripoli, Candia, and Canea Stations, September 1907. It should be noted that these newspapers were written in French and English respectively, and their audiences included both Europeans living in the Ottoman Empire as well as highly educated Ottoman readers.

34 POR DOC/ETC/5/184, no. 26, Eastern Telegraph Company Rule Book. London, 1883.

35 Ibid., 20

36 POR DOC/ETC/2/31, Financial Memoranda, Eastern Telegraph Company Limited. C.D. Adye, Reports for Dardanelles and Salonica Stations, September 1907.

37 While the Ottoman clerk's ethnicity was not explicitly mentioned, his name (*Vlashicki*) and the fact that he was reported to have been buried in the local "Greek Church" hint at his ethnicity. POR DOC/ETC/5/123, Letter from H.E. Blanchard to Mr. Halpin, February 1, 1889.

some exercise and diversion from the tedium of eight-hour shifts.[38] On this occasion, the prolonged absence of the two employees had raised concern, leading to a search party and the discovery of their bodies. While it is unclear whether the deceased were the victims of a botched robbery—as suspected at the time—or the political violence that would eventually engulf the island, their untimely deaths provide a record of the collegiality that existed at times between British and Ottoman staff.

Thus, while the company was largely restricted to the coastal environs of the empire, the daily needs and practices of operating stations and managing personnel generated a number of links between the Eastern Telegraph Company and Ottoman society on a local level. In turn, these local connections were mirrored on a systemic level, whereby the Ottoman state and the British company mutually shaped each other's efforts to build and manage telegraphic infrastructure in the empire.

Ottoman agency

In 1878, Harry Pender of the Eastern Telegraph Company traveled to Cyprus to oversee the establishment of a submarine cable on the shore of the Ottoman territory. As recalled by his mother, Emma Pender, the young Pender boasted of his superhuman power in dictating the direction of infrastructure in Ottoman lands. His mother wrote, "As Harry said of his commission, he went out as a prophet to announce…where new cities would be raised over the land, where the earth would pour out riches, and where the seas would cast up treasure."[39]

While Pender may have viewed himself and his company as having sole control over submarine cables in Ottoman territory, the reality was more complicated. Despite being far more experienced in the management of submarine cables, British companies were not given a free hand in the construction of lines or operation of stations in Ottoman territory. From the laying of cables to the delivery of messages, the imperial administration played a role in shaping the day-to-day practices of the company.

In many of the concessions granted, the Ottoman telegraph administration laid out the technical specifications of the planned infrastructure and required that its own expert personnel conduct inspections to confirm that these specifications were met. An example of this can be found in the 1870 contract between the Ottoman government and the Newall Company (later acquired by the Eastern Telegraph Company) for the laying and operation of a series of cables connecting six points in the Ottoman Aegean.[40] Referred to as the "Ottoman

38 POR DOC/ETC/5/123, Letter from H.E. Blanchard to Mr. Halpin, February 1, 1889.

39 Simone Müller, *Wiring the World,* 161.

40 The six lines served the following locations: Canea to Rethimo, Rethimo to Candia, Candia to Cape of Sidero, Cape of Sidero to Island of Scarpantho, Island of Scarpantho to Rhodes, and Chio to Tchesme. See POR DOC/ETC/1/84, "Ottoman Archipelago" Concession, November 28, 1870.

Archipelago" in company records, the concession brought the company exclusive rights for submarine communication in these locations, and was to last for fifty years. For its part, the Ottoman government was to subsidize the project with a one-time payment of 41,000 pounds, under the condition that it would also be allowed to use the lines at no additional cost.[41]

The concession stipulated the technical and material components of the cables, making clear that the company was to work closely with Ottoman technical civil servants to ensure that no corners were cut. The contract meticulously identified the three different types of cables that were to be used, including precise descriptions of each model's material, weight, diameter, and structure. All were to share the same core, made up of "seven wires of pure copper put together in a sheaf and weighing 120 English pounds per maritime mile. The envelope serving to inter-isolate the said wires shall be made of three coatings of India-rubber, and shall weigh 150 English pounds per maritime mile, with an outer wrapping of hemp cloth (rope)."[42] For cables placed in areas close to the shore, this core was to be covered with nine iron wires. For those in shallow water (less than 150 meters) the same core was to be used but the external casing was to be made of twelve iron wires. Lastly, for cables used in deep water (exceeding 150 meters) the external envelope was to be made of six iron wires, and covered with a coat of tarred manila.[43]

Demonstrating its interest in international standardization, the Ottoman telegraph administration made a number of demands regarding the quality of the lines. First, it stipulated that the deep-water cables conform with the "American Submarine Cables, which have been ascertained to be the best and the strongest for deep water."[44] Second, the administration also required that the cables have the same electric resistance as the standard used by Siemens in its telegraph network. Third, the company was to guarantee that the lines be capable of transmitting at least fifteen words per minute, via a Morse apparatus manufactured by Siemens.[45]

Having developed its own corps of telegraphic experts, the imperial telegraph administration was also able to confirm that these requirements were met. The company was required to submit samples of all cables to the Ottoman administration in advance of the project, and to afford the Ottoman telegraph engineers with the means to ascertain the origin, composition, and quality of the wires.[46] The administration even required that Ottoman telegraph experts be present on board the laying vessel to act as superintendents

41 Ibid.
42 POR DOC/ETC/1/84, "Ottoman Archipelago" Concession, November 28, 1870, Article IV.
43 Ibid.
44 Ibid.
45 Ibid.
46 POR DOC/ETC/1/79, Dardanelles-Port Lagos Concession, August 20, 1878, Article VII. This requirement appeared in multiple contracts, indicating that it was a common requirement.

of the immersion of the lines and to ensure that the cables used were consistent with the samples presented.[47] As part of their assessment process, those Ottoman engineers also had the right to conduct electrical experiments on the wires to ensure the stipulated conditions were met.[48] For example, twenty-four hours after the laying of the Jeddah-Souakin cable in 1882, Emile Lacoine,[49] the technical director of the Ottoman telegraph administration, measured the length of the cable and tested it for conductor resistance, electrostatic capacity, dielectric resistance, and mean temperature.[50]

The Ottoman administration also required the company to work closely with imperial engineers in selecting landing sites for the cables.[51] This was because it was the telegraph administration that was responsible for building the terrestrial lines connecting the coastal stations to the inland network. As a result, the administration insisted that the decision of where to land the cables be made jointly and not just from the perspective of the company. This attempt by the Ottoman telegraph administration to exert both geographic and technical control over the Eastern Telegraph Company was common practice, and similar language can be found in contracts for stations along the Dardanelles, the Red Sea, and Black Sea.[52]

The influence of the Ottoman telegraph administration also extended into the operation of company stations. Since the administration controlled the terrestrial lines that connected the coastal stations to the interior network, it was necessary for company stations to also house members of the Ottoman telegraph corps. While company management determined the necessary qualifications of these clerks—such as requiring that the appointed Ottoman clerks speak English and French—they did not have the authority to directly supervise or fire them. If there was a cause for complaint, the Eastern Telegraph Company was limited to merely making recommendations to the Ottoman administration regarding the offending clerk's shortcomings.[53]

47 POR DOC/ETC/1/79, "Ottoman Archipelago" Concession, November 28, 1870, Article XIII; Sheikh Sayd-Perim Concession, May 7, 1890, Article V.

48 POR DOC/ETC/1/79, "Ottoman Archipelago" Concession, November 28, 1870, Article V.

49 Emile Lacoine (1835-1899) was an important figure in the Ottoman Telegraph Administration. A French electrical engineer who first came to Istanbul during his work on the building of the Suez Canal, he ultimately became a life-long resident of the city and long-term bureaucrat and technical adviser within the Ottoman telegraph administration. Rising to the post of technical director (*Fen Kalemi Müdürü*) of the telegraph administration, he also played a key role in instructing Ottoman telegraph students, implementing and designing curricula, editing the corps' journal, and representing the Ottoman telegraph corps at the international congresses related to electricity and telegraphy. He was a prolific author of theoretical and instructional materials on telegraphy, and he also ventured into other topics, such as the synchronization of calendars, astronomy, and the nature of earthquakes. He is buried in the Feriköy Cemetery in his adopted city of Istanbul. For more on his life and career, see Feza Günergun, "Salih Zeki ve Astronomi: Rasathane-i Amire Müdürlüğü'nden 1914 Tam Güneş Tutulmasına," *Osmanlı Bilimi Araştırmaları* 7, 1 (2005), 117-118.

50 *The Telegraphic Journal and Electrical Review*, November 4, 1882, 346.

51 POR DOC/ETC/1/79, "Ottoman Archipelago" Concession, November 28, 1870.

52 POR DOC/ETC/1/79, Odessa-Constantinople Concession, May 26, 1873; Sheikh Sayd-Perim Concession, 1890; Dardanelles-Port Lagos Concession, 1878.

53 POR DOC/ETC/1/79, Letter from Jules Despecher to Feizi Pasha, Constantinople, July 20, 1873.

Similarly, for many company offices, including those in Istanbul, Tripoli, Salonica, and Tenedos, the Ottoman government required that it be those Ottoman telegraph officials who interface with the public. This meant that Ottoman clerks both delivered incoming telegrams to local recipients and managed the front desk where clients came to send new messages.[54] The administration may have relied on these companies for building the infrastructure, but it still managed the public-facing aspects of telegraphy, even for stations that were part of the submarine network.

The Ottoman telegraph administration also sought to minimize company autonomy by requiring the Eastern Telegraph Company to maintain copies of all international traffic sent via its stations and to share those records with the imperial administration. For instance, the 1881 agreement for the submarine line to Chios specified that copies of all communications originating from Chios and destined for Greece be shared with the imperial administration at the end of each week.[55]

The prominent role played by the Ottoman telegraph administration in shaping company operations is also demonstrated by the financial expenditures made by the company to maintain good relations with the Ottoman telegraph corps. Given that the company was restricted to operating coastal stations, it frequently depended on imperial clerks for forwarding messages on to their final destinations. As a result, any sort of foot-dragging, delay, or backlog on the part of the Ottoman clerks posed a risk to company business. To minimize this threat and to guarantee that company messages were expeditiously handled by imperial clerks, it was common practice for the Eastern Telegraph Company to make regular payments to the Ottoman telegraph employees who handled company messages. These payments, which company management referred to explicitly as bribes, were so routine that the company actually included them in their station budgets.[56]

However, the company did not leave it to chance alone to ensure that these payments curried favor among the Ottoman operators. For instance, in the Izmir station, the company not only made a point of regularly paying the station chief in order to ensure cooperation and facilitation, but it also made a point of paying another clerk who could report on whether such cooperation was truly happening. As described in a 1902 company memo, the firm found it useful to make regular payments to a Kerope Effendi, who was described as an "old clerk who will always be at the side of the station chief." By providing this clerk with regular payments, the company sought to "see how the station chief is acting" and report if he was doing anything to "injure the company's interest," such as diverting messages away from

54 POR DOC/ETC/1/79, Constantinople Line Agreement, June 15, 1878; Odessa-Constantinople Line Agreement, May 26, 1873, Tripoli Office Agreement, June 29, 1882.

55 BOA HR/HMS/ISO/234, no. 37, Arrangement between İzzet Effendi and G. Serpos Effendi, February 14, 1881.

56 POR DOC/ETC/7/52, Anderson Letters, Letter from T.L. Greenwood to R.H. Finnis, September 9, 1902.

company lines toward alternate routes.[57]

While this practice of tipping or bribing was intended to further company influence among imperial officials, it could also create more trouble. In the winter of 1902-1903, the officials of the Eastern Telegraph Company found themselves in an awkward situation in Izmir, when they attempted to alter the terms of payment to the Ottoman telegraph employee whom they had been maintaining. The office had been paying the Ottoman telegrapher a regular installment of five pounds: a bribe intended to facilitate smooth communication between state and company lines and to encourage the Ottoman telegraph administrators to overlook the fact that the company office was not formally approved in the original concession.[58] When the Ottoman official was transferred to a station in Beirut—in keeping with staff rotation practices in the Ottoman telegraph administration—the company saw an opportunity to win the favor of three Ottoman clerks for the price of one. Since the incoming official was none the wiser, the company reduced his bribe to two pounds and divided up the remaining three pounds to two additional Ottoman employees. This scheme worked well until the old official was transferred back from Beirut to Izmir and was indignant to discover that his entitlement had been reduced. In order to avoid any trouble, local management scrambled to gain company approval for an increase in the office budget to support the first Ottoman clerk at his original rate and to continue to pay the two additional employees who had been added to the bill.[59]

From imperial regulations on company infrastructure to the central role played by state clerks in company business, it is clear that the Eastern Telegraph Company did not have the autonomy and omnipotence described in Mr. Pender's claims. Far from being solely determined by the whims of company management, company operations in Ottoman territory were governed in part by the employees and practices of the Ottoman telegraph administration. However, this did not mean that the Ottoman telegraph administration was the dominant power in the public-private partnership. As indicated by the company bribing of Ottoman telegraph officials, the influence of the company stretched well beyond its own activities, directly and indirectly shaping how the Ottoman state managed telegraphic operations and infrastructure in the empire.

Company influence

While Eastern Telegraph Company infrastructure represented only a fraction of the lines and stations in the Ottoman telegraph network, the influence of the company extended throughout the imperial telegraph system. By acting as both an enabler of Ottoman imperial

57 Ibid.

58 POR DOC/ETC/7/52, Anderson Letters, Letter from James Anderson to an Unnamed Managing Director. December 31, 1902.

59 Ibid.

communication, as well as a competitor that offered alternative routes to the state system, the company had an outsized effect on the development of Ottoman telegraphic practices and imperial governance more broadly.

Most significantly, the company's submarine cables enabled the imperial government to rapidly communicate with areas that had previously been out of immediate reach. By 1885, the Ottoman government had telegraphic access to remote provinces, such as Ottoman Tripoli, the Hijaz, and Yemen, through the workings of these company cables. And the state took full advantage of this access. Of the nearly 1.5 million telegrams sent by the Ottoman government in 1885, more than half passed through Eastern cables at some point on their journey.[60] As a result of the prioritization and discount afforded to government messages in the concessions, company lines were often flooded with government messages, much to the chagrin of company managers. In 1883, company officials threatened to remove the cable that connected Istanbul and Salonica, via Tenedos, as it had been operating at a loss due to extensive, and heavily discounted, government use.[61] During the Crete uprisings in 1889, company officials again complained that the government's intensive use of the submarine cables had all but monopolized the private company's lines, preventing them from being used in correspondence from Europe and Egypt.[62]

Beyond expanding government access into the peripheries of the empire, the presence of the Eastern Telegraph Company infrastructure also shaped the daily practices of Ottoman telegraph clerks. The interconnectedness of state and company lines demanded that Ottoman state clerks be familiar with the costs and protocols of the private firm, both for messages sent within the empire and across its borders. For instance, if an individual in Van wanted to send a message to Lemnos, the message would need to travel over both state and company lines. And while the state clerk would receive the payment for both sections of the utilized infrastructure, he would need to keep track of what portion of the station's income would eventually be transferred to the company.

As a result, the Eastern Telegraph Company featured prominently in the official manuals for the employees of the Ottoman telegraph administration. For instance, there were typically two sets of information for pricing telegrams within the empire: one for state lines, and one for lines owned by the Eastern Telegraph Company.[63] While telegrams sent entirely over state lines ranged in price from 10 paras to 1 piaster per word—depending on the telegram's

60 The number of government messages sent via Eastern lines was approximately 800,000. This number was calculated using the official messages sent in "Oriental Script" to the destinations of Yemen, Tripoli, and Hijaz, all of which used the Eastern lines. Including the Eastern lines in the Aegean, this number would be even higher. See *Posta ve Telgraf Mecmuası*, August and September 1888.

61 POR DOC/ETC/1/84, Letter from John Pender to Said Pasha, October 10, 1883.

62 POR DOC/ETC/1/84, Duplicate Candia-Canea Cable, August 15, 1889.

63 SALT 384/Tel/C/1, *Telgraf ve Posta Nezareti Saltanat-ı Seniye-i Telgraf Merakizine Mahsus Resmi Rehberdir.*

journey—telegrams sent over company lines cost an additional 20 paras more per word.[64] In addition to word count, the cost of a telegram also depended on the type of message: customers could pay more to include a paid response, acknowledgement of receipt, or a rush transmission. In addition to being responsible for this matrix of information for state lines, Ottoman imperial telegraphers were also required to understand the various costs for telegrams traveling over Eastern lines. For instance, the manual gave clerks separate charts demonstrating the various types of messages and costs for both state routes, such as Beirut to Damascus and Skopje to Istanbul, as well as for routes that included Eastern lines, such as Salonica to Lemnos and Istanbul to the Dardanelles.[65]

The finances of the two entities were also closely linked, and payments to and from the Eastern Telegraph Company became a regular feature of the imperial telegraph administration's records of income and expense. For example, in the 1884-1885 fiscal year, the imperial telegraph administration received a payment of 102,721 piasters from the Eastern Telegraph Company, and it in turn paid the company 92,452 piasters in order to balance the accounts for telegraphic traffic within the empire.[66] By 1895, the total amount of money exchanged between the two administrations had increased and the ratio of debit and credit had reversed, with the Ottoman imperial administration owing the company 126,319 piasters and only receiving 97,384 for internal messages.[67]

The regular balancing of Ottoman accounts also extended to international messages sent via Eastern lines. Interestingly, this category of messages included those sent between the Ottoman Empire and the Ottoman territories of Tripoli, the Hijaz, and Yemen, as those territories were serviced by Eastern lines that went through the non-Ottoman territories of Suakin and Malta.[68] As with internal messages, there was also an increase in the financial exchange between the imperial telegraph administration and the company for international messages, a trend that reflects the rising dependency of the Ottoman government on the company.[69]

These financial records reveal in striking terms the simple fact that the Ottoman telegraph administration could not have functioned without the infrastructure and employees of the Eastern Telegraph Company. The company lines were not incidental to the flow of information in the empire but were rather integral to the success of Ottoman telegraphy.

64 Ibid.
65 Ibid.
66 *Posta ve Telgraf Mecmuası*, August and September 1888.
67 AK ISTKA/2012/BIL/233, no. 10, *Telgraf ve Posta İstatistiki,* 1317 (1900).
68 As a result, these messages were subjected to an international tariff. SALT 384/Tel/C/1, *Telgraf ve Posta Nezareti Saltanat-ı Seniye-i Telgraf Merakizine Mahsus Resmi Rehberdir*.
69 Total amount increased from 645,947 piasters to 1,457,607 between 1885 and 1895. See *Posta ve Telgraf Mecmuası*, August and September 1888; AK ISTKA/2012/BIL/233, *Telgraf ve Posta İstatistiki,* 1317 (1900).

This influence of the private firm also extended into the new legal framework that the Ottoman state created to manage telegraphic infrastructure. This is most visible in the expansion of Ottoman law to protect the extensive network of privately-owned, undersea infrastructure in the empire's waters. Outside of the protection of any single state, submarine cables had become a subject of interest for the International Telegraph Union, particularly after the Eastern Telegraph Company gained representation at the body in 1875.[70] On March 14, 1884, the Ottoman Empire joined twenty-five countries in signing the Convention for the Protection of Submarine Telegraph Cables.[71] The intent of the convention was to form a unified front in criminalizing the breaking or damaging of submarine cables inside and outside of territorial waters. The signatory countries were responsible for writing their own laws regarding the crimes and for forming the tribunals for prosecuting offenses, but those laws were to be based on the convention's general framework. The convention did not seek to replace the possibility of civil action in case of willful or neglectful damage of cables, but rather to supplement such action with criminalization.

On September 21, 1886, the Ottoman government passed legislation that met the standards of the convention: the new law both criminalized the damaging of submarine cables in Ottoman waters and prescribed punishment for Ottoman mariners who damaged lines in extra-territorial waters.[72] In line with the international agreement, the Ottoman law included a list of newly illegal behavior, which included not only willful damage of cables but also negligent activities that endangered cables. Each crime included a prescription of punishment, ranging from fines to prison time. For damage of property within Ottoman territorial waters, both Ottoman and foreign boats were subject to prosecution, and the local Ottoman authorities were to be responsible for conducting the investigation and judicial proceedings. For damage of property in extra-territorial waters by Ottoman mariners, the prosecution could be held in either the district where the boat was constructed or the district in which the boat's primary port was located.[73] In most cases, it was the captain of the vessel who would be held responsible.

The law designated three tiers of crimes, each of which had its own range of punishment. One class of crimes related to negligence, including not maintaining a certain distance from the cables (which were to be marked with buoys), not using proper signaling when repairing

70 Unknown Author, *L'Union Télégraphique Internationale (1865-1915)* (Berne: Bureau International de l'Union Télégraphique, 1915), 13

71 The signatories were Great Britain, Argentina, Austria-Hungary, Belgium, Brazil, Colombia, Costa Rica, Denmark, the Dominican Republic, France, Germany, Greece, Guatemala, Italy, Netherlands, Persia, Portugal, Romania, Russia, Salvador, Servia, Spain, Sweden and Norway, Turkey, the United States and Uruguay. See BOA HR/HMS/ISO/167/13, Convention for the Protection of Submarine Cables, March 14, 1884.

72 "Turkey: Loi du 9/21. Dispositions spéciales aux eux non territoriales." *Journal Télégraphique* 4 (April 1887), ITU Archive.

73 "Loi pour la répression des infractions à la convention international du 14 Mars 1884, relatives à la protection des cables sous-marins." Published in *Bulletin Télégraphique et Postal* 1, June 1888, 16.

cables, and approaching boats engaged in cable repair. For these acts, an individual could be fined from three to fifty medjidies.[74] A second class of crimes included anchoring within a quarter mile of the lines and throwing nets and other fishing equipment near the protected infrastructure. For these crimes, guilty individuals would also be fined from three to fifty medjidies and faced imprisonment for up to five days. The law also clarified that these acts were illegal and punishable regardless of whether a cable was damaged.[75]

The third class of crimes applied to instances when individuals caused the breaking of lines. Captains and individuals guilty of this crime through negligence could be fined from three to fifty medjidies and imprisoned from six days to two months. This punishment also applied to individuals who willingly produced equipment that could cut cables. In addition, individuals who willingly cut or damaged cables could be punished with a fine of between fifty and two-hundred medjidies and imprisonment from three months to three years. After listing out these penalties, the law clarified that they did not apply to those who were forced to cut a cable in order to save a life or to protect a ship from damage.[76]

By agreeing to protect this private infrastructure with the force of its own laws and criminal justice system, the Ottoman state was effectively assimilating its legal code with the new structure of international law, which could better deal with the issue of transnational property. This assimilation also represented a new iteration of the centuries-old question of how to deal with a *hostis humani generis*. Carrying the meaning of "enemy of humankind" or "one at war with the whole world," the term refers to individuals who engage in criminal activity outside the jurisdiction of any state and thus render themselves subject to arrest and punishment by all states.[77] Traditionally the reserve of piracy, this category of criminality took on new salience with the emergence of privately-owned and publicly-used infrastructure in extra-territorial waters.[78]

In part, the Ottoman decision to create a uniform legal space for telegraphy is reminiscent of David Harvey's description of capitalist imperialism. In contrast to territorial imperialism, which Harvey uses to describe the expansion of a single state's power over a new area, capitalist imperialism refers to the diffusion of a particular model through consensus and emulation among world powers in order to promote the seamless flow of capital and commerce.[79] However, in this case, it was not merely the flow of capital and commerce that the new submarine-cable law protected. Given that the Ottoman state also benefited

74 Ibid.
75 Ibid.
76 Ibid.
77 Jody Greene, "Hostis Humani Generis," *Critical Inquiry* 34, 4 (Summer 2008): 683-705, 691
78 For more on the relationship between international law and submarine cables, see Winseck and Pike, *Communication and Empire,* 48
79 David Harvey, *The New Imperialism* (New York: Oxford University Press, 2003).

from these company cables, it was in the government's interest to create an environment that was hospitable to the establishment and operation of privately-owned infrastructure. In other words, the legal protection of private submarine cables was not a subordination of state interests to those of the company. Rather, these legal measures represent a momentary alignment of the interests of the Ottoman state and the Eastern Telegraph Company, which had become an integral part of Ottoman imperial communications.

Rivalry

The influence of the Eastern Telegraph Company extended beyond the collaboration practiced between the firm and the Ottoman government. This was because the Ottoman telegraph administration was not just a client of the company: it was also a competitor. While the Ottoman telegraph administration had been the world's first provider of Indo-European telegraphy, it soon faced competition from new entrants in the market, including the Eastern Telegraph Company. In 1873, the company completed a submarine connection from Europe to India, and that route quickly emerged as a competitor to the Ottoman terrestrial lines.

This competition increased with the cartelization of non-Ottoman, Indo-European routes in the late 1870s. In 1878, the Eastern Telegraph Company partnered with the Indo-European Telegraph Company (a Siemens venture) and the Indo-European Telegraph Department (a branch of the British-Indian government that operated the lines connecting India to the Ottoman station of Fao) to create a "common purse agreement," by which the three entities agreed to pool revenue for messages originating in or destined to India.[80] The agreement also brought with it a commitment to setting prices together, as well as rights to divert messages to partner lines in case of interruption. This cartelization applied significant pressure to the Ottoman telegraph administration: its share of Indo-European messages dropped from 18 percent in 1871-72 to a mere 1.5 percent in 1887-1888.[81]

This loss of income was enormous for the Ottoman administration. Telegraphy had proven to be good business for the Ottoman state, particularly at a time of great financial distress for the empire. In 1875, the Ottoman state had declared bankruptcy and in 1881 the Ottoman Public Debt Administration was created in order to guarantee loan repayment to foreign investors. While the Ottoman Public Debt Administration had earmarked certain profitable sectors — such as salt and tobacco — for the exclusive repayment of foreign debt, income generated from telegraphy remained open for general use by the Ottoman state.[82]

While there are no comprehensive figures on the income generated by telegraphy, the few available data points indicate that telegraphy was a source of revenue for the Ottoman

80 POR DOC/ETC/1/96, India Joint Purse Agreement, May 28, 1878.
81 Winseck and Pike, *Communication and Empire,* 97.
82 Birdal, *The Political Economy of Ottoman Public Debt,* 104.

state. In the 1882-1883 imperial budget, the income generated by the telegraph network was recorded as six times higher than that of the imperial mines.[83] Furthermore, the relatively low cost of telegraphic operations meant that telegraphy often generated a profit for the government. In 1884-1885, the Ottoman telegraph administration spent approximately thirty-one million piasters on its telegraph network, including on salaries, building, and maintaining infrastructure, subsidies for company lines, and payments to other networks for handling Ottoman messages. In contrast, the administration brought in forty-eight million piasters in revenue, making a profit of seventeen million piasters.[84] While this represented just a fraction of the imperial treasury's revenue, it nonetheless made telegraphy a valuable source of available income for the indebted Ottoman state.[85]

The importance of this income to the state can be seen in the measures taken by the Ottoman telegraph administration to remain competitive among providers of international telegraphy, even as alternative Indo-European routes emerged. For instance, the imperial telegraph administration included reciprocity clauses in contracts for submarine cables in the empire, requiring that companies contracting with the Ottoman state use Ottoman terrestrial lines for any traffic to India.[86] When possible, the Ottoman administration also partnered with companies competing with the Eastern Telegraph Company in order to maximize its own profit. In 1905, the Ottoman telegraph administration renewed its agreement with the Black Sea Telegraph Company to operate an Istanbul-Odessa line that connected the empire with northern and western Europe. This line, while in excellent condition, had been losing traffic to a Mediterranean route offered by the Eastern Telegraph Company due to the high tariff rates demanded by the Ottoman administration. In order to stimulate traffic and maximize revenue, the administration lowered the tariff rate on the Black Sea line from 30 centimes to 20 centimes for messages going into the empire, while maintaining the higher rate for messages leaving the empire. It was estimated that this adjustment yielded an additional 58,000 francs per year for the imperial administration.[87]

Ottoman statesmen outside of the telegraph administration were also aware of the competition that existed between the underwater cables and the state network. In speaking before the Ottoman House of Deputies in April 1911 on the state of the empire's communication network, Prime Minister İbrahim Hakkı Pasha warned that the privately owned submarine cables "partially compete with our land cables" and emphasized the importance of the state

83 Darina Martykánová, *Reconstructing Ottoman Engineers: Archeology of a Profession* (Pisa: Plus-Pisa University Press, 2010), 43.

84 *Posta ve Telgraf Mecmuası*, August and September 1888, 45-48.

85 For the financial year of 1880-81, the total revenue for the Ottoman state was estimated to be 1,615,584,000. See Stanford J. Shaw, "The Nineteenth-Century Ottoman Tax Reforms and Revenue System," *International Journal of Middle East Studies* 6, 4 (October 1975): 421-459.

86 POR DOC/1/84, Archipelago Concession, November 28, 1870, Article XXIV.

87 POR BSTC/7/1, Assimilation of Tariff between Turkey and Great Britain, via Odessa, July 12, 1905.

maintaining a monopoly on wired communication, as a means to not lose the valuable income that it represented.[88]

Remarkably, while the Ottoman telegraph administration had been reduced to a small player in the larger game of international telegraphy, it nonetheless continued to weigh on the mind of the Eastern Telegraph Company. In a 1907 exchange between the divisional manager at Athens, James Anderson, and the company representative to the Ottoman government, V. Hekimian, the two men expressed concern over a proposed agreement between the Ottoman and Egyptian telegraph administrations to reduce rates. The reduction threatened to divert traffic bound for South Asia away from the company's submarine cables toward the Ottoman land lines. Fearing that the rate adjustment would lead to a considerable loss for the company, Anderson suggested offering a "compensation" to an Ottoman official who could ensure that the proposal was withdrawn.[89] While such a move risked alerting the Ottomans to the importance the company attached to the matter, Anderson concluded that the protection of the market was ultimately worth it. He suggested that the company target someone outside of the telegraph administration, as that body had already decided it was in the government's best interest to lower rates.[90]

While it is unknown whether the company was successful in this attempt to influence Ottoman pricing, this exchange reveals two related points. First, it demonstrates that the Ottoman telegraph administration had emerged as not only a provider of a public utility but also as a player in the business of international telegraphy. The physical location of the empire between Europe and Asia situated the imperial network to act as a natural bridge for intercontinental messaging, effectively pitting it against the Eastern Telegraph Company and others engaged in Indo-European telegraphy. Second, this exchange demonstrates the risk of this position. By taking a slice of the Indo-European telegraph market, no matter how small, the Ottoman imperial administration drew the attention of a powerful corporation that sought to dominate the market. As a result, the imperial administration was vulnerable to the threat of manipulation and interference by the company, which sought to bribe Ottoman officials to put corporate interests over those of the telegraph administration. Thus, while the company was central to the success of Ottoman telegraphy, its dual role as collaborator and competitor made the Eastern Telegraph Company a risky partner for the Ottoman government.

Conclusion

In concluding this examination, it is important to note that the Ottoman state was not unusual in having to work with a private company to manage the submarine telegraph

88 Sadrazam İbrahim Hakkı Paşa, speech before the House of Deputies, April 1911. Reprinted in full in Tanju Demir, *Turkiye'de Posta Telgraf ve Telefon Teskilatinin Tarihsel Gelisimi (1840-1920),* 69-72.

89 POR DOC/ETC/7/52, Letter from James Anderson, Athens Divisional Manager of Eastern Telegraph Company, to V. Hekimian, Eastern Telegraph Company Representative to Sublime Porte, July 3, 1907.

90 Ibid.

network within its imperial domain. Given the sheer dominance of the Eastern Telegraph Company in submarine telegraphy — it is estimated that at its height it managed half of the world's underwater cables — it was certainly the norm for states in the late nineteenth and early twentieth century to have to work with this company, or other private firms, in order to communicate beyond state-run land network.[91] In addition, only a few states — namely the United Kingdom, Germany, France, and the United States, had the option of partnering with firms originating from within their borders for their underwater-cable needs. Globally, the submarine cable network was managed by just a handful of major companies, which were based in an even smaller number of countries. Furthermore, it is useful to remember that even the British government was at times wary of British cable companies, such as the Eastern Telegraph Company, which was not infrequently criticized by British parliamentarians and reformers for price gouging and profiting from inter-imperial communication.[92]

However, given the geography of the Ottoman Empire—which stretched across three continents and many bodies of water—as well as its status as a relatively weaker power, one could say that the state-company relationship surrounding submarine cables in Ottoman waters merits special consideration. This is especially true given the shifting nature of Ottoman and British relations toward the second half of the nineteenth century, in which imperial rivalry and mistrust began to escalate. As the work of many scholars have shown, including Javier Marquez Quevedo and Heidi J.S. Evans, submarine telegraph networks were certainly a site for inter-imperial competition, particularly as a rising Germany attempted to circumvent the near chokehold that British firms had on submarine telegraphic communication around the world.[93]

As this study demonstrates, the Eastern Telegraph Company came to play a significant role in the history of telegraphy in the Ottoman Empire, helping the imperial telegraph administration to integrate the empire's disparate parts and to connect it to the global network. In contrast to assumptions about the nature of foreign companies in the modern empire, these privately-owned cables were not isolated outposts of foreign technology; rather they were deeply embedded in the local environment and even, at times, managed by local operators. Nor were they exclusively sites for foreign domination: the Ottoman telegraph administration regulated company behavior and shaped company practice.

Nonetheless, the presence of this company complicated the otherwise state-run project of telegraphy in the empire. Ottoman imperial employees had to be familiar with company

91 Daniel Headrick, *The Invisible Weapon*, 39.

92 Dwayne Roy Winseck, and Robert M. Pike. *Communication and empire: media, markets, and globalization, 1860-1930*. (Durham: Duke University Press, 2007) Chapter 5.

93 Javier Márquez Quevedo, "Telecommunications and Colonial Rivalry: European Telegraph Cables to the Canary Islands and Northwest Africa, 1883-1914," *Historical Social Research / Historische Sozialforschung* 35, 1 (2010): 108-24; Heidi Jacqueline Evans, "The path to freedom"? Transocean and German wireless telegraphy, 1914-1922. *Historical Social Research / Historische Sozialforschung* 35, 1 (2010): 209-233.

practices and pricing; Ottoman law changed in order to accommodate and protect the private infrastructure; and the Ottoman telegraph administration lost market share—and potentially employee loyalty — to the spending power of the large company. The fact that this all occurred in the shifting political climate of the modern empire — a time in which the Ottoman government felt increasingly threatened by European imperialism and suspicious of the "loyalties" of Christian Ottomans — made this complex relationship all the more fraught.[94] These private cables enabled the Ottoman state to communicate with its territories, regardless of their remote locations, but they also tightened the connections between the empire and the expanding zone of British technical and economic practices.

In a way, the partnership between the Ottoman state and the Eastern Telegraph Company — and the everyday interactions between the two—demonstrates the symbiotic relationship between the tightening of transnational ties and the centralization of Ottoman imperial power. Reframing the history of submarine cable companies in the empire as a story of mutual influence across a tension-filled network allows for this seeming contradiction and provides a more accurate picture of Ottoman economic and political peripheralization in the nineteenth century. Even as the Ottoman telegraph administration asserted its territorial sovereignty against British state actors, which sought to influence the management of Ottoman terrestrial lines, it came to rely on and engage with a British firm to develop a comprehensive communication system. By focusing on these submarine cables, and their attendant social practices, the Ottoman state appears neither as an independent agent nor a subordinate vassal in the globalizing world of the late nineteenth century. Instead, the imperial state emerges as an actor in a transnational network that linked the social and technical, the public and private, as well as the foreign and domestic.

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94 While there is limited documentation regarding the ethnic background of the Ottomans who were employed — or paid — by the Eastern Telegraph Company, it is notable that a number of them had Christian names. More research is needed to determine if there was such a trend, and if so, whether it was due to a prejudice on the part of the company, or disproportional access and interest on the part of Christian Ottomans for working with the firm.

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