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General Information

Journal of Balkan and Black Sea Studies is an interdisciplinary refereed journal focusing on the humanities and social sciences of the Balkan countries and the former Soviet republics. The journal welcomes contributions in the fields of history, economics, politics, international relations, culture, art, geography, literature, theology, ethnography and environmental sciences. The idea behind this initiative is to extend a cross-cultural and cross-disciplinary approach over issues of regional importance. Under this light, the journal aspires to act as an academic forum for scholars in historical as well as contemporary context on a wide range of cross-regional issues and to provide the epistemological framework for a comparative investigation, which would enhance our understanding of the Balkan, and Black Sea societies, polities and communities. Furthermore, manuscripts connecting the region with wider scopes, such as technological applications, will be also considered.

The journal is published online with two issues per year (June and December) commencing in 2018 and themed issues are anticipated. Submitted manuscripts should be original and not published or under consideration for publication elsewhere. Their length should not exceed 8.000 words. The manuscript will be subject to anonymous peer-review by at least two members of the scientific committee. The use of graphics and images in colour is encouraged and not subject to limitations (within reason). However, it is the responsibility of the individual authors to acquire copyright permission if needed. The language for manuscripts is English and Turkish. Articles, other than in English or Turkish, will be occasionally accepted. Articles must have an abstract of up to 150 words in English.

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Mehmet Hacısalihoğlu

Conditions of Publication

Guidelines for Submission: Each issue will include articles, review essays, and shorter book reviews. All articles are to be submitted in electronic form to the journal editorial board at http://dergipark.org.tr/balkar and at balkar@yildiz.edu.tr. Submissions are to be up to 8,000 words in length and may be accompanied by footnotes and a bibliography. Transliterations will be kept to a minimum, and when used will follow the standard adopted by the appropriate scholarly bodies in the respective language areas. Articles are expected to be written in English though submissions in other languages can also be considered. Review essays are to be up to 4,000 words in length. They may review one or more books and may also focus on multiple works of a single author, works in a series, or publications around particular historical sources. Book reviews are to be 1,000 words in length.

Review of Submissions: All submissions are evaluated through a double-blind review process and include review both by editorial board members and external reviewers. *Publishable Copy*: Articles are to be submitted via electronic means in Word format and accompanied by a copy in pdf format. The pictures and figures should be sent separately in 200 dpi resolution in tif format.

General Style Rules: 1. The text must be formatted with 1.5-inch margins and be double-spaced. 2. A separate cover sheet must be included with the manuscript title, author's name, ORCID iD Number, professional affiliation, complete mailing address and telephone number. 3. A short abstract of 70–100 words in English (including also key words) should accompany the article. 4. Capitalization: authors should be consistent in their use of capitalization. 5. Italics: the titles of works and periodicals should normally be italicized. Foreign words should also be italicized. 6. In general, foreign words and phrases, both in main text and footnotes should be provided in translation. All non-Roman alphabets should be transliterated according to the rules of international transliteration. 7. All articles should include footnotes. 8. All articles should have a bibliography at the end of the article. 9. Illustrations, tables, maps and figures must be numbered consecutively in the text and captions identifying the source of any image or data should be used. Figure title: below the picture; Table title: above the table. 10. For further reference, The Chicago Manual of Style Online (http://www.chicagomanualofstyle.org) is recommended.

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Editorial

Journal of Balkan and Black Sea Studies is an Istanbul-based journal aiming at strengthening academic exchange among social scientists from Turkey, the Balkans, the Caucasus and Eastern European countries. We started the journal in 2018 and have published five issues until now. The fifth issue includes three research articles and a special issue. The special issue on "*Transottoman Infrastructures and Networks across the Black Sea*" consists of one introduction and four research articles on the history of infrastructure in the Balkans and the Black Sea region. The special issue underwent a double editing process, first by the editors of the special issue, *Dr. Lyubomir Pozharliev*, *Dr. Florian Riedler* and *Prof. Dr. Stefan Rohdewald*. The research articles of the special issue were additionally evaluated through a double-blind review process, including reviews both by some editorial board members and external reviewers.

The first article of the special issue titled "Concessions and Mirages along the Lower Danube: The Town of Silistria in the Plans of Foreign Railway Promoters during the mid-1850s" by *Assist. Prof. Dr. Boriana Antonova-Goleva* (Sofia) deals with railway and road projects aiming to connect the Danube with the Black Sea to facilitate the transportation of goods from the Balkans. The second article of the special issue titled "(Dis)Connected: Railway, Steamships and Trade in the Port of Odessa, 1865–1888" by *Dr. phil. Boris Belge* (Basel) discusses the port of Odessa which was constructed at the end of the 18th century and became the most important Russian port across the Black Sea. The connection of Odessa with different parts of Russia is the main subject of the article. The third article of the special issue titled "State Goals and Private Interests in the Development of Transport Infrastructure in the Russian Black Sea Region in the Second Half of the Nineteenth Century" by *Dr. phil Lyubomir Pozharliev* (Leipzig) deals with -parallel to the territorial expansion of Russia - the increasing Russian investments in the Black Sea coasts to improve the transport infrastructures. The fourth article of the special issue titled "Integrating the Danube into Modern Networks of Infrastructure: The Ottoman Contribution" by *Dr. phil. Florian Riedler* (Leipzig) dwells on the projects and investments to improve and facilitate the transportation over Danube. The increasing corn export from the Balkans to Central Europe and development of trade in the region made the infrastructural investments in connecting Danube with hinterland essential.

The first article of the issue 5 titled "An Ottoman Story Until the End: Reading Fan Noli's Post-Mediterranean Struggle in America, 1906-1922" by *Assoc. Prof. Dr. Isa Blumi* (Stockholm, Sharjah) examines the life and historical role of Fan Noli, founder of the Autocephalous Orthodox Church of Albania, celebrated in Albania as one of the leading national heroes of the Albanian national movement. The author discusses different aspects of his life as a transnational personality and tries to show the role of the diaspora communities, particularly the Tosk community in the USA, in the transformation process of Albania after its independence in 1912.

The second article of the issue 5 titled "Kemalism, Literature and Politics: Turkish Historical Novel in a Comparative Perspective" by Assoc. *Prof. Dr. Aslı Daldal* (İstanbul), focuses on the Turkish novelists Kemal Tahir, Atilla İlhan and Ahmed Hamdi Tanpınar in the Interwar period. Daldal evaluates their historical novels in the context of Kemalist nationalism, national historiography and perception of the East and West, and discusses if there is in their novels any criticism or support regarding the Kemalist modernism.

The third and last research article of the issue 5 titled "Theoretical Approaches to the Black Sea Region: Is the Wider Black Sea Area a Region?" by *Nasuh Sofuoğlu* (Rize, Istanbul) tries to evaluate the existing literature and theories about the Black Sea area within the concept of regionalism and new regionalism.

The issue also includes four book reviews.

I would like to thank the editors of the special issue and especially Dr. Florian Riedler, who carried out the collection and submission of the articles of the issue, and the authors of the articles and book reviews. We feel privileged due to the fact that they decided to publish their valuable contributions in our journal. I would like to thank also all the referees for their precious efforts during the evaluation process of the articles. Finally, I would like to thank the national and international institutions which started to index our journal.

Mehmet Hacısalihoğlu, Prof. Dr.

Editor in Chief

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Special Issue

"Transottoman Infrastructures and Networks across the Black Sea"

Editors

Lyubomir Pozharliev*, Florian Riedler*, and Stefan Rohdewald*

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Content of the Special Issue

Introduction to the Special Issue:

Transottoman Infrastructures and Networks across the Black Sea

Lyubomir Pozharliev, Florian Riedler, and Stefan Rohdewald

Traditionally, the larger Black Sea area acted as a pivot that connected the Ottoman realm with the empires in the north such as Poland–Lithuania and Russia, as well as the territories of Moldova, Walachia, and Hungary and also the Habsburg Empire via the Danube, and Persia via the Trabzon route.[1] This special issue aims to explore such connections by looking at the infrastructures that organized them spatially and socially. We are particularly interested in tracing the transformation of older Transottoman connections and networks through the development of modern infrastructures in the larger Black Sea region.[2] From the nineteenth to the twentieth century when the geopolitical outlook of the whole region changed, Russia and the Ottoman Empire as well as other states were connected in new ways. New technologies such as steam shipping on the Black Sea, the Danube, and other rivers, as well as railways in the hinterland, played a decisive role in the transformation of the entire region and its connections. New goods and products such as wheat or oil called for new transport infrastructures and resulted in new trans-imperial competition. Old ports and new ports were (re)connected to the hinterland and the Black Sea region in its global context.[3]

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[1] Y. Eyüp Özveren, "A Framework for the Study of the Black Sea World, 1789–1915," *Review: A Journal of the Fernand Braudel Center* 20 (1997): 77–113; Charles Issawi, "The Tabriz–Trabzon Trade, 1830–1900: Rise and Decline of a Route," *International Journal of Middle East Studies* 1, no. 1 (1970): 18–27.

[2] Stefan Rohdewald, Stephan Conermann, and Albrecht Fuess, eds., *Transottomanica – Osteuropäisch-osmanisch-persische Mobilitätsdynamiken: Perspektiven und Forschungsstand* (Göttingen: V&R unipress, 2019).

[3] Constantin Ardeleanu and Andreas Lyberatos, eds., *Port-Cities of the Western Black Sea Coast and the Danube: Economic and Social Development in the Long Nineteenth Century* (Corfu: Black Sea Project, 2016), https://books.blacksea.gr/en/15/; Edhem Eldem, Sophia Laou, and Vangelis Kechriotis, eds., *The Economic and Social Development of the Port-Cities of the Southern Black Sea*

In a narrow sense, infrastructures are material components of wider networks that enable exchange and mobility, e.g., roads, railways, canals, ports, and others. Only as part of networks and in close collaboration with the human actors can they offer insight into the development of social life. Because they function as sociotechnical systems, infrastructures in a wider sense can also include associations, institutions, networks of merchant houses or banks. Thus, they can be associated with all structured practices of transport, migration, and the mobility of people and objects in general. Both aspects, the material and the social, come together in Thomas P. Hughes's notion of large technological systems.[4]

From a historical perspective, infrastructure is intricately connected to the state and its development. Because of the huge investment costs involved, infrastructures were often constructed with public money and this expense was justified by declaring their effects a common good. In particular, the ability of transport infrastructures to penetrate territories and to project power has made them interesting for states in their attempt to intensify or extend their domination. This is true for foreign colonies as well as for home territories that were subjected to "internal colonization."[5] The following contributions will examine this issue in greater detail in relation to the nineteenth-century infrastructure policies of the Ottoman Empire and Russia. Focusing on infrastructure development can provide a new perspective on specific state policies. From such a perspective, the element of planning gains a special importance, and through it we can access geopolitical visions of power and mental maps of state actors that do not necessarily match with reality.

However, although infrastructure development is very often politically driven, it lies beyond political boundaries. Thus, it is linked to transnational and trans-imperial studies and can also enhance our understanding of larger trends such as modernization. The map that modern infrastructure outlines does not necessarily overlap with the political one – it is a map of economically and symbolically important centers constituted by the various infrastructural networks themselves. Technological skills and specific knowledge are intertwined in its

Coast and Hinterland, Late 18th–Beginning of the 20th Century (Corfu: Black Sea Project, 2017), https://books.blacksea.gr/en/6/.

[4] Thomas P. Hughes, "The Evolution of Large Technological Systems," in *The Social Construction of Technological Systems*, ed. Wiebe E. Bijker, Thomas P. Hughes, and Trevor Pinch (Cambridge, MA: MIT Press, 1987), 45.

[5] Dirk van Laak, *Imperiale Infrastruktur: Deutsche Planungen für eine Erschließung Afrikas 1880–1960* (Paderborn: Schöningh, 2004); Joanna Guldi, *Roads to Power: Britain Invents the Infrastructure State* (Cambridge, MA: Harvard University Press, 2012).

construction. The direction and nature of the transfer of knowledge, along with the networks of mobile actors engaged with this transfer, become visible through them.

Once built, infrastructures become a conduit for the exchange of goods and people. Therefore, by setting the focus on infrastructure in a broad sense, this special issue attempts to change the dominant prism of studying the Danube and Black Sea region in the nineteenth and twentieth centuries as a bipolar conflict zone between the Ottoman and Russian Empires. Rather, it seeks to place the connection between the two empires, but also between other political actors, in a wider framework of Transottoman connections that include perspectives on all regions around the Black Sea, from the Danube to the Caucasus, Persia, the Caspian Sea and the Don–Volga regions, but especially the former Polish–Lithuanian territories within Russia and the Danubian connections to the Habsburg Empire via Walachia and Bulgaria. The contributions unveil the intertwined trajectories of mutual interest in the regions, the established networks constituted by cooperation and competition, and the consolidation of hubs or centers of communication and infrastructures of structural importance in the formation of a cross-imperial or Transottoman society.

At the same time, the impact of modern infrastructure, as well as various aspects to and imaginations of modernity are complex. Besides connecting and transporting necessary goods, technologies, and knowledge, the consolidated infrastructure also facilitates the rapid spread of life-threatening epidemics, wars and weapons, or a change of perception in criminal activities surrounding drugs and prostitution. It simultaneously changes the interpretations of the trajectories through which it passes, upsets local everyday routines, and brings uncertainty as part of the connotations of modernity. As before, infrastructures enabled trade, transcultural exchange, migration, and mobility, all of which went beyond bilateral connections between the imperial centers. But often these connections were transformed and reshuffled in line with new technological possibilities. For example, new trade routes and railways opened the Black Sea region in a now direct connection via the Caspian Sea to the emerging world market;[6] Orthodox pilgrims from Russia and Muslims from Central Asia discovered the opportunities of rail and steamer transport in reaching Jerusalem and Mecca respectively via

[6] Reinhard Nachtigal, *Verkehrswege in Kaukasien: Ein Integrationsproblem des Zarenreiches 1780–1870* (Wiesbaden: Reichert, 2016).

Batumi, Sevastopol, and Odessa.[7] Exploring the dual nature of infrastructure will shed light on the practice and conception of what is called "modernity" in the different societies of the area in focus here.

Finally, yet importantly, the focus on infrastructures will explain the geopolitical restructuring of the region as a consequence of transformed patterns of mobility. As mentioned above, this concerns the integration into new global economic flows and patterns of migration. Moreover, this also concerns the consolidation of cross-regional, Transottoman society and the internal restructuring of states and empires. Van Laak binds the construction of large-scale infrastructure projects to colonial domination and the imposition of imperial power.[8] The concrete analysis in the cases examined in this special issue can illustrate a more complex relationship. For instance, the upgrading of infrastructure in the Ottoman Empire was driven to some degree by recognized and certainly new and challenging self-understandings that relate to their own lack of technical equipment. For the Ottomans, the acknowledged paucity of new technologies and knowledge was linked to the lack of cultural prestige and, ultimately, to imperial legitimation. The question remains though: who were the actors who triggered the imperial centers to invest in new infrastructures from the eighteenth to the twentieth century? Were they the imperial elites, lobbyists for Western interests, or to some degree independent mobile players from the provinces with – let us call them Transottoman – cross-imperial horizons of actions and interests?

Is there a reversal in the implementation of imperial policy not only conceived in terms of the movements of troops, weapons, and military infrastructures, but through the broader and general, economic and societal usage of forms of technological acceleration of time and their respective spatial accessibility? Conversely, did the new infrastructures and technologies offer a chance to emancipate imperial subjects from the center and to formulate cross-regional societal horizons of action and economic interest? These are some of the questions that the contributions to this special issue attempt to address.

Boriana Antonova-Goleva's contribution starts by depicting early Ottoman railway development through the example of the Silistra Railway Project. During the 1850s, the Ottoman Empire started to develop its own railway infrastructure. The project for this line was one of the first railway

[7] Eileen Kane, *Russian Hajj: Empire and the Pilgrimage to Mecca* (Ithaca: Cornell University Press, 2015).
[8] Laak, *Imperiale Infrastruktur*.

schemes in Rumelia that was introduced to the Ottoman government by a British group of investors. The group's primary aim was to strengthen other railway schemes along the Lower Danube in which some members of the group were directly involved, and to foster grain trade via the Black Sea, the Principality of Serbia, and the Danubian Principalities. They competed with another group that favored an alternative railway route. As a result of their competition, after 1850 the urban centers on the Lower Danube became a focus for Transottoman and global infrastructure enterprises.

Boris Belge illustrates old and new trade practices in the port of Odessa in the second half of the nineteenth century. He makes clear why the port of Odessa, which had become a high-performing hub, rather quickly lost its importance after a few decades of blossoming, and how it faced growing competition from a regional rival such as Nikolaev (Mykolaïv). The causes can be explained in terms of the port's infrastructure: the connection to the imperial railway network was not good enough to ensure links between waterfront and hinterland. Although the port and regional administration lobbied the capital, they were unsuccessful as the empire's governmental priorities shifted to other ports on the Black Sea shore that could be used by the army, too.

Lyubomir Pozharliev continues in this context, and argues that the creation of the Russian Steam Navigation and Trading Company (ROPiT) in 1856 was not enough to make up for other systemic infrastructural shortcomings: Although the state intended that the company play a dominant role in Russia's imperial policy of control and influence over the Black Sea and its Southern territories, this was structurally hampered by the bigger picture – the continued lack of roads and railway routes linking the interior of Russia to Odessa and insufficient investments for other Russian Black Sea and Caucasus ports.

Florian Riedler, finally, turns to the Ottoman side again, and illustrates how the Ottoman bureaucratic elite adopted modern technological and infrastructural thinking and how it collaborated with international experts. He does so through the example of preparations for international cooperation on the regularization of the Danube at the Iron Gate and its delta. As a consequence of new technical and infrastructural solutions, older Transottoman routes of trade and travel were transformed and intensified.

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Concessions and Mirages along the Lower Danube: The Town of Silistria in the Plans of Foreign Railway Promoters during the mid-1850s

Boriana Antonova-Goleva*

Abstract:
The paper focuses on three railway schemes from 1856 to 1857 that included the town of Silistria in their routes: the Varna and Silistria Railway, the Danube and Black Sea Railway, and the Medjidieh Railway. The primary aim of these rival projects' promoters was to engage in Danube and Black Sea grain production and trade. Thus, such infrastructures were designed to supplement other railway schemes along the Lower Danube and the Black Sea region, as well as in neighboring countries. As a result of their competition, urban centers along the Lower Danube, such as Silistria, featured at the center of Ottoman and Transottoman infrastructure enterprises during the second half of the nineteenth century.
Keywords: railways, Ottoman Empire, Silistria, Varna and Silistria Railway, the Danube and Black Sea Railway, Medjidieh Railway

1. Introduction

During the 1850s, the Ottoman Empire started to develop its own railway infrastructure. British capitalists, engineers, and speculators

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played a key role in the early stages of this process. Many of these concession hunters were involved in a broad range of undertakings both in the Ottoman Empire and in other parts of the world. Some of them were also entangled in various social networks and interlocking company boards. They lobbied, therefore, for certain railway schemes that favored different regional Ottoman and Transottoman infrastructure enterprises. One of the regions that attracted the attention of many concession hunters in the mid-1850s was the area between the Lower Danube and the Black Sea coast, since it offered great commercial prospects. Thus, the cities and the towns in this part of the Ottoman Empire featured at the center of the rivalries between several British groups that had various interests in the region. The present paper focuses on one such case, and examines the place of the town of Silistria (Silistra, Turkish: Silistre) in three competing schemes from 1856 to 1857: the Varna and Silistria Railway, the Danube and Black Sea Railway, and the Medjidieh Railway.

During the mid-1850s the town of Silistria was part of the Ottoman Elayet of Silistre. It was the center of the Sancak of Silistre and one of the commercial spots along the Lower Danube. However, Silistria had no significant role in regional trade compared with other urban centers like Rusçuk (Ruse) and Varna. The town's importance for the Ottoman Empire was rather strategic. It was a key stronghold on the Ottoman border and played an important role in the Ottoman–Russian military conflicts of the eighteenth and nineteenth centuries, and especially during the Crimean War.[1]

After the end of the latter war and the liberalization of river navigation, trade along the Danube started to grow and intensify. Furthermore, in 1856 the Ottoman Empire entered the second stage of the Tanzimat reforms, and as part of its economic and technological modernization program, the imperial government invited western capitalists to develop a railway infrastructure in the lands of the Sultan. Various entrepreneurs thus became interested in the urban centers along the Lower Danube.

* I am grateful to Philip "FTA" Atanassov for preparing the maps for the present paper.

[1] Virginia Paskaleva, "Shipping and Trading along the Lower Danube during the Eighteenth and Nineteenth Centuries," in *Southeast European Maritime Commerce and Naval Policies from the Mid-Eighteenth Century to 1914*, ed. Apostolos Vacalopoulos, Constantinos Svolopoulos, and Béla Király (Boulder, CO: Social Science Monographs; Thessaloniki: Institute for Balkan Studies, 1988), 131–151; Andrew Robarts, "Crimean War," in *Encyclopedia of the Ottoman Empire*, ed. Gábór Ágoston and Bruce Masters (New York: New York Facts on File, 2009), 161–162; Candan Badem, *The Ottoman Crimean War (1853–1856)* (Leiden: Brill, 2010), 184–186.

At present, little is known about the significance of Silistria in the plans of the foreign railway promoters in the Post-Crimean Ottoman Empire. Thus, the Varna and Silistria Railway has not been examined at all by modern scholarship.[2] Perhaps the lack of studies on the topic is also because of the scarcity of sources. There are only a couple of documents that contain information about this project. They are held at the Ottoman Archive in Istanbul (Başbakanlık Osmanlı Arşivi, hereafter BOA) and at the collections in The National Archives in Kew, London (hereafter TNA).

As regards the Danube and Black Sea Railway, and the Medjidieh Railway, there are several studies that examine different aspects of their history. Yet, the place of Silistria in these infrastructure projects as well as in the broader interests of their promoters in the region has not been examined so far. Unlike the sources available on the Varna and Silistria Railway, there is an abundance of information about the Medjidieh Railway project, and the Danube and Black Sea Railway. These include various official documents held at BOA and TNA, reports in the British

[2] The main studies on Ottoman railways in Rumelia are: Ali Akyıldız, "Balkanlar'a Osmanlılardan Miras Bir Çağdaş Medeniyet Ürünü: Rusçuk-Varna Demiryolu," in *Balkanlar'da İslam Medenyeti Milletlerarası Sempozyumu Tebliğleri, Nisan 11–23 2000*, ed. Ali Çaksu and Eklemeddin İhsanoğlu (Istanbul: İslâm Tarih, Sanat ve Kültür Araştırma Merkezi, 2002), 123–145; Ali Akyıldız, "Bir Teknolojik Transferin Değişim Boyutu: Köstence Demiryolu Örneği," *Osmanlı Araştırmaları* 20 (2000): 313–327; Ali Akyıldız, "The Modernizing Impact of Technological Transfer: The Case of the Constanta Railway," in *Science in Islamic Civilization: Proceedings of the International Symposia 'Science Institutions and Islamic Civilization' and 'Science and Technology in the Turkish and Islamic World'*, ed. Eklemeddin İhsanoğlu and Feza Günergun (Istanbul: Research Centre for Islamic History and Culture, 2000), 201–212; Yaqub Karkar, *Railway Development in the Ottoman Empire, 1856–1914* (Ann Arbor: Vantage Press, 1972); John H. Jensen and Gerhard Rosegger, "British Railway Builders along the Lower Danube, 1856–1869," *The Slavonic (and East-European) Review* 46, no. 106 (1968): 105–128. In fact, these studies focus on the history of the successfully implemented projects such as the *Rusçuk and Varna Railway* and the *Danube and Black Sea Railway*. Several other studies examine both successful and unsuccessful projects, like the *Medjidieh Railway*: Vahdettin Engin, *Rumeli Demiryolları* (Istanbul: Eren, 1993); Mihail Guboğlu, "Osmanlı İmparatorluğu'nda Karadeniz–Tuna Kanalı Projeleri (1836–1876) ve Boğazköy–Köstence Arasında İlk Demiryolu İnşası (1855–1860)," in *Cağını Yakalayan Osmanlı! Osmanlı Devleti'nde Modern Haberleşme ve Ulaştırma Teknikleri*, ed. Eklemeddin İhsanoğlu and Mustafa Kaçar (Istanbul: İslâm Tarih, Sanat, ve Kültür Araştırma Merkezi, 1995), 217–247; Orhan Kurmuş, "British Dependence on Foreign Food and some Railway Projects in the Balkans," *METU Studies in Development* 2 (1971): 259–284; Yakup Bektas, "The British Technological Crusade to Post-Crimean Turkey: Electric Telegraphy, Railways, Naval Shipbuilding and Armament Technologies" (PhD diss., University of Kent at Canterbury, 1995), 115–119; Georgi Pašev, *Ot Tsarigrad do Belovo*, (Sofia: Nauka i izkustvo, 1965). However, they do not provide any information about the Varna and Silistria Railway project.

and Ottoman press, prospectuses, and other types of primary sources that provide data on these schemes.

Thus, examined in a broader context, the short history of Silistria's place in the railway projects of 1856–1857 reflects the main trends in early Ottoman railway development. It can also serve as an example of how the general patterns in nineteenth-century entrepreneurship influenced the Sultan's domains. Therefore, by revealing the place of Silistria in the railway projects of 1856 to 1857, the paper will address questions on the interrelation between the promoters of this line and those of other railway schemes in the region, and also how Silistria related to other Ottoman and Transottoman infrastructures.

2. The Varna and Silistria Railway Project

Little is known about the Varna and Silistria Railway project. According to the Memorial on the Varna and Silistria Railway – one of the few sources that provide information on this scheme – the construction of a trunk line between Varna and Silistria as well as the establishment of two entrepôts on the termini were proposed to the Ottoman government. In the memorandum, "the right of transit along the Railway with other privileges in the accompanying heads of Firman of concession" was also requested and a further extension of the line to Turtakia (Tutrakan, Turkish: Turtukaya) and Rusçuk was planned (see Map 1).[3]

The promoters of the Varna and Silistria Railway highlighted the advantages of the proposed scheme, as this was the practice with applications for railway concessions at that time. These advantages were grouped into three categories – commercial, political, and strategic. Since the memorial focused on the first category, the main purpose of this scheme was clearly related to regional commerce. According to the text, this railway was intended as an important transshipment connection between the Danube and the Black Sea.[4] Moreover, Silistria's location was seen as suitable "for an inner emporium on the Danube," which may also attract traffic from the Prut, Galatz (Galați) and Ibrailow (Brăila, Turkish: İbrail) and may compete with the Sulina canal route. Yet, the terminus at Varna was considered to be "capable of being rendered by connection

[3] BOA, Hariciye Nezâreti Londra Sefareti Belgeleri (hereafter HR.SFR.3)/29/16/2/1, Note, London, 13 October 1856 and HR.SFR.3/29/16/2/2, Memorial on the Varna and Silistria Railway, London, 10 October 1856.
[4] BOA, HR.SFR.3/29/16/2/2.

with the Lake of Devna." According to the memorial, after the completion of the Hungarian and Walachian lines and their extension through Bucharest to the Danube, the Varna and Silistria Railway would become an important link between Western and Central Europe and the Black Sea coast.[5] Therefore, the promoters of the scheme proposed to establish a steam ferry at Turtakia that would be "capable of transporting whole Trains of Carriages without transshipment."[6] According to them, "Varna if connected by Rail with Silistria must ere long eclipse Odessa."[7]

Many of the above mentioned claims sound exaggerated and unrealistic. It is unclear, however, to what extent the Varna and Silistria Railway promoters were aiming to convince the Ottoman government in their project's prospects, and to what extent they truly believed in the described advantages. Yet, it is certain that the group was interested in the commercial potential of the Lower Danube.

Who were the promoters who stood behind this project? E. Ward Jackson claimed to be the main originator of the scheme.[8] His name was written as one of the project promoters in a note to the Ottoman ambassador to London, Kostaki Musurus, to which the memorial was attached.[9] The memorial was signed by John Robinson McClean, Henry Robertson, Charles Manby, and Forbes Campbell.[10] All of them, except Campbell, were civil engineers and were engaged in various infrastructure projects.[11] As for Campbell, he was not only a promoter of the Varna and Silistria Railway project, but also the agent of the group.

It is not clear when exactly this scheme originated. It was put forward at the end of 1856 and seems to be one of the earliest projects

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[5] Ibid.

[6] BOA, HR.SFR.3/29/16/2/1.

[7] Interestingly enough, the last statement was included in description of the political advantages of the line, BOA, HR.SFR.3/29/16/2/3.

[8] TNA, FO 195/460, Embassy and Consulates, Turkey (formerly the Ottoman Empire)/ General Correspondence/ Banks, Telegraphs and Railways, 1854–1857 (hereafter TNA, FO 195/460) Letter from E. Ward Jackson, London, to Lord Stratford de Redcliffe, Constantinople, 3 October 1856.

[9] BOA, HR.SFR.3/29/16/1/1.

[10] BOA, HR.SFR.3/29/16/2/3.

[11] "Obituary: John Robinson McClean, Former President and Vice-President, M.P., F.R.S., 1813–1873," *Minutes of the Proceedings of the Institution of Civil Engineers* 38 (1874): 287–291; "Obituary: Henry Robertson, 1816–1888," *Minutes of the Proceedings of the Institution of Civil Engineers* 93 (1888): 489–492; "Obituary: Charles Manby, F.R.S., 1804–1884 (Secretary of the Institution, 1839–1859)," *Minutes of the Proceedings of the Institution of Civil Engineers* 81 (1885): 327–334.

from that period to include Silistria in its route. Initially, on 3 October, E. Ward Jackson sought support for his plan from the British ambassador to Constantinople, Stratford de Redcliffe.[12] In his letter to de Redcliffe he also claimed that "an attempt is now being made, by Mr. Thomas Wilson and other parties associated with him, to appropriate to themselves" his project of a railway between the Danube and the Black Sea. In fact, E. Ward Jackson was referring to the British promoter Wilson who in 1855 formed an Anglo–French–Austrian consortium together with Duke Charles de Morny and Count Ludwig von Breda, and applied for a concession for a canal between Rassova (Rasova) on the Danube and Kustendjie (Constanţa, Turkish: Köstence) on the Black Sea. In May 1855 the group received a firman for the concession, from the Ottoman government.[13] Yet, in the summer of 1856 Wilson started a new round of negotiations with the Sublime Porte to transform it into a railway concession. It seems that E. Ward Jackson was also associated with the initial project. According to his letter to the British ambassador, "Mr. Wilson has abandoned his Canal scheme, as utterly impracticable, and seeks to oust me of my prior right."[14] Therefore, Ward Jackson proposed the Varna and Silistria Railway project as an alternative route that would unite the Danube and the Black Sea.[15]

Between 1855 and 1856 Forbes Campbell was also associated with the Anglo–French–Austrian consortium, since he represented it before the Sublime Porte. However, at a certain moment in 1856 he made a shift and became part of E. Ward Jackson's group.

In addition to contacting Stratford de Redcliffe, by 13 October the group had presented the project to Kostaki Musurus and to Lord Clarendon, British Secretary of State for Foreign Affairs.[16] It is unknown whether this scheme was supported by the British government or if the Ottoman government was interested in it. The project was never implemented.

[12] TNA, FO 195/460, Letter from Ward Jackson to de Redcliffe, 3 October 1856.
[13] Thomas Forester, *The Danube and the Black Sea: Memoir on their Junction between Tchernavoda and a Free Port at Kustendjie with Remarks of the Navigation of the Danube, the Danubian Provinces, the Corn trade, the Ancient and Present Commerce of the Euxine; And Notices of History, Antiquities, etc.* (London: Stanford, 1857), 48.
[14] TNA, FO 195/460, Letter from Ward Jackson to de Redcliffe, 3 October 1856.
[15] Nevertheless, Ward Jackson still claimed the rights on his project for a railway between the Danube and the Black Sea, ibid.
[16] BOA, HR.SFR.3/29/16/1–2.

Map 1: The 1856 Varna and Silistria Railway Project

3. The Danube and Black Sea Railway

As already mentioned, initially the Danube and Black Sea Railway scheme started as a canal project. The negotiations for it between the Anglo–French–Austrian consortium and the Ottoman government began in 1855 and resulted in a firman granted on 5 May 1856.[17] Subject to its agreement, a company called The Abdul Medjid Canal & Railway Company was to be established "for the construction and working of a Canal from a point near Rassova to a point in the Bay of Kustendjie."[18] A free port at Kustendjie was also included in the concession.[19] Yet, in the late summer of 1856, Thomas Wilson started to make enquiries to the

[17] On the negotiations over this project see TNA, FO 195/460; on this project see also Florian Riedler's article "Integrating the Danube into Modern Networks of Infrastructure: The Ottoman Contribution" in this issue.
[18] TNA, FO 195/460, Heads of firman granting Concession in perpetuity to Thomas Wilson of 20 Gloucester Square, Hyde Park, London, to Monsieur le Compte de Morny, Paris and to Monsieur Ludwig Von Breda, Vienna.
[19] Ibid.

Ottoman government to shift the project focus from a canal to a railway line. In September of the same year, the final decision to construct a railway between Tchernavoda (Cernavodă, Turkish: Boğazköy) and Kustendjie was passed as this scheme was more feasible.[20]

The changes made in the second half of 1856 also resulted in a shift in the project promoters involved. The company that put forward the railway scheme was still led by Thomas Wilson. Yet, the remaining promoters totally changed. The new board of directors included Samuel Cunard, William Philip Price, George Byng Paget, Josiah Lewis and William Johnstone Newall.[21] As already mentioned, E. Ward Jackson and Forbes Campbell also dropped out of the project. Later on, John Trevor Barkley was appointed as the group's agent.[22] The name of the undertaking was also changed to the Danube and Black Sea Railway, and the Danube and Black Sea Railway and Kustendjie Harbour Company was established in 1857.[23]

Despite these shifts, Wilson, and later on his new joint-promoters, referred to the canal firman that claimed the right to transform the main concession.[24] The imperial government, however, required that the group submit an entirely new application, since "it cannot acknowledge to him [i.e., to Wilson] any right to change the concession of a Canal to that of a Railway, and if he wishes to obtain concession for a Railway he must make new propositions as any other party."[25] Thus, de facto in the beginning of 1857 the British group began new negotiations for the Danube and Black Sea Railway.[26] They were finalized in September 1857

[20] BOA, HR.SYS.587/15/6, Lettre de Thomas Wilson à Fuad Pacha, London, 23 August 1856; See also the documents in BOA, HR.TO.425/23/1–5; Forester, *The Danube and the Black Sea*, 51–55.

[21] Later on, the members of the board of directors changed again and Thomas Wilson was not part of it anymore; Cunard became chairman and Price became vice-chairman of the company; Samuel Beale and Thomas Moxon also joined the board at different stages; C. Liddell and L. Gordon were appointed as engineers. TNA, FO 195/460, Letter from Samuel Cunard to Viscount Stratford de Redcliffe, Westminster, [London], 28 February 1857; Forester, *The Danube and the Black Sea*, 215, 227; BOA, Sadâret Divan-ı Hümâyûn Kalemi Mukâvele Kısmı Belgeleri (hereafter A.DVN.MKL).1/8/2/2–3, Receipt for firmans of concession, London, 16 October 1857.

[22] TNA, FO 195/460, Letter from Cunard to de Redcliffe, 28 February 1857.

[23] TNA, Board of Trade (hereafter BT) 31/280/954; TNA, BT 41/182/1037.

[24] See for example FO, 195/460, Letter from J. Trevor Barkley to Viscount Stratford de Redcliffe, Constantinople, 24 March 1857.

[25] BOA, HR.SFR.3.29/10/6/1, Draft of a note from the Ottoman Ambassador [Kostaki Musurus], Bryanston Square, [London], 18 September 1856.

[26] TNA, FO 195/460, Letter from Barkley to de Redcliffe, 24 March 1857.

when the group received two firmans – one for a railway concession and one for a concession for the port of Kustendjie.[27]

During the negotiations the application was suspended twice. The first suspension was between 16 March and 4 April 1857 and was caused by the claims of Austin Henry Layard, who headed the Medjidieh Railway – a rival scheme in the region. Layard's request to the Porte related to his attempt to renegotiate the terms of his concession. However, it was unsuccessful.[28] Thus, in the beginning of April 1857 the application for the Danube and Black Sea Railway concession was resumed.

A second suspension followed soon after.[29] This time the reason was a local group from the town of Şumnu (Shumen), which at that moment was applying for the Rusçuk and Varna Railway concession. The group was headed by several prominent Bulgarian merchants from this town, and it was also supported by some wealthy Turks from the region, as well as by the eminent Galata financier Jacques Alléon, who was the enterprise banker. Unofficially, the application was patronized by the local and central Ottoman government, chiefly by the Ottoman Grand Vizier Mustafa Reşid Pasha.[30]

In May 1857 the Ottoman railway promoters objected to the Council of Tanzimat,[31] where the Danube and Black Sea Railway project was

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[27] Forester, *The Danube and the Black Sea*, 215–225 or TNA, FO 195/804, Embassy and Consulates, Turkey (formerly the Ottoman Empire)/General Correspondence/From Black Sea, Kustendjie harbour dues, 1864–1868, Convention pour le Gouvernement Ottoman, d'une part, et la Compagnie du Chemin de fer du Danube il la Mer Noire et du Port de Kustendjie; TNA, FO 198/41, Southern Department and Foreign Office: Embassy and Consulates, Turkey (formerly the Ottoman Empire): Miscellanea/Claims and Concessions, vol. 3, Railways 1875–1879, Convention relative to the concession of the Port of Kustendjie, 1 September 1857/ Convention relative à la concession du Port du Kustendjie, 1 Septembre 1857.

[28] Boriana Antonova, "Foreign Entrepreneurs, Social Networks, and the Modernization of the Ottoman Empire in the Second Half of the 19th Century" in *Power Networks in the Ottoman and Post-Ottoman Balkans (18th–20th c.)*, ed. Dimitris Stamatopoulos (London: Routledge, 2020, forthcoming).

[29] It lasted from 19 April to 18 May 1857. For more information see TNA, FO 195/460 and especially the letters from J.T. Barkley to Viscount Stratford de Redcliffe from 21 April 1857 until 18 May 1857.

[30] For more on the suspension and the local application for the Rusçuk and Varna Railway concession see Boriana Antonova-Goleva, "'Top-Down' or 'Bottom-Up' Modernization: Local Railway Entrepreneurs in the Ottoman Empire in the Second Half of the 19th Century" (forthcoming).

[31] The Council of Tanzimat was one of the main administrative bodies that discussed railway applications. After approving successful applications, they were referred to the Council of

initially approved. The local group claimed that the presence of the British company in the Lower Danube would have a negative impact on the river traffic, as well as on their own undertaking. Moreover, J.T. Barkley started negotiations with the promoters of the Rusçuk and Varna Railway, who stated that if the British group was "willing to surrender any claim to an extension of our Line to Silistria, the opposition of these persons will be withdrawn."[32] The discussions with the local group were finalized at the beginning of May, and the two parties reached certain agreements.[33] It seems that one of these agreements was that Wilson's group would give up the claim for extending the Danube and Black Sea Railway to Silistria.

Thus, it becomes clear that these British promoters had interests similar to those of the Varna and Silistria Railway. It seems that their plan was in a very initial stage, as it was discussed neither with the British Embassy, nor was it mentioned in the negotiations with the Ottoman government. Yet it indicates a broader interest of the Danube and Black Sea Railway promoters in the region.

The main focus of the group was on the grain trade of the Lower Danube and Black Sea region. According to a preliminary report by the project's main engineers, Charles Liddell and Lewis Dunbar Brodie Gordon, Kustendjie should be established as a well-regulated, "commodious" free port "where the grain of all the provinces may be concentrated by easy arrangements, much cheaper in the end than those of the rude system at present in use."[34] According to their estimations, the grain that would pass through Tchernavoda would also be cheaper.[35] The joint-promoters believed that the port of Kustendjie would compete mainly with Odessa, and in more general terms with Russian trade in that region.[36] Moreover, according to them, "completed on a magnificent

Ministers for further authorization. After the applications were finally approved by the Sultan a firman and a convention were issued.

[32] TNA, FO 195/460, Letter and Memoranda from J. Trevor Barkley to Viscount Stratford de Redcliffe, Constantinople, 9 May 1857.

[33] TNA, FO 195/460, Letter from J. Trevor Barkley to Viscount Stratford de Redcliffe, Constantinople, 11 May 1857; a copy of the letter is also enclosed to TNA, FO 78/1262, From Lord Stratford de Redcliffe, from 3 to 15 June 1857, (hereafter TNA, FO 78/1262) Letter from Viscount Stratford de Redcliffe to the Earl of Clarendon, Constantinople, 18 May 1857, no. 437; *Journal de Constantinople*, no. 807 (21 May 1857).

[34] Charles Liddell and Lewis Dunbar Brodie Gordon, *Report on the Proposed Railway Between the Danube and the Black Sea (from Tchernavoda to Kustendjie) and the Free Port of Kustendjie* (London: William Clowes and Sons, 1857), 9.

[35] Liddell and Gordon, *Report,* 9–10.

[36] Forester, *The Danube and the Black Sea*, 129–130.

scale, [Kustendjie] will be incontestably the most valuable in the Black Sea."[37]

The group was also highly interested in "the capabilities of the Danubian Provinces as corn-growing states."[38] These were Walachia and Moldavia, and especially Bulgaria.[39] Therefore, it is unsurprising that the promoters of the Danube and Black Sea Railway planned to extend their project to Silistria. According to Tomas Forester's memoir "The Danube and the Black Sea", this town was "one of the most prosperous and commercial places on the Danube."[40]

Thus, the Danube and Black Sea Railway promoters did not request any government guarantees from the Sublime Porte, contrary to railway concession practices in that period.[41] According to the researchers Rosseger and Jensen, the company accepted this and other heavy responsibilities and unfavorable conditions of the concession, since it expected a great profit from its operation.[42]

The activities of some of the persons involved in the Danube and Black Sea Railway project are also indicative of the group's interest in the region. Thus, in 1856, during the negotiations around Thomas Wilson's initial project for the Abdul Medjid Canal & Railway, another small-scale scheme mostly intended to support the canal project appeared. It seems that its promoters were associated with Wilson's project. According to the proposal by the Danube and Black Sea Company, who applied for the concession,[43] a railway between Ram or "Desira"[44] on the Serbian bank of the Danube River, and Baziaş on the Romanian bank was considered. Linking the railway with Vidin on the Ottoman bank of the river was also

[37] Ibid. 79–80.
[38] Ibid. 135.
[39] The name "Bulgaria" at that time designated the European territories of the Ottoman Empire located between the Balkan Mountain range and the Danube River.
[40] Ibid. 18–19.
[41] In fact, this approach was initially applied to the Abdul Medjid Canal & Railway concession, TNA, FO 195/460, Memo in support of Clause III [that the Abdul Medcjid Canal & Railway concession shall be "perpetual"] by Forbes Campbell, Therapia, [Constantinople], 9 August 1855.
[42] Jensen and Rosseger, ""British Railway Builders," 111–112.
[43] The company which applied for the concession was formed in 1856 and initially was called the Danube and Black Sea Trading and Colonization Company. Its aim was to "purchase culture and colonization of Lands upon and for general Trading operations with the European and Asiatic Shores of the Danube and Black Sea." Later on, it was renamed the Danube and Black Sea Company, see TNA, BT/31/173/520; TNA, BT/41/182/1038.
[44] Desine, 20 km south of Ram.

planned, either via Pec[45] or via Porečki[46] and Negotin.[47] Yet this project was never implemented.

Several years later the engineers of the Danube and Black Sea Railway, Charles Liddell and Lewis Gordon, together with Thomas Page, also applied for a railway project in the region. In 1860 they succeeded in receiving a concession for a railway from Constantinople that passed through Adrianople (Edirne), Phillipopolis (Plovdiv, Turkish: Filibe), Sofia, and Niš, and which terminated at the border of the Serbian Principality, with a branch line to Thessaloniki (Turkish: Selanik).[48] The group, however, did not manage to fulfill the requirements that the imperial government made and they eventually lost the concession.[49]

Liddell and Gordon also did common business with the family of another director of the Danube and Black Sea Railway and Kustendjie Harbour Company, William Johnstone Newall. In 1839 they, together with Robert Sterling Newall, a brother of W.J. Newall,[50] established R.S. Newall and Company for the commission of wire, ropes and machinery.[51] The main activities of R.S. Newall related to submarine telegraphy. During the mid-1850s, R.S. Newall and Company became a leader in this field, and produced a significant portion of all the submarine cables of that period.[52] During the Crimean War, in 1855, the company built the submarine telegraph between Varna and Balaclava. The chief engineer of the project was Liddell. In the same year, the company laid and maintained the submarine cable between

[45] Unidentified.
[46] Possibly Porečki zaliv.
[47] TNA, FO 195/460, Railway Between Kustendjie and Black Sea, Constantinople, 1856.
[48] Sublime Porte, *Railway from Constantinople to the Frontiers of Servia with a Branch to Salonica* (London: Cox & Wyman, 1860), 3, article 1.
[49] Engin, *Rumeli Demiryolları*, 47.
[50] See <https://mcmanus168.org.uk/mcmanus168entry/george-h-newall/#source7> (date of access 26 January 2020); <http://www.fdca.org.uk/pdf%20files/LockitN.pdf> (date of access 26 January 2020); Agnes Mary Clerke and Anita McConnell, "Newall, Robert Stirling (1812–1889), engineer and astronomer." *Oxford Dictionary of National Biography*, 23 September 2004. Oxford University Press, <https://www.oxforddnb.com/view/10.1093/ref:odnb/9780198614128.001.0001/odnb-9780198614128-e-19974> (date of access 26 January 2020).
[51] *The Railway Times* 6 (1843): 1065, 1089, 1113.
[52] "Obituary: Robert Stirling Newall, F.R.S.," *Proceedings of the Institution of Mechanical Engineers* (1889): 335–336; Walter Peterson, "The Queen's Messenger: An Underwater Telegraph to Balaclava" First published in: *The War Correspondent: The Journal of The Crimean War Research Society*, (April 2008), reproduced in <https://atlantic-cable.com/Cables/1855Crimea/index.htm> (date of access 26 January 2020).

Constantinople and Varna.[53] R. S. Newall and Company was associated with other telegraph projects in the Ottoman Empire and the Mediterranean, too.[54]

It seems that Liddell and Gordon were central figures in the Danube and Black Sea Railway, since they also enlisted John Trevor Barkley to be an agent for the group. Subsequently, J.T. Barkley and his three brothers helped build the line.[55] During the 1860s, they also engaged in the construction of the Rusçuk and Varna line. Moreover, J.T. Barkley was the general agent of the group that negotiated the concession. He and his brothers were also engaged in the construction of the Bucharest and Giurgevo (Giurgiu, Turkish: Yerköy, Yergöğü) line in the United Principalities of Walachia and Moldavia. These two railway projects also emerged as a result of prospecting for profit from the grain trade in the Lower Danube and Black Sea region.[56]

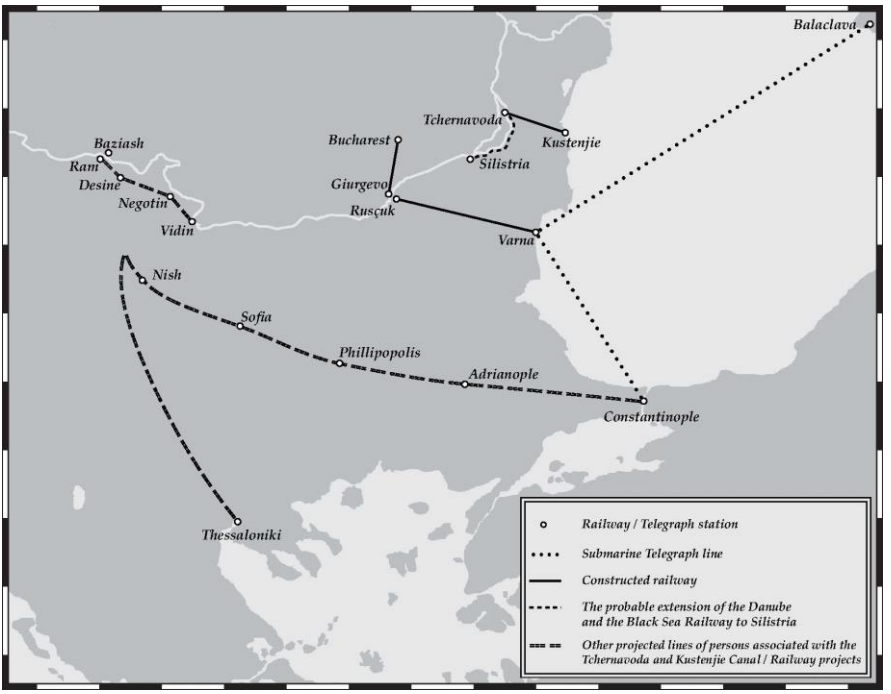
The review of the activities of the Danube and Black Sea Railway members shows their involvement in several successful and unsuccessful Ottoman and Transottoman infrastructure projects (see Map 2). Thus, their efforts to extend their projects to different urban centers along the Lower Danube, such as Silistria, suggest an enduring interest in the region.

[53] Bektas, "The British Technological Crusade," 39; Ivan Rusev, "Krimskata vojna (1853–1856) i izgraždaneto na p"rvite telegrafni linii v B"lgarskite zemi: Po novootkriti dokumenti ot frenskite arhivi," in *Sine ira et studio: Izsledvaniya v pamet na prof. Zina Markova*, ed. Konstantin Kosev, Iliâ Todev, Elena Statelova, Olga Todorova, Plamen Božinov (Sofia: Akademično izdatelstvo "Marin Drinov", 2010), 371.

[54] Jorma Ahvenainen, *The History of the Near Eastern Telegraphs: Before the First World War* (Helsinki: Acad. Scientiarum Fennica, 2011), 23–26; 33–39; 52–57.

[55] Jensen and Rosegger, "British Railway Builders," 110–111.

[56] Ibid., 105–128.



Map 2: The Danube and Black Sea Railway and other railway and telegraph infrastructure undertakings in which Wilson's group was involved during the 1850s and 1860s

4. The Imperial (Medjidieh) Ottoman Railway Project

At the very end of 1856, another project that included Silistria in its route was presented to the Porte – the Imperial (Medjidieh) Ottoman Railway (hereafter referred to as the Medjidieh Railway).[57] This scheme was promoted by the British archaeologist, politician, and entrepreneur Austin Henry Layard in a letter to the Grand Vizier Mustafa Reşid Pasha, dated 22 December 1856.[58] In fact, the application for the Medjidieh Railway was very unusual in many regards.

[57] This paragraph mainly follows Antonova, "Foreign Entrepreneurs," which offers a detailed study of this railway project.

[58] BOA, İrâde Meclis-i Mahsus (hereafter İ.MMS).9/393/4–7, Lettre de A. H. Layard à Son Altesse le Grand Vizir [Reschid Pasha], Pera, [Constantinople], le 22 Décembre 1856. In fact, Layard was not behind this project. It belonged to George Cruikshank, an artist, and Joseph Gibbs, a civil engineer. They presented their idea to the British archaeologist in the summer

Thus, for example, the initial negotiations between Layard and the Ottoman government were completed very quickly. In the very beginning of January 1857, both parties reached an agreement and by 15 January the Council of Tanzimat, the Council of Ministers, and the Sultan had all approved the project.[59] Several days later, on 23 January, a firman and a convention were issued.[60] According to the Medjidieh Railway Company's[61] prospectus, this was "a dispatch of business unexampled in the annals of the Porte."[62] Indeed, it was very unusual for the imperial government to so speedily approve such an undertaking.[63] The initial success of the negotiations for the Medjidieh Railway was most probably due to a combination of factors, and mainly to Layard's influential contacts in the Ottoman and British governments, the high interest of Sultan Abdülmecid in the project, and the favorable conditions for the scheme's execution.[64]

One of the main advantages of the proposed project was that, as with the Danube and Black Sea Railway, the imperial government did not request financial guarantees.[65] In fact, some of the other conditions of

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of 1856 and invited him to become chairman of the future railway company. Cruikshank and Gibb decided to involve Layard in the scheme since he had good positions both in the Ottoman government and among the British capitalist elite. Thus, according to their original plan, Layard was supposed to represent them in Constantinople. Yet, after arriving in the Ottoman capital, he started negotiations on his own behalf, and later on excluded Cruikshank and Gibb from the board of directors of the company. See: British Library, Layard Papers (hereafter BL, LP)/Additional Manuscripts (hereafter Add MS) 38985, Letter from George Cruikshank to A. H. Layard, 48 Mornington Place [London], 14 February 1857, ff. 129–130; Kurmuş, "British Dependence," 275–276; Antonova, "Foreign Entrepreneurs."

[59] For the different stages of the negotiations' progress see *Railway Record* 14 (1857), 39; *Times*, 15 January 1857; *The Proposed Imperial (Medjidieh) Ottoman Railway, its Purposes and Prospects* (n. p. [London], 1857), 4; *Times*, 30 January 1857; BOA, HR.SFR.3/32/10/3, Copie, Lettre de Reschid à Monsieur Layard, Membre du Parlement, à Londres, 15 Janvier 1857.

[60] BOA, SFR.3/32/10/2–4, 7; the text of the firman is in BOA, A.DVN.MKL.2/13/4, ferman, Cemazi[yelevvel] 1273 (23 January 1857); for the text of the convention in Ottoman-Turkish see BOA, İ.MMS.9/393/1, mukavelenâme, n.d.; for an official French translation see TNA, FO 195/460, Traduction du projet de convention relative à la concession des chemins de fer de Constantinople à Roustchouk par voire d'Andrinople et d'Andrinople à Enos ou à un autre point plus convenable, 23 January 1857.

[61] Officially the company was named the Imperial Ottoman Mejediyé Company, the Imperial Ottoman Railway Company/Compagnie de chemin de fer Impérial Ottoman/Tīmūr yolū kumpānyasi-i Devlet-i ʿAliyye-yi ʿOsmāniyye.

[62] *The Proposed*, 4.

[63] Thus, for example, Wilson's group needed approximately a year to accomplish the negotiations for the Danube and Black Sea Railway, and to receive a firman for the concession.

[64] For more on this see Antonova, "Foreign Entrepreneurs."

[65] BOA, İ.MMS.9/393/4/7, Lettre de A.H. Layard.

the concession were very unusual, too. According to the final agreement, the Medjidieh Company had to deliver the Porte a caution money (i.e., a financial guarantee that they would accomplish the concession) by 23 April 1857, that is, three months from the date that the firman was issued.[66] This unusually short period was not in line with the railway concession practices of the time, and it related to another peculiar condition of the Medjidieh Railway scheme. The Sublime Porte agreed the necessary survey of the route to be made after the company's submission of the caution money. Usually, such a survey would be made to calculate the funds necessary for the project's implementation. The caution money was also calculated on this basis. Therefore, while it was normally transferred after the preliminary survey of the route had been made, this was not the case for the Medjidieh Railway concession. Thus, under normal circumstances a much longer period for delivery of the financial guarantees was required.

In fact, Layard's group claimed that it had at its disposal several detailed surveys of the proposed route.[67] On this basis they insisted on delivering the fixed amount of £100,000 as a guarantee.[68] The Ottoman government, for its part, insisted that the caution money should be proportional to the cost of the line and that it should be adjusted in line with the route survey.[69] Thus, it seems that Layard's group was trying to avoid full payment of the required financial guarantee by delivering less money to the Porte.

The dispute between the promoters of the Medjidieh Railway and the Ottoman government led to a new round of discussions between the two parties. Yet, there was another reason for the renegotiation of the concession's conditions, on which Layard insisted – the proposed route. According to the initial project, a railway starting either from Rusçuk or Silistria, passing through Şumnu and Adrianople, and terminating at Enos or another convenient point on the Aegean coast was proposed. Several branch lines to Constantinople, Varna, Thessaloniki, Belgrade, and to other big cities in the European provinces of the Ottoman Empire

[66] See articles 16 and 19, TNA, FO 195/460, Traduction du projet; BOA, İ.MMS.9/393/1; Engin, *Rumeli Demiryolları,* 46. According to the railway entrepreneurial practices, the caution money was two percent of the company's starting capital, i.e., the money necessary to execute a certain project.

[67] *The Proposed*, 5–10.

[68] Respectively the starting capital of the company was calculated at £5 million.

[69] BOA, HR.SFR.3/32/10/12, Télégramme du Ministre des Affaires Etrangères à l'Ambassadeur de Turquie à Londres [Kostaki Musurus], Constantinople, 14 Mars 1857.

were intended as well.[70] According to the final agreement with the Sublime Porte, the concession included the mainline Constantinople–Adrianople–Şumnu–Rusçuk with a branch line to Enos.[71] It seems that Layard's group was unsatisfied with this outcome, since it insisted on extending its privilege rights to build railways in the region between the Danube, the Mediterranean, and the Black Sea.[72]

The new round of negotiations was held between 16 March and 4 April 1857 and, as already mentioned, it resulted in the suspension of discussions with all other railway promoters in the region (including Wilson's group). This second round of discussions, however, did not bring any positive outcome for Layard's group.[73]

The Medjidieh Railway promoters also faced problems with raising the caution money, although the Porte made some concessions by agreeing to reduce the amount of the financial guarantee and to extend the payment deadline until the end of May 1857.[74] Despite this, Layard's group failed to fulfill this condition and ultimately lost the concession.[75]

The Medjidieh Railway project attracts researchers' attention not only because of its speculative nature. Interestingly enough, it seems that the emergence of this scheme related to the interests of various entrepreneurs and railway promoters in the grain trade between the countries neighboring the Lower Danube and the Black Sea, and namely the Ottoman Empire and Russia, but also Austria. Yet, a review of the project itself does not suggest such a conclusion. As already mentioned, the proposed railway route was supposed to start either from Rusçuk or Silistria, to pass through Şumnu and Adrianople, and to terminate at Enos or at another convenient point on the Aegean coast. Several branch lines to Constantinople, Varna, Thessaloniki, Belgrade, and other big cities of the European provinces of the Ottoman Empire were included in the project as well. The scheme's various descriptions emphasized the importance of the Medjidieh Railway's route for the region's grain trade. The commercial role of Austria (with special regard to the Vienna–

[70] BOA, İ.MMS.9/393/4/1–2, Lettre de A.H. Layard; Engin, *Rumeli Demiryolları,* 44–45; see also the map in BOA, İ.MMS.9/393/7/1.
[71] BOA, A.DVN.MKL.2/13/4; TNA, FO 195/460, Traduction du projet; BOA, İ.MMS.9/393/4, Lettre de A.H. Layard.
[72] BOA, HR.SFR.3/32/10/9, Letter from A.H. Layard, Chairman of the Imperial Ottoman Mejediyé Company to K. Musurus, London, 10 February 1857.
[73] For these events see BOA, HR.SFR.3/32/20/1–35.
[74] For details about this see Antonova, "Foreign Entrepreneurs."
[75] For these events see BOA, HR.SFR.3/33/12/1–14, as well as TNA, FO 195/460.

Kronstadt (Braşov)–Szegedin (Szeged) railway, which passed through Hungary and Transylvania and was supposed to provide a connection with Bucharest and the Danube) is highlighted. Walachia and Moldavia (and the Danube ports of Orşova, Ibrailow, Galatz, Giurgevo, Iassi, and the planned lines in the region), as well as Bulgaria and "Roumelia (the ancient Thrace)" (i.e., the Black Sea ports of Varna and Burgas, and the urban centers from the hinterland, as for example Şumnu and Adrianople) are also highlighted as important segments on this trade route. The planned terminal station at the Aegean Sea was expected to become an important port in the grain trade, too.[76]

Although the idea to make Silistria the terminus of the planned route was abandoned, the promoters of the Medjidieh Railway pointed out that the railway would link Silistria and other big towns and cities in the region (such as Rusçuk, Şumnu, and Varna) with Constantinople and with one other.[77] A glance at the map attached to the letter to Mustafa Reşid Pasha from 22 December 1856 also shows that Silistria was an important station in the project, since it would also provide a link to Iassi via Galatz.[78] According to the initial project, associated with Cruikshank and Gibb – the originators of the scheme – one of the main advantages of the planned route was that it was expected to provide a link with the planned lines in Walachia and Moldavia.[79]

Thus, the Medjidieh Railway was intended as an important infrastructure in the grain-trade route in the European provinces of the Ottoman Empire. An analysis of the activities of the people associated with the project also reveals their wider interests, and these extend beyond the Sultan's state. Yet, who were the persons who supported the scheme? A list with the names of the directors presented by Layard to Kostaki Musurus sheds light upon this question.[80] It includes the names of several influential London bankers such as George Grenfell Glyn, Arthur Hankey, and Kirkman Daniel Hodgson. Prominent figures from the social, political, and financial life of Britain like Baldwin Walker (a member of the British military who served in the Royal Navy), Charles Bell from the firm J. Thompson, T. Bonar and Co., William F. Williams (a

[76] *Railway Record*, 13 (1856), 263; BOA, İ.MMS.9/393/4, *Lettre de A. H. Layard*; *Prospectus*, 9–10, 13–15; Antonova, "Foreign Entrepreneurs."
[77] BOA, İ.MMS.9/393/4, Lettre de A.H. Layard; *The Proposed*, 11.
[78] BOA, İ.MMS.9/393/4, Lettre de A.H. Layard.
[79] *Railway Record*, 13 (1856), 263.
[80] BOA, HR.SFR.3/32/10/10, Committee of the Imperial Ottoman Railway Company appointed to wait upon his Excellency M. Musurus.

British Major General), and Henry Rawlinson (an Orientalist) were also among the members of the company. The Ottoman merchant Pierre J. Hava was a member of the board of directors, too.[81] According to the list, John Hawkshaw was engineer-in-chief, William Richard Drake was solicitor, and Lachlan MacKintosh Rate was secretary of the company. Rowland Macdonald Stephenson was also added to the list.[82] Perhaps Thomas Matthias Weguelin, another influential figure in the City of London, was associated with Layard's project as well, though he was not part of the company's governing body.[83]

The scheme was also financially supported by the Ottoman subjects George Zarifi and Mihran Bey Duz, influential figures in the economic life of the Ottoman Empire,[84] as well as by a "certain Baltazzi."[85]

During the 1850s and 1860s many of these people were engaged in various enterprises in the Danube and Black Sea region[86] as well as in Russia, another major exporter of grain. Some of them were involved in the Russian trade. Such was the merchant house Thompson, Bonar & Co., in which T. Bell and T.M. Weguelin were partners. According to Fraser's Magazine, the house had been involved in Russian trade for several generations and possessed an establishment in St. Petersburg;[87] Weguelin (who was of Russian origin) was governor of the Russia Company formed in 1855;[88] the merchant house P. Hava & Co. was oriented toward the Russian market, too, and had an establishment in Odessa. The house Zarifi Zafiropoulo and some members of the Zarifi family were engaged in the grain trade with the Danubian Principalities and Odessa.[89]

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[81] In fact, although Hava was ready to provide a certain amount of money to financially guarantee the project, he refused to sit on the board of directors. This happened on 13 February, i.e., three days after Layard sent the list with the names of the board members to Mustafa Reşid Pasha, Kurmuş, "British Dependence," 280, n. 63.

[82] His name was written at the end of the list with ink of another color.

[83] It seems that he also supported the scheme, Antonova, "Foreign Entrepreneurs."

[84] BL, LP/Add MS 39054, Lettre de George Zarifi et Mihran Duz Bey à A. H. Layard, Constantinople, le 12 Janvier 1857, ff. 15–16; Kurmuş, "British Dependence," 280.

[85] Kurmuş, "British Dependence," 280. Presumably this was Théodore Baltazzi or Aristide Baltazzi, both of whom were prominent Galata bankers.

[86] In fact, in the same period when the Medjidieh Railway project appeared, most of them were engaged in the establishment and the governance of the Ottoman Bank. For more on this see Antonova, "Foreign Entrepreneurs."

[87] *Fraser's Magazine* 28 (1843): 207.

[88] *The British Imperial Calendar, or General Register of the United Kingdom of Great Britain and Ireland, and Its Colonies (etc.)* (London: Varnham, 1854), 251.

[89] Haris Exertzoglou, *Prosarmostikotēta kai Politikē Omogeiakōn Kephalaiōn: Ellēnes trapezites stēn Kōnstantinoupolē: To Katastēma 'Zariphēs Zapheiropoulos', 1871–1881* (Athens: Idryma Ereunas

Some of the persons associated with the Medjidieh Railway Company also took part in railway projects in Russia and the Austrian Empire. Thus, for example, Hawkshaw was engineer-in-chief of the Riga and the Dünaburg (*Daugavpils*) and Witepsk (*Vitebsk, Vitsebsk*) Railways in Russia.[90] The Lemberg (*Lviv*) Czernovitz (*Chernovtsi*) Railway in Austria, built in the 1860s, was another undertaking in which some of the persons associated with the Medjidieh Railway scheme were involved. These were L.M. Rate and E.R. Drake who took part in the establishment of the Imperial Royal Privileged Lemberg Czernowitz Railway Company in 1864. Rate became chairman of the board of directors in England and Drake was also a board member. The company of the latter, Messrs. Birhman, Dalrymple, Drake & Ward, was a solicitor firm, and the companies Messrs. Glyn, Mills, Currie & Co. and the Anglo–Austrian Bank (both of them associated with G.G. Glyn) were banking houses.[91] According to the railway prospectus issued in 1869: "The extension of the Lemberg and the Czernowitz to the Black Sea had always been the ultimate desire and ambition of the direction since the establishment of the company. The guarantees of a prosperous future lie in this extension, be it either Odessa or to Galatz."[92] Along with Odessa, Varna also occupied an important place in these plans.[93] For this reason extensions to Botoşani and Iassi were built later.[94]

As for Layard himself, he was rather interested in the Asian parts of the Ottoman Empire and the Eastern Mediterranean. According to the map of the Medjidieh Railway, the proposed route was supposed to link with other railway schemes in Western Anatolia. Its extensions would pass very close to Scala Nova (Turkish: Kuşadası), where Layard and two other directors of the Medjidieh Railway Company, Charles Bell and

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kai Paideias tēs Emporikēs Trapezas tēs Ellados, 1989), 11–13; Vassilis Kardasis, *Diaspora Merchants in the Black Sea: The Greeks in Southern Russia, 1775–1861* (Lanham: Lexington Books 2001), 163; Dimitris Stamatopoulos, *Metarrythmisē kai Ekkosmikeusē: pros mia anasynthesē tēs Istorias tou Oikoumenikou Patriarcheiou ton 19o aiona*. (Athens: Alexandreia, 2003), 64–65; Antonova, "Foreign Entrepreneurs."

[90] *Railway Times* 20 (1857): 695; "Obituary: Sir John Hawkshaw, 1811–1891," *Minutes of the Proceedings of the Institution of Civil Engineers* 106 (1891): 325; Robert Henry Mair, *Debrett's Illustrated House of Commons, and the Judicial Bench* (London: Dean & Son, 1870), 282.

[91] Charles Barker and sons, *The Joint Stock Companies' Directory* (London: King, 1867), 201; Antonova, "Foreign Entrepreneurs."

[92] W.J. Adams, *Bradshaw's Railway Manual, Shareholders' Guide, and Official Directory for 1869* (Manchester: Bradshaw and Blacklock 1869), 358.

[93] Ibid.

[94] For this line see Ihor Zhaloba, "Leon Sapeiha – a Prince and Railway Entrepreneur," in *Across the Borders: Financing the World's Railways in the Nineteenth and Twentieth Centuries*, ed. Ralf Roth and Günter Dinhobl (Aldershot: Ashgate, 2008), 49–62.

Baldwin Walker, had another common venture – the Levant Mineral Company. This company was founded in 1856 in order to supply emery stone from Scala Nova and the Island of Naxos (in Greece).[95]

Thus, the appearance of the Medjidieh Railway scheme involved persons and institutions with long-standing interests in various undertakings linked to the grain trade and other business activities in this part of the world (see Map 3).

Map 3: The Medjidieh Railway project from 1856, its extensions, and other infrastructure and commercial undertakings in which Layard's group was involved during the 1850s and 1860s

[95] *Railway Record* 13 (1856): 581–583.

5. Conclusion: Silistria in the Context of Ottoman and Transottoman Infrastructure Projects

After the Crimean War, the Ottoman Empire started to develop railway infrastructure in its various regions. The territories between the Black Sea and the Lower Danube region were among the areas that attracted the attention of various capitalists and entrepreneurs from the very beginning of this process. Naturally, due to its location, Silistria, together with other urban centers along the Danube River was the focus of many railway promoters interested in commercial prospects, which this part of the Sultan's empire could offer. Thus, in the early stage of Ottoman railway development, three competing schemes included this town in their route. Several conclusions regarding their appearance, interrelationship, and their place with respect to other Ottoman and Transottoman railway infrastructures can be drawn.

The earliest of these schemes, from October 1856, was the Varna and Silistria Railway. It emerged as an alternative to the Rassova/Tchernavoda–Kustendjie route and was the only project in which Silistria had a central role as a terminus. Yet, it had to compete with other schemes that sought to link the Danube and the Black Sea, namely, the Danube and Black Sea Railway, and the Rusçuk and Varna Railway. Perhaps because the first of them had strong political support from the British government and the second was of primary importance to the Sublime Porte, the Varna and Silistria Railway lost this competition.

At the end of 1856 and the beginning of 1857, Silistria appeared in the plans of other railway entrepreneurs, though it had a secondary importance. The lack of available information means that the plans of the Danube and Black Sea Railway promoters for this town remain vague and obscure. A general review of the group's intentions, however, shows that its members were interested in the grain trade along the Lower Danube, and they aimed to compete with Odessa over grain exports from the region. In this context, Silistria attracted the attention of Wilson's group. Again, owing to the competition with the Rusçuk and Varna Railway, the Danube and Black Sea Railway promoters were forced to abandon their plans to extend the line in this direction.

In the third scheme, the Medjidieh Railway, Silistria played an important role as a link to other Transottoman railway infrastructures in the Lower Danube region. Yet, this town was once again of secondary

importance as a terminus on the Danube and also as a connection to the Walachian and the Moldavian railway networks, because in the course of the negotiations with the Sublime Porte, Rusçuk was chosen as more suitable in this regard. The result of the discussions between Layard and the Ottoman government, however, did not satisfy the group. They therefore initiated a second round of negotiations to extend their powers to construct railway infrastructures in the European provinces of the empire. It is quite possible that Silistria may have been part of those plans again. Eventually, Layard did not manage to renegotiate the concession and fulfill his engagements with the Porte. Thus, the Medjidieh Railway project, as well as the plans for a railway connection to Silistria, were never implemented.

Analyzed from a broader perspective, the three projects reflected the different scales of interests of the various entrepreneur lobbies in this part of the world. Thus, the composition of E. Ward Jackson's group does not indicate the participation of its members in other undertakings in the region. In fact, most of its members were engaged in engineering, which also explains the weaker positions of the Varna and Silistria Railway compared with its rival counterparts.

Yet, the competitor group of T. Wilson had a much wider interest in the Lower Danube region. The participation of some of its members in various Ottoman and Transottoman projects in neighboring countries that bordered the Danube, e.g., the Principality of Serbia and the Danubian Principalities, leads to such a conclusion. Central figures in the Danube and Black Sea Railway included the engineers Gordon and Liddell, as well as J.T. Barkley. Unlike the members of E. Ward Jackson's group, they were engaged in various enterprises in the Ottoman Empire (mainly in railway entrepreneurship but also in telegraph construction), and thus had a strong position before the Sublime Porte.

Finally, Layard's group had the broadest range of interests compared with its counterparts. It sought out entrepreneurial opportunities in the countries neighboring the Lower Danube and the Black Sea, such as the Ottoman Empire, the Danubian Principalities, the Russian Empire, and the Austrian Empire. The members of this group were engaged in various types of undertakings, such as banking, railway entrepreneurship, commerce, etc. In fact, many of the persons associated with the Medjidieh Railway were held together by interlocking

directorships in various companies around the world.[96] Moreover, Layard's group had a strong influence in the Ottoman government. As a result of similar interests to Layard's and Wilson's group in the region, the Medjidieh Railway project became a strong competitor to the Danube and Black Sea Railway.

Viewed from this perspective, the choice of Silistria by both groups is evident. In fact, the three schemes reflect the growing global interest of different entrepreneurs in the Lower Danube and the Black Sea region in the Post-Crimean Ottoman Empire. Although they were never implemented, in the second half of the 1850s Silistria, together with other urban centers along the Lower Danube became an important element in the Ottoman and Transottoman railway infrastructure projects.

In fact, the process of modernizing transportation affected the region's urban network in various ways. On the one hand, because of the construction of various Ottoman and Transottoman railway infrastructures, many settlements expanded. By transforming Kustendjie and Varna into railway termini and by enlarging their ports, for example, these two cities emerged as important stops on the region's grain-trade route. On the other hand, Silistria was never linked to the railway, and thus remained only one of the important military strongholds in this border region of the Ottoman Empire. Eventually, it never grew as a significant commercial center like Rusçuk or other towns and cities along the Lower Danube. Thus, the bright perspectives for a prosperous future alluded to by the plans for a railway link to Silistria remained only a mirage in the foreign entrepreneurs' schemes.

[96] For more on this see Antonova, "Foreign Entrepreneurs."

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(Dis)Connected: Railway, Steamships and Trade in the Port of Odessa, 1865–1888

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Abstract:
After the end of the Crimean War, politicians, engineers, and economists alike debated the future of the port of Odessa. Two particular issues that relate to the rising age of steam emerged: Odessa was forced to adapt its port infrastructures to bulky steamships and the city questioned its place in the developing railway network of Imperial Russia. This contribution argues that by balancing economic and military (geostrategic) demands, ministry officials and engineers laid the foundation both for Odessa's success in the 1860s and 1870s and its failures in the 1880s and 1890s.
Key Words: Odessa, infrastructure, steamships, railway, Russian history

1. Introduction

Grain is more difficult to handle than one might expect. At best, it comes perfectly dried and stowed in leakproof bags that are easy to pile, store, and move. In practice, and not only in nineteenth-century Russian commerce, things were often more complicated: Residual humidity, pests,

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and product impurity were among the reasons why grain was not moved and sold quickly. Grain was constantly under the threat of rotting, which resulted in economic losses on a large scale.[1] However, by increasing grain's speed of delivery, e.g., by accelerating time and shortening distances between producer, hub, and final destination, tremendous economic gains were to be expected. It is therefore no surprise that transport infrastructure is a crucial element in grain trade over global as well as regional distances.[2] In this article, I will focus on Odessa, Imperial Russia's biggest port on the shores of the Black Sea, and its function as a junction between different transport routes.[3]

In the 1860s, the port and its people found themselves in the middle of two transport revolutions that would ultimately shape this site of infrastructures in a new way: The arrival of steamships and railway lines heralded the beginning of Odessa's modern era. Steamships increased trade volumes on an unprecedented scale, while the railway lines fundamentally altered the characteristics of the sea–land interface. In addition, the grain market changed fundamentally when telegraphs accelerated the flow of information and synchronized prices on stock exchanges all over Europe.[4] Taken together, these technologies posed new questions and problems for Odessa's planners both in the port city and in the capital, St. Petersburg. They were forced to find an answer to the question of whether Odessa was first and foremost part of a Eurocentric global trade network or an integral part of an imperial trade system, and thus more peripheral and dependent on the center. Debates over Odessa's place within the Russian Empire culminated in discussions over the direction and purpose of the "Southern Line," as part of Russia's railroads.

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[1] For an overview of the history of grain trade cf. Steven S. Topik and Allen Wells, "Warenketten in einer globalen Wirtschaft," in *Geschichte der Welt 1870–1945: Weltmärkte und Weltkriege*, ed. Emily S. Rosenberg (München: Beck, 2012), 589–815 here: 687–723; Dan Morgan, *Merchants of Grain: The Power and Profits of the Five Giant Companies at the Center of the World's Food Supply* (New York: Viking, 1979).

[2] C. Knick Harley, "Transportation, the World Wheat Trade, and the Kuznets Cycle, 1850–1913," *Explorations in Economic History* 17, no. 3 (1980): 218–50.

[3] Lewis Siegelbaum, "The Odessa Grain Trade. A Case Study in Urban Growth and Development in Tsarist Russia," *Journal of European Economic History* 9, no. 1 (1980): 113–151; For the history of Odessa cf. Patricia Herlihy, *Odessa: A History, 1794-1914* (Cambridge, MA: Harvard University Press, 1986); Evrydiki Sifneos, *Imperial Odessa: People, Spaces, Identities* (Leiden: Brill, 2018); Charles King, *Odessa: Genius and Death in a City of Dreams* (New York: Norton, 2011).

[4] Svetlana Natkovich, "Odessa as 'Point de Capital': Economics, History, and Time in Odessa Fiction," *Slavic Review* 75, no. 4 (2016): 847–871; Roland Wenzlhuemer, *Connecting the Nineteenth-Century World: The Telegraph and Globalization*, sec. ed. (Cambridge: Cambridge University Press, 2014).

The debate touched upon the central question of Odessa's place in European, partly global, and imperial trade networks. This geographical reorientation increasingly disentangled the Odessa region from its incorporation into a Russian–Ottoman contact zone that was part of a Mediterranean trade network. Instead, Odessa was imagined as a "global" port that linked the Russian Empire with other major trade hubs such as Liverpool, Marseille, and New York.

Odessa's development was at a crossroads in the mid-1860s. Engineers, merchants, and economists in Odessa knew of possible ways to connect grain production, overseas transportation, and railroad transportation with Moscow. Decision-makers in St. Petersburg had to choose which way to go. Their choice to connect with or disconnect from the city on the shores of the Black Sea would ultimately decide its prosperity or, in Odessa's case, both its ongoing success in the 1870s and early 1880s and its failure in the late 1880s.

2. Connecting a port: Odessa and the railway system in the 1860s

In the early 1860s, the Russian Empire was the world's biggest exporter of wheat; it owed its status as the "bread basket of Europe" to its fertile black-earth soils in the southern provinces of Russia and the city and port of Odessa.[5] Founded in 1794 alongside the eponymous city at the personal behest of Catherine II, the port came to be the Russian Empire's chief center of maritime transshipment.[6] Within approximately 30 years, Odessa had risen to become a "[...] hub on the map of the flow of goods and money, part of the Mediterranean world and the Levant between Constantinople and Marseilles, Smyrna and Port Said."[7] As the official residence of the Governor-General of New Russia and Bessarabia, Odessa held a privileged position on the Black Sea coast and rapidly evolved into a central location for administrative functions.[8] From the beginning,

[5] King, *Odessa*, 109–12; Mose Lofley Harvey, "The Development of Russian Commerce on the Black Sea and Its Significance" (PhD dissertation, University of California Berkeley, 1938).
[6] For the history of the port cf. Nikolay Gleb-Koshanskiy, *Port and Odessa: We Are 200 Years Old: On the Port, City and Region History* (Odessa: Vest, 1994); Taras Hryhorovyč Hončaruk, *Odes'ke Porto-Franko: Istoriâ 1819–1859 rr.* (Odesa: Astroprynt, 2005); Liliya Belousova, "The Black and Azov Sea Port-Cities: Shipbuilding and Commercial Industry in Late 18th – Early 20th Century Through the Prism of the State Archives of Odessa Region," n.d.; V. Timonov, *Očerk Razvitiâ Odesskago Porta* (Sankt-Peterburg: Tipografiâ Ministerstva putej soobŝeniâ, 1886).
[7] Karl Schlögel, *Entscheidung in Kiew: Ukrainische Lektionen* (München: Hanser, 2015), 131; cf. Herlihy, *Odessa*, 21–46, 96–114.
[8] Guido Hausmann, "Die wohlhabenden Odessaer Kaufleute und Unternehmer: Zur Herausbildung bürgerlicher Identitäten im ausgehenden Zarenreich," *Jahrbücher für Geschichte*

Odessa and the region of what was called the "New Russia" were designed as an economic laboratory for the whole empire. Until 1819, the Russian state actively encouraged foreigners to settle in the newly conquered territories, with Odessa being one main migration hub.[9] Besides German and Western European settlers, emigrated subjects of the Ottoman Empire, such as Bulgarians, Greek, and Romanians, were also attracted by the duty exemptions the Russian state provided and the fertility of the region's black soil. The port of Odessa was designed to ship large volumes of traded goods around the world, and it was foreign trade that "worked decisively to shape the economy and society of Odessa [...]."[10]

Although the early 1860s marked the peak of an upward trend that went on for decades, circumstances had already changed during the Crimean War, when established Black Sea trade routes had collapsed and hardly reopened after 1856. Big merchant houses of the Mediterranean world, many among them Greek or Italian, had left the city and paved the way for new merchants and entrepreneurs who would make the city more Russian and Jewish than ever before. Odessa slowly developed into an ethnically Russian port city, and the border to the Ottoman Empire increasingly divided people. At the same time, the Black Sea developed into a space of global connections.[11] Against this backdrop, Odessa was about to lose its status as *porto franco* (a free port), which on the one hand "stimulated Odessa's foreign trade, but it severely restricted its access to the huge market that the empire represented."[12] Removing Odessa's free-port privileges sparked hope of further integrating the agriculture of the southern provinces into an imperial economic network and of boosting the industrial development of the Odessa region. While this development was intended to strengthen the inner imperial economy, Odessa simultaneously faced the rise of the steamship age and its tremendous impact on the globalization of trade.[13] The city was one of the major places in which Russia established steam-powered seafaring, since in 1856 it had

Osteuropas 48, no. 1 (2000): 41–65; Guido Hausmann, *Universität und städtische Gesellschaft in Odessa, 1865–191: Soziale und nationale Selbstorganisation an der Peripherie des Zarenreiches* (Stuttgart: Steiner, 1998).

[9] Andreas Kappeler, *Russland als Vielvölkerreich: Entstehung, Geschichte, Zerfall*, sec. ed., (München: Beck, 2008), 52; Dietmar Neutatz, *Die 'Deutsche Frage' im Schwarzmeergebiet und in Wolhynien: Politik, Wirtschaft, Mentalitäten und Alltag im Spannungsfeld von Nationalismus und Modernisierung (1856–1914)* (Stuttgart: Steiner, 1993).

[10] Herlihy, *Odessa*, 72.

[11] Cf. Florian Riedler's contribution to this issue.

[12] Herlihy, *Odessa*, 113.

[13] Richard J. Evans, *The Pursuit of Power: Europe 1815–1914*, (London: Penguin, 2016), 147–58.

become the headquarters of the Russian Steam Navigation and Trading Company (*Russkoe Obŝestvo Parohodstva i Torgovli, ROPiT*). Initially designed to mask the building of large ships that could ultimately be turned into naval ships in case of war, after Russia's defeat in the Crimean War, ROPiT soon became a major global economic player.[14]

All these developments were accompanied by ongoing debates and plans regarding whether and, if so, how to connect Southern Russia to the planned railway network. Back in 1844, the Governor-General of New Russia and Bessarabia, Mihail Voroncov, stated in a letter to Tsar Nikolaj I that "[...] the future of trade in our southern region depends on encouraging the construction of a network of railways in our steppes, which, by bringing closer distances, speed, regularity, and cheap delivery, would put us in a position not to be afraid of any rivalry in foreign markets."[15] As early as in October 1854, the tsarist administration sent Pavel Mel'nikov on an expedition to investigate possibilities and routes for a railway from Moscow to the shores of the Black Sea. Mel'nikov proposed a line from Moscow to Feodosiâ and highlighted the economic possibilities of the proposed railway, especially the "palpable reduction of transport durations and costs," which would contribute to a "maximal development of the natural sources of wealth, of the productive forces."[16] After the end of the Crimean War, when he was staying in St. Petersburg for the coronation of Alexander II, Voroncov lobbied in favor of Odessa being connected to Moscow. However, he did not succeed and the new head of the Department of Transport and Communication, K.V. Čevkin, opted to retain the proposed Moscow–Crimea (Feodosiâ) line, clearly motivated by his impression of Russia's insufficient supply structures during the Crimean War. Only two years later, things changed, and a new society grouped around the counts Strogov and Allerberg, a certain engineer Marčenko, N.A. Novosel'skij and several merchants of Odessa who advocated linking Russia's largest Black Sea port to Moscow and St. Petersburg.[17] Their initiative sparked a controversy over the exact course

[14] Ludmila Thomas, *Streben nach Weltmachtpositionen: Russlands Handelsflotte, 1856 bis 1914* (Berlin: Akademie Verlag, 1995); Mesut Karakulak, *Osmanlı Sularında Rus Vapurları Buharlı Çağında Vapur ve Ticaret Kumpanyası (1856-1914)* (Ankara: Türk Tarih Kurumu 2020); A. Skal'kovskij, "Russkoe Obŝestvo Parohodstvo i Torgovli 1857–1869". https://odessitclub.org/publications/almanac/alm_40/alm_40_6-19.pdf (last accessed on 30 November 2020). Also cf. Lyubomir Pozharliev's article in this issue.

[15] Apollon Skal'kovskij, "Biografiâ Odesskoj Železnoj Dorogi," *Trudy Odesskogo Statističeskago Komiteta*, 1865, 8.

[16] Frithjof Benjamin Schenk, *Russlands Fahrt in die Moderne: Mobilität und sozialer Raum im Eisenbahnzeitalter* (Stuttgart: Steiner, 2014), 52.

[17] Skal'kovskij, "Biografiâ Odesskoj Železnoj Dorogi," 11.

of the empire's southern railway line. This controversy took place both behind closed doors and in the public arena: Newspapers that propagated arguments from different ministries and departments (finance, war, internal affairs, and communications), as well as state and private actors, argued for or against two proposals that lay on the table.[18] The discussions were dominated mainly by two questions: Who was to finance the Southern Line – the state or entrepreneurs – and which direction should it take?[19] Two options were discussed the most: Connecting Odessa with Kiev via Balta and then via Orel to Moscow, or connecting Odessa first with the economic centers of Imperial Russia's south before leading northwards to Moscow (Odessa–Balta–Kremenčuk–Poltava–Harkov–Moscow)?[20]

Fig. 1: Russian railway map of 1906 with the Odessa–Harkov line marked in green. Source: Shema železnyh dorog Rossijskoj imperii izdanie I. F. Zauera 1906 goda. S.Peterburg 1906

What seems a rather technical decision was much more, since the railway's course determined the main purpose and ultimate goal of the

[18] Schenk, *Russlands Fahrt in die Moderne*, 70–72.
[19] Alfred Rieber, "The Debate over the Southern Line: Economic Integration or National Security," in *Synopsis: A Collection of Essays in Honour of Zenon E. Kohout*, ed. Serhii Plokhy and Frank Sysyn (Edmonton: Canadian Institute of Ukrainian Studies, 2005), 373.
[20] Skal'kovskij, "Biografiâ Odesskoj Železnoj Dorogi," 13–14.

line: It could either be a state-driven, strategic line that linked the center and the periphery, or a line designed to serve economic purposes in the developing southern regions of Russia, cofinanced by merchants and entrepreneurs. In December 1864, after days of heated discussions, the Committee of Ministers decided to follow the proposal of the Finance Minister of Russia, Michael von Reutern, supported by the Minister of the Navy, Nikolaj Krabbe, and, most prominently, the Grand Duke Konstantin Nikolaevič. Their opponents who rallied around the War Minister Dmitrij Milûtin had argued in favor of a strategic railway line that would help tie the Ukrainian periphery both politically and economically more strongly to the center.[21] But, according to von Reutern, "the short-term advantages of linking the bustling Ukrainian markets to the export trade through a port easily accessible to foreign ships outweighed all other considerations. Russia's economic development depended on its ties with Western Europe."[22] Von Reutern and his circle of reform-oriented like-minded people tended to focus on economic growth and the region's development toward its western (the Habsburg Empire and Western Europe) neighbors. By decree it was ordered to "build the southern railway, which has already begun from Moscow to Serpukhov and from Odessa to the Baltics, by the state treasury, as active as possible, on the one hand from Serpukhov to Tula, Orël, Kursk and Kiev, and on the other from Balta to Kremenčug and Harkov." Over the following years, Russian imperial railway construction in the south tended to prioritize this regional economic integration over a rapid strategic linking of the southern provinces to the imperial centers. However, the planners and builders of Russia's southern railway line clearly followed both an economic *and* a political agenda. It was namely the state-financed building of railroads that, according to Apollon Skal'kovskij, would both satisfy the economic needs of the region and contribute to the nationalization of the Black Sea region: "[It's] the first use of capital contributed by all of Russia, which will be directed to the cause which is so exciting for the whole empire – the construction of a railway from Moscow to the Black, that is, the ancient 'Russian' sea."[23]

Apart from the question of railway links, people in Odessa in the 1860s were occupied with another major infrastructure project: Faced with the onset of the steam age, and given the lack of sufficient wharfs, the

[21] Schenk, *Russlands Fahrt in die Moderne*, 72.
[22] Rieber, "The Debate over the Southern Line," 394; cf. William L. Blackwell, *The Industrialization of Russia: A Historical Perspective*, third ed. (Arlington Heights, IL: Harlan Davidson, 1994), 28–29.
[23] Skal'kovskij, "Biografiâ Odesskoj Železnoj Dorogi," 14.

1860s saw ongoing discussion over enlarging the port, dredging the harbor basin, and extending its wharfs and piers. Steamships fundamentally altered the circulation of people and goods across the globe. As well as permitting delivery scheduling for shipments by liberating shipping from its hitherto absolute dependence on currents and wind, they made it possible for naval engineers to build larger ships that could carry higher volumes and bulkier types of cargo.[24] The possibilities this development opened up to world trade simultaneously posed a major challenge to ports worldwide, which found themselves needing to rearrange and expand their infrastructure to take in bigger ships and to load and unload greater volumes of goods. Wharfs and piers had to be extended, new warehouses had to be built and more docking stations had to be set up. But the most important task that Odessa's port builders faced in this context was the deepening and cleaning of its harbor basin. All parts of the port required a greater depth of water, especially the quarantine harbor, at which trading vessels from all over the world arrived. One substantial problem was the clogging of the harbor basin with stones and rocks, along with illegally dumped litter and ballast. Cleaning is a constant necessity for a port, but in the mid-nineteenth century the issue gained great urgency, with a loss to Russia's economy incurred for every steamship unable to dock in Odessa.[25] Another obstacle to an increase in trade in Odessa were dangerous winds from the south and southeast, alongside colliding water masses from the Bug, the Dnepr, and the Danube, which produced what were referred to as "hacking waves." Additionally, the port became increasingly cramped when trade increased, and shipwrecking was a massive danger to trade. According to one source, shipwrecking accounted for a loss of 270,000 rubles per year. During the 1860s, several measures were taken to ensure the port's relevance in global trade. These measures, too, aimed to link Odessa primarily with other global ports, such as Marseille or Livorno, and permitted an expansion in the volume of exported grain.

Both infrastructure projects of the 1860s – the linking to the railway system and the expansion of the port's facilities – focused on strengthening the port as an important part of the economic macroregion of Southern Russia and the port of Odessa as the most important trading hub for the export of grain. In contrast to this, Odessa's planners believed that intensifying the city's connections with the imperial center was an

[24] William Rosen, *The Most Powerful Idea in the World: A Story of Steam, Industry and Invention* (London: Pimlico, 2011); Douglas R. Burgess, *Engines of Empire: Steamships and the Victorian Imagination* (Stanford: Stanford University Press, 2016).
[25] Timonov, *Očerk Razvitiâ Odesskago Porta*, 26–40.

issue of secondary importance. When a certain I.F. Felkner of Rostov-na-Donu denounced Odessa as an "artificial port founded by a foreigner," his polemics were, of course, somewhat overblown.[26] But, like all polemics, they contained a kernel of truth: Odessa was designed as a special economic laboratory at the frontier of the Russian Empire, in which new ideas and concepts could be tested and performed long before they became economic practices in other parts of Russia. This reflected a longtime hope formulated initially at the end of the eighteenth century and vital until at least the early 1860s: As a European Great Power, the Russian Empire intended to use the newly conquered southern territories to boost economic growth and entanglements with Europe and the world. However, the auspices of geopolitics and economics changed drastically during the second half of the nineteenth century – and Odessa suddenly found itself cut off from important economic routes.

3. Disconnected: Railway networks and the global grain trade

The January Uprising, an insurrection in imperial Russia's Kingdom of Poland in 1863 and 1864, reinforced the purported "Polish fear" present among the imperial elite in St. Petersburg. When around 10,000 men rallied around the revolutionary banner, and resisted conscription into the Russian army, they revealed – once again – the asymmetries and disbalances of social, economic, and political power within the Russian Empire. Among Russocentric politicians in St. Petersburg, it was a widely held belief that these disbalances would evoke rebellions and uprisings in the western and southern provinces and that reasonable imperial politics would include the effective suppression of separatist movements on the periphery.[27] Alongside the Poles, Ukrainians were also highly suspicious in the eyes of imperial elites.[28] This imperial situation had a profound impact on infrastructure policies in Odessa as well: In the first half of the nineteenth century, the relative independence and laboratory-like character of the southern provinces were considered to be an asset to Russia's economic growth and geopolitical significance. But after the January Uprising, the relative remoteness of Odessa and its port increasingly became a problem in the eyes of politicians and engineers.

This politicization of transport issues in the southern provinces had a profound impact on the newly planned railway tracks. As early as March

[26] Rieber, "The Debate over the Southern Line," 392.
[27] Schenk, *Russlands Fahrt in die Moderne*, 327–32.
[28] Andreas Kappeler, *Kleine Geschichte der Ukraine*, fourth ed. (München: Beck, 2014), 131–132.

1866, the tsar approved extending the railway lines from Odessa to as far as Kiev. In 1872, the railroad linked Odessa to Harkov and from there to Moscow, St. Petersburg and Kiev.[29] However, these constructions were not dominated by an economic paradigm: They served mainly strategic purposes and were designed to deploy troops to the Russian–Ottoman border. This "haphazard method" resulted in "crooked lines" that were quite often unnecessarily long and poorly maintained.[30] In effect, the shipment of grain in Southern Russia could not benefit entirely from the acceleration and price reductions that the railway promised to deliver. However, even under these given limitations, the railroad continued to become more important for the grain trade: By 1879, 71 percent of all grain reached Odessa by train.[31]

Getting grain to the port and the sea was even more vital for Russia in the 1870s and 1880s, since Russia underwent a shift in economic paradigm: In contrast to its liberalist policy of the 1860s, Russia then aimed to boost its export surplus, for which Russia almost exclusively relied on its grain exports. In so doing, Russia ultimately sought to join the gold standard.[32] Since its founding, Odessa constantly lacked a processing industry that would have helped develop the region into an economic center. The linking of Odessa with Ukrainian agricultural hotspots in the first instance, such as Balta, Kremenčuk, and Harkov, was inspired by the new economic, export-oriented policy. Consequently, regionally focused industrial development became even less important for the Ministry of Finance in St. Petersburg, and the region was unable to come to occupy a greater political significance in the imperial framework. In addition, Odessa faced being cornered by rival port cities on the Black Sea shore, which enjoyed an advantage. Among them was Nikolaev (Mykolayiv), a port city northeast of Odessa that had long been engaged in shipbuilding and, during most of the nineteenth century, hosted the Russian Empire's Black Sea Navy Headquarters.[33] The close link between the Naval Ministry in St. Petersburg and Nikolaev was one of the reasons for Nikolaev's rise in the 1860s. The military governor Bogdan von Glazenap encouraged foreign vessels to land in the commercial port and thereby transformed

[29] Herlihy, *Odessa*, 216.
[30] Ibid., 217.
[31] Ibid., 219.
[32] Paul R. Gregory, *Before Command: An Economic History of Russia From Emancipation to the First Five-Year Plan* (Princeton: Princeton University Press, 1994); Peter Gatrell, *The Tsarist Economy: 1850–1917* (London: Batsford, 1986).
[33] Ûrij S. Krûčkov, Istoriâ Nikolaeva (Nikolaev: Vosmožnosti Kimperii, 2006).

Nikolaev from a naval base to a big commercial port.[34] In the 1880s, Nikolaev became Russia's third-largest commercial port, after Odessa and St. Petersburg. This intense regional competition increased pressure on the port of Odessa, which faced losing its monopoly on the northern shore of the Black Sea and altered Southern Russia's "regional" environment once again.[35]

Taken together, the new political situation, an inefficient transport infrastructure, and regional rivalry threatened the wellbeing of the port of Odessa. At the end of the 1870s, these threats did not go unnoticed. During the 1880s, a multitude of reports and evaluations (both by domestic and foreign observers) tried to shed light on the port of Odessa's difficult situation. Among the most elaborate reports was one handed in by the Odessan Committee of Trade and Industry in 1875. This committee was one of many in the Russian Empire, created at the request of urban or merchant societies. Committees of trade and manufacturers were established to discuss issues of trade and industry, based on the proposals of the Ministry of Finance of the Russian Empire and the provincial government, as well as issues related to local trade and industry that were raised by the committee itself. Until 1872, Odessa had no such committee, as it was organized through the Imperial Board of Trade (*Kommerčeskij Sovet*), which maintained branches in some of the empire's most vital economic centers: Odessa, Riga, Arhangelsk, Taganrog, and Rostov-na-Donu. But in 1872, this institution was abolished, a decision that intended to end or limit economic autonomy in the region and further attach these regions to the center. Subsequently, committees for trade and industry were introduced and Odessa's committee immediately started work. In the early 1880s the committee moved into its new building where a new commercial college was established. Designed by the architect F.B. Gonsiorovskij, the engineer Alexej N. Paškov erected the building in 1876–1877. He would later preside over the committee's board. Its members evaluated the region's economic situation thoroughly, and the results were published as annual reviews on the current situation regarding trade and industry in the respective region. The committee in Odessa even distributed their reports commercially.[36] In 1875, immediately after its foundation, the committee felt an urge to alert St. Petersburg. A report

[34] D.D. Gnusin, *Materialy dlâ opisaniâ Russkih portov i istorii ih sooruženiâ*, vyp. IX, *Nikolaevskij Port* (St. Petersburg, 1889).
[35] In his book, Walter Sperling investigated the railroad's impact on the region of Âroslavl' and Saratov: Walter Sperling, *Der Aufbruch der Provinz: Die Eisenbahn und die Neuordnung der Räume im Zarenreich* (Frankfurt: Campus, 2011).
[36] *Enciklopedičeskij slovar Brokgauz i Ėfron* 15a (1895), 850, art. "Komitety torgovli i manufaktur."

titled *On the Decline and Measures of Development in Odessa* was sent to the economic department of the Ministry of Internal Affairs of the Russian Empire.[37] On page two, the report's authors directly addressed the problematic situation in the city and the port of Odessa, "Which is beginning to raise the most serious fears for the future." It continued:

> The present state of affairs in Odessa can be expressed in brief words by the fact that it is not only experiencing a temporary crisis, depending on the state of harvests at home and abroad, etc., but is also entering a period of decisive decline. And this decline will be fatal for her if it is not prevented by the most energetic measures and if no measures are taken at the most urgent time.[38]

The report ultimately evaluated two reasons for the port's decline, both of which related to changes in regional economic and infrastructure relations:

> The success or failure of the Odessa trade [...] depends on the conditions under which it struggles with someone else's rivalry. Until recently, these conditions were very favorable. Southern Russia ranked first in the world in terms of quantity and quality of the bread it produced and Odessa was almost the only holiday destination in the whole vast region. Now this has changed. On the one hand, vacations began to be made via Nikolaev and Sevastopol, on the other hand, the development of the railway network allowed our bread to reach its foreign consumers, bypassing the Black Sea.[39]

According to the report, Odessa was faced with two threatening developments: First, the Black Sea region had diversified, with Nikolaev and Sevastopol' rising to become significant economic centers, which thus undermined Odessa's former monopoly in the region. Second, the Black Sea region itself lost its status as a prime hub for grain trade, and lost its share in favor of the developing and booming railway network. Instead, the Baltic seaports (and most prominent among them, Riga) were now rising fast.[40] They benefited from their close links to the central railroad

[37] Rossijskij Gosudarstvennyj Istoričeskij Arhiv (RGIA), f. 1287 op. 7 d. 728, Hozâstvennyj departament MVD, Ob upadke i o merah razvitiâ torgovli v Odesse (1875).
[38] RGIA f. 1287 op. 7 d. 728 l. 2.
[39] RGIA f. 1287 op. 7 d. 728 l. 2.
[40] Cf. Katja Wezel's research project on Riga as a hub of global trade and Ulrike von Hirschhausen, *Die Grenzen der Gemeinsamkeit: Deutsche, Letten, Russen und Juden in Riga 1860–1914* (Göttingen: Vandenhoeck & Ruprecht, 2006); Anders Henriksson, *The Tsar's Loyal*

lines and short distances from the important markets of Germany and Great Britain. Additionally, the report highlighted the sudden change in circumstances – clearly, the forces inherent in the world's first (modern) globalization overstrained the adaptability of Odessa's port. Under the presidency of A. Paškov and with nine sitting members, among them Russian, Jew, Greek, and German merchants, the committee then pressed on to face up to the port's biggest problems.[41] One sure problem was the port's bad connection to the railway network: The decision of the 1860s to bypass Kiev now appeared to be a big problem, since the efficient and profitable railroad connection from Kiev to the Baltic provinces (and, from there to the lucrative and ever rising markets of Germany and Great Britain) challenged and changed the well-trodden tracks of grain transport to which Odessa's city officials were accustomed. The report stressed that moving a *četvert*[42] of grain from Kiev to Odessa (481 kilometers away) in 1875 cost two rubles, while moving the same amount of wheat to Königsberg, which was far more distant (956 kilometers), cost nearly the same (1.90 rubles).[43] This clearly demonstrated Odessa's poor connection to the empire's main transportation routes, and resulted in high and unprofitable transportation costs. The essence of this argument clearly lay in the shifting notions of "center" and "periphery" that affected all parts of the empire.[44] In the late nineteenth century, connectedness to the center became a (more) crucial feature of economic hotspots, and it is this geographical shift that is also visible in the following source:

> The "Odessa–Baltic Railway" [...] on the one hand to Žmerinka and Kiev, on the other to Elisavetgrad and Kremenčug, is not the shortest way to connect Odessa to the center of the Empire.[45]

But the report did not limit itself to the Odessan port's infrastructural deficits. In addition, its authors proved to be well aware of global ruptures in the grain market that would change the flow of grain and money across the oceans in a significant way. More specifically, it mentioned Argentina and the US as rising and increasingly dominant players in the global grain market, who eventually outpaced all their European rivals with respect to

Germans: The Riga German Community, Social Change and the Nationality Question, 1855–1905 (New York: Columbia University Press, 1983).

[41] The committee's report was signed by L. Vedde, I. Vučina, G. Gurovič, A. Kievskij, L. Kommerel, N. Krionap-Nikola, A. Novikov, A. Ratgauz and D. Rafalovič.

[42] One *četvert* (old Russian dry measure) = 209.9 liters.

[43] RGIA f. 1287 op. 7 d. 728 l. 11ob.

[44] Schenk, *Russlands Fahrt in die Moderne*, 60–70.

[45] RGIA f. 1287 op. 7 d. 728 l. 16.

quality and price. Pessimistically, the report noted: "The bread [wheat] trade of Russia, and that means largely of Odessa, will suffer the same fate that befell our export of wool."[46] What they meant here was that the port of Odessa was threatened by both its peripheral location within the imperial economic network and by its self-restriction on exports of wheat. This resulted in a constant imbalance between imports and exports, with the former being partially neglected in the port's trade. As a result, ships were often forced to make an empty run back to Odessa, and this stopped the economic region of Odessa from developing clusters of processing-industry plants. Back in 1865, planners in Odessa and St. Petersburg sincerely hoped that the new railroad would lead to the development of new industries, since it would contribute to the intensification and concentration of commerce and the flow of goods in the region:

> [...] in the eyes of a wise government, a scientifically experienced statistician, and even a simple Russian person, the construction of the southern railway would mean not only the connection of existing supply markets to Odessa, to a port for international trade, but also –through acceleration – the desire for cargo movement and convergence of localities, hitherto separated by entire deserts, the cheapening of transport and, consequently, the development of industry [*promyšlennost'*] where the most necessary branches of the economy are in complete stagnation.[47]

Apparently, this problem remained an urgent one 20 years later. To overcome this issue, the report proposed that trade in Odessa should become

> [...] more diverse, [it should] change from the predominance of just one specialty [...] In the future, imported trade for Odessa should take a much more prominent place than now. At the same time, it is necessary that it also creates within itself a manufacturing industry and that its capitals do not go exclusively in that one-way direction [...][48]

Taken together, in summary this report comprises a detailed analysis of the port's problems, possible solutions and a remarkable overview of the situation in the global grain trade. The report made clear assertions

[46] RGIA f. 1287 op. 7 d. 728 l. 12ob.
[47] Skal'kovskij, "Biografiâ Odesskoj Želesnoj Dorogi," 15.
[48] RGIA f. 1287 op. 7 d. 728 l. 13.

regarding the links between economic performance and structural features, and it accorded lesser weight to other factors such as customs duties and taxes. Its authors, many of whom had been involved in constructing the port's facilities, developed their argument through close observation of their works. They underpinned the complex framework of different challenges that Odessa would face in the coming decades at the global, imperial, and regional levels. What is quite striking is the absence of political arguments. In 1875, shortly before the outbreak of the 1877–1878 Ottoman–Russian War, commercial elites in Odessa clearly did not notice or mention the Ottoman Empire, its neighbor, as a political or economic force in the region. Furthermore, the increasingly dangerous situation inside the empire itself, with Tsar Alexander II facing multiple terrorist attacks and the "Polish Question" as hot as possibly never before, infrastructural problems obviously had a political dimension.[49] However, the Committee of Trade and Industry in Odessa refrained from pushing this argument forward and relied on solely economic argumentation. It is only in historical retrospect that we can connect these two spheres.

4. Connected, but to where?

The nineteenth century was, according to Jürgen Osterhammel, a "golden era of ports and port cities." Seaports ranked as the "most important transaction points between nations and continents."[50] The port of Odessa was no exception to this: It linked the Russian Empire to the world. An analysis of the port's infrastructure and its place in wider networks of transport and communications therefore contributes both to the history of the Russian Empire and the history of globalization. For Odessa, globalization did not always entail a steady increase in export and unlimited growth, and the story of Odessa cannot only be told as a success story.[51] In the 1860s, 1870s, and 1880s, when the world's first (modern) globalization swept across Russia, Odessa was only partially able to cope with the fundamental changes that this process brought to how it traded.[52]

[49] Frithjof Benjamin Schenk, "Attacking the Empire's Achilles Heels: Railroads and Terrorism in Tsarist Russia," *Jahrbücher für Geschichte Osteuropas* 58, no. 2 (2010): 232–53.

[50] Jürgen Osterhammel, *Die Verwandlung der Welt: Eine Geschichte des 19. Jahrhunderts* (München: Beck, 2011), 402–3.

[51] This, of course is a feature of globalisation in general, cf. Peter Feldbauer, *Rhythmen der Globalisierung: Expansion und Kontraktion zwischen dem 13. und 20. Jahrhundert* (Wien: Mandelbaum, 2009).

[52] For globalization's impact on the history of Russia cf. Martin Aust, "On Parallel Tracks at Different Speeds: Historiographies of Imperial Russia and the Globalized World around 1900," *Comparativ* 29, no. 2 (2019): 78–105; Martin Aust, *Globalisierung imperial und sozialistisch:*

It is this ambivalent relation to modernity's prospects that makes the case of Odessa so illuminating. The reasons for Odessa's (relative) decline were situated on all three geographical levels – global, national, and regional.

First, Russia was a prisoner of its own trajectories: For a long time, Russia simply placed trust in its position as the "breadbasket" of Europe, and this enabled it to achieve high profits from export business. When new competitors arrived in the grain market, Russia witnessed them challenging its position and hastily evaluated measures to fight back. But, although the black soil of the Ukrainian lands was certainly extremely fertile, the vast areas of Argentina and America's Midwest allowed for production on a far larger scale.[53] Their rise to power, though, was only possible because of plummeting transportation costs. The railway and steamships dramatically reduced transportation costs over long distances and increased the reliability of deliveries. The port of Odessa tried to secure its position as the Black Sea's main port with ambitious construction projects, but it had to witness regional rivals, such as Nikolaev, wrestling shares from Odessa. This contribution identified infrastructure policies as one of the main reasons for the delayed response to these global and regional shifts. Despite having been designed from an economic point of view in the first half of the nineteenth century, in the hope of boosting an economic mesoregion in Russia's south, in the 1860s and 1870s Odessa's bad railway links with Kiev and Moscow increasingly became a big problem. They harmed Russia's grain trade at its weakest point: Because of insufficient means of transportation, grain was stored at several points along the route. Moisture played an important role: It soaked Russian grain when it was loaded on carts and when the grain rested unprotected alongside tracks and railroad lines. This exacerbated already-known problems that related to the falsification of grain (often, grain was "stretched" with added sand).[54]

The port of Odessa lost significant shares in the export of grain to its rivals, most notably to Nikolaev and Herson, but Odessa remained Russia's largest export port until well into the late 1890s. Nevertheless, to a great degree, Russia's economic prosperity (and, ultimately, destiny) was dependent on the wellbeing of its hub on the northern Black Sea shore. After 1890, the situation clearly changed: Nikolaev started to overtake Odessa, and Riga rose to be Russia's biggest port until the beginning of

Russland und die Sowjetunion in der Globalgeschichte 1851–1991 (Frankfurt: Campus, 2013); Wenzlhuemer, *Connecting the Nineteenth-Century World*.

[53] Osterhammel, *Die Verwandlung der Welt*, 402–3.

[54] Herlihy, *Odessa*, 207–8.

the Russian Revolution. Odessa entered the twentieth century amid sailors' strikes, the workers' movement(s), and devastating pogroms.[55] Clearly, the port of Odessa was not the only one that struggled with different aspects of globalization. The age of steam was a challenge for many ports in Europe, including those in Livorno, Marseille, and Liverpool. All witnessed the "streamlining of technologies, the growth of exchange, and simultaneous political, economic, and social changes."[56] This article has argued that, in the case of Odessa, political and economic changes in the late nineteenth century were influenced by decisions to connect Odessa to, or disconnect it from, Russia's transport infrastructure. However, this did not mean that infrastructure policy determined political and economic outcomes. Quite often, the building and expansion of infrastructures reacted to or anticipated changes in economic or imperial policies (from liberalism to protectionism), political rulership (from Alexander II to Alexander III) or the composition of multiethnic city citizenship (from the Greek–Italian world of the first half to the Jewish–Russian world of the last half of the nineteenth century).[57]

In St. Petersburg and Odessa, the acceleration in and intensification of the movement of goods, particularly grain, via railroads sparked hope and rose expectations among numerous people. Looking back from the 1880s, some of these hopes were fulfilled, others were not. At the end of the nineteenth century, more grain than ever was moved to the shores of the Black Sea. However, the railroad did not lead to the significant industrial development of the Odessa region until the beginning of the twentieth century, and its competitors in the global grain market set out to overtake Russia. For Odessa, globalization was both a promise and a threat. It depended upon the choices made by decision-makers in the top ministries of St. Petersburg and on-site in Odessa, and the 1860s were a crucial moment for the port's history: Shaped by reformist debates, the (dis)connections decided on at that time were to define the city and port of Odessa well until the eve of the October Revolution.

[55] King, *Odessa*, 127–251; Tanja Penter, *Odessa 1917: Revolution an der Peripherie* (Köln: Böhlau, 2000).
[56] Carola Hein, "Port Cities," in *The Oxford Handbook of Cities in World History* (Oxford: Oxford University Press, 2013), 809.
[57] Dirk van Laak, *Alles im Fluss: Die Lebensadern unserer Gesellschaft: Geschichte und Zukunft der Infrastruktur* (Frankfurt: Fischer, 2018), 13: "They are the material substrate of social constellations, the coagulated state of a respective moment."

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State Goals and Private Interests in the Development of Transport Infrastructure in the Russian Black Sea Region in the Second Half of the Nineteenth Century

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Abstract:
The article examines the development of transport infrastructure and shipping in the Black Sea region through the case of the establishment and initial development of the Russian Steam Navigation and Trading Company (ROPiT) between 1856 and the end of the nineteenth century. ROPiT was a joint-stock company co-owned by private entrepreneurs and the state. The article introduces the concept of "systemic actors," and argues that the construction of Russia's maritime infrastructure in the Black Sea region became possible due to the efforts of two systemic actors – Nikolaj Arkas and Nikolaj Novosel'skii – who had a comprehensive vision about the development not merely of maritime infrastructure but of infrastructure as a large technological system (cf. Hughes). The development of infrastructure also resulted from constant negotiation between the state's and entrepreneurs' different interests. The article thus challenges the thesis that the modernization of the Russian Empire was sustained by top-down state intervention, and shows that modernization developments, with regard to transport infrastructure, consist of a much more complex process encompassing the constant negotiation and confrontation of state and private interests. The researched case can be better explained by the notion of "entangled modernities."
Keywords: Russian History, Infrastructure, steam shipping

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1. Research questions and concepts

This article examines the development of transport infrastructure and shipping in the Black Sea region through the case of the establishment and initial development of the Russian Steam Navigation and Trading Company[1] (ROPiT) from 1856 to the end of the nineteenth century. ROPiT was a joint-stock company co-owned by private entrepreneurs and the state.

The article lies in the field of the social history of technology. I understand "infrastructure" in the sense of Thomas P. Hughes's notion of large technological systems whose components are not only physical artifacts but also organizations, knowledge, legislative artifacts, etc.[2] Contemporary studies of infrastructure bring together politics, economics, social relations, technology, space, and time.[3] In this article I will not deal with the technological aspects of the construction and development of maritime infrastructure, although they are important. I will concentrate on the biographies of two actors, Nikolaj Arkas and Nikolaj Novosel'skij, who invested their efforts in the establishment of such a structure. The question of the mobility of actors is important for the Transottomanica program[4] and also in biography research.[5] I will therefore also focus on this aspect as well as on the cultural and social capital[6] of Arkas and Novosel'skij, and on their role in the success of their work.

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[1] Russian: *Russkoe obščestvo parochodstva i torgovli* – ROPiT.

[2] Thomas P. Hughes, "The Evolution of Large Technological Systems," in *The Social Construction of Technological Systems*, ed. Wiebe E. Bijker, Thomas P. Hughes, and Trevor Pinch (Cambridge, MA: MIT Press, 1987), here 45.

[3] Dirk van Laak, *Imperiale Infrastruktur: Deutsche Planungen für eine Erschließung Afrikas 1880–1960* (Paderborn: Schöningh, 2004).

[4] For a detailed presentation of the priority programme Transottomanica, see Stefan Rohdewald, "Mobilität/Migration: Herstellung transosmanischer Gesellschaften durch räumliche Bewegungen," in *Transottomanica – Osteuropäisch-osmanisch-persische Mobilitätsdynamiken: Perspektiven und Forschungsstand*, ed. Stefan Rohdewald, Stephan Conermann, and Albrecht Fuess (Göttingen: V&R unipress, 2019), 59–82.

[5] Malte Rolf, "Einführung: Imperiale Biographien: Lebenswege imperialer Akteure in Groß- und Kolonialreichen (1850–1918)," *Geschichte und Gesellschaft* 40, no. 1 (2014): 5–21; Sarah Panter, Johannes Paulmann, and Margit Szöllösi-Janze, "Mobility and Biography: Methodological Challenges and Perspectives," in *Mobility and Biography, Jahrbuch für Europäische Geschichte/European History Yearbook* 16, ed. Sarah Panter (Berlin: De Gruyter Oldenbourg, 2015), 1–14.

[6] Pierre Bourdieu, "Ökonomisches Kapital, kulturelles Kapital, soziales Kapital," in *Soziale Ungleichheiten*, Soziale Welt, Sonderheft 2, ed. Reinhard Kreckel (Göttingen: Schwartz, 1983), 185.

Of special importance in understanding the emergence and development of ROPiT, and hence of the maritime infrastructure in Odessa, are the visions and strategies of the key actors. In this regard, I will examine two questions concerning those strategies.

The first one concerns *systemic complexity in constructing maritime infrastructure*. Precisely because infrastructures are comprehensive technological formations, their components must be systematically interconnected. On the one hand, this means that they can be built only in an environment in which such systemic interconnection is possible; on the other, after beginning construction, they provoke the creation of other infrastructures and institutions. Hence, to ensure their success, the key actors should bear this systemic interconnection of infrastructure components in mind, and set out not just to build a port, purchase ships, and so on, but also to develop various transport routes and services, as well as educational, financial, commercial, and other institutions that will make maritime shipping more efficient. Questions should be raised and solutions proposed about, for example, how exports will be moved out and imports in; whether there will be enough trained personnel to handle not only the shipments but also the commercial servicing of ships, how this type of transportation will be regulated, etc. The systemic approach requires a vision of all the components in an infrastructure – physical artifacts, organizations, knowledge, and legislative artifacts. This is a vision that encompasses the entire complexity of the interdependence of the future elements of the infrastructure in question. I will call those who have such a vision and work on its realization *systemic actors*.

The second question addressed in my analysis is as follows: What position can facilitate such an all-encompassing systemic vision, or claims of having such a vision – is it that of the state or of private entrepreneurs? Despite Karl Mannheim's fair conclusion that all social positions are ideological, i.e., partial, even though they claim to express a universal interest, the question remains as to what interests the state and entrepreneurs have, and who contributes to the greater efficiency of an undertaking. The opposition between private economic interests and state interests posited as a public good is a leading one in the definition of infrastructure. According to Reimut Jochimsen, infrastructure is "the sum of material, institutional and personal facilities and data which are available to the economic agents and which contribute to [...] complete integration and maximum level of economic activities."[7] Conversely, for

[7] Reimut Jochimsen, *Theorie der Infrastruktur: Grundlagen der marktwirtschaftlichen Entwicklung* (Tübingen: Mohr, 1966), 100.

Dirk van Laak, infrastructure is a visible, material mediator of the common good, positioned in between domination and everyday life, while being part of both.[8] From this point of view, infrastructure is associated with the public interest of the state, as constructed by each state. The economic point of view links infrastructure with an increase in the efficiency of economic activity, and with a particular private interest. The dilemma of whom does infrastructure "serve" – a state-constructed public interest or, conversely, private interests and the wellbeing of particular groups – is of key importance in the study of infrastructure. Those interests differ across countries and in different historical situations, and they have different social implications. For example, the state interest may focus on building infrastructure for military purposes for national unification, but it may also tolerate certain regions and groups more than others. Private interests, if they are entrepreneurial and commercial, will be expansionist and will look for external horizons; they will (probably) have a stronger cumulative effect insofar as they will demand the building of institutions that support their interests being realized, etc. It is accepted that the development of the Russian Empire followed the path of a "strong arm" of centralized state power.[9] The hypothesis I will test in this article is whether the mentioned opposition between private and state interests is artificial, in the researched case, because the successful development of transport infrastructure resulted from a complex intertwining of both types of interests.

As far as I am aware, the question of the relationship between state imperial interests and the economic interests of entrepreneurs, merchants, and shareholders in ROPiT has not been analyzed in-depth from the point of view of the construction of maritime infrastructures in Odessa. ROPiT is the subject of several important texts of the late nineteenth and early twentieth centuries[10] as well as of recent times,[11] but these texts describe mostly the chronology of its foundation and the development and lives of the persons involved in this enterprise. Still, Baryshnikov's text deals in part with the issue of the conflict between imperial and private interests.

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[8] Laak, *Imperiale Infrastruktur*.

[9] David Lieven, *Towards the Flame: Empire, War and the End of Tzarist Russia* (London: Penguin, 2015); Victor Taki, *Tsar and Sultan* (London: I.B. Tauris, 2016).

[10] For example, S.I. Ilovajskij, *Istoričeskii očerk piatidesiatiletiia Russkogo obščestva parochodtsva i torgovli* (Historical sketch on the fiftieth anniversary of the Russian Steam Navigation and Trading Company) (Odessa, 1907); A. I. Denisov, *General-adiutant, admiral, Nikolaj Andreevič Arkas (biografičeskij očerk)* (Sevastopol: Tipografija D.O. Karčenko, 1887).

[11] M. Baryšnikov, "Russkoe obščestvo parochodstva i torgovli: učreždenie, funkcionirovanie, perspektivy razvitija (1856–1864 g.)," *Terra Economicus* 13, no. 2, (2015).

In light of the above, this article seeks to answer the following research questions:

How did the foundation and development of the Russian Steam Navigation and Trading Company become possible – in terms of context and initiators?

What were the biographies of the two key actors, Nikolaj Arkas and Nikolaj Novosel'skij, the founders and first directors of ROPiT, in terms of the resources they had at their disposal, i.e., mobility, networks, and knowledge? Can they be defined as systemic actors and transcultural mediators?

What strategies for developing maritime infrastructure did the entrepreneurs and the representatives of the state have, and what was the relationship between state and private interests?

What were the obstacles to and consequences of the establishment of ROPiT for the construction of maritime infrastructure in the period under study?

2. The social context of 1856

According to Article 11 of the Treaty of Paris of 30 March 1856, which ended the Crimean War (1853–1856), the Black Sea was "neutralized," i.e., the countries that lined its coasts were prohibited from maintaining a naval fleet. This article of the treaty, however, placed the Russian Empire at a disadvantage in relation to the Ottoman Empire, since the latter was able to keep its naval forces in the Aegean and in the Mediterranean and, if need be, to urgently transfer them to the Black Sea via the Straits. Deprived of such a possibility, the authorities in Russia accelerated and facilitated the creation of the Russian Steam Navigation and Trading Company as an organization that developed maritime trade and passenger shipping. However, it also had a hidden military agenda. As early as in January 1856, before the signing of the Treaty of Paris, the Grand Duke Konstantin Nikolaevič wrote a report to his brother, Tsar Alexander II, in which he insisted on the establishment of a joint-stock private company that would purchase a large number of big steamships that, "when necessary, the government will rent or buy to transport troops, or convert to battleships."[12]

[12] RGIA, f. 107, op. 1, d. 14, l. 1.

The hidden purpose of creating such a company was that, in the event of war, its port resources, infrastructure, and relatively fast ships would be able to execute military tasks. The imperial authorities regarded the establishment of ROPiT as a preliminary step toward restoring (if need be) the Black Sea naval fleet. This is not to say that they did not recognize the economic importance of maritime transport for Russia. Along with this importance, however, the expansion of Russia's influence and presence in the maritime territories to the south of the empire was declared as a "moral purpose" of the company. This is clearly seen in a note from Grand Duke Konstantin Nikolaevič again to the Committee of Ministers regarding the benefits of establishing such a company:

> It will be very beneficial for the development of our maritime trade by transporting goods on Russian ships, but also for [maintaining] constant contacts with different points of the Orthodox Christian East and transporting a large number of pilgrims to Palestine and Mount Athos, thus helping us to become much closer to our co-religionists and contributing to the increase of Russia's importance in the East.[13]

Behind this geopolitical strategy, formulated in moral terms, one can undoubtedly also read the empire's future political intentions. Thus, due to the specific circumstances, ROPiT became a mediator of military and economic policies. Understandably, ROPiT's military purposes were hidden, and the aim was to legitimate the company as an institution of private entrepreneurs (merchants, bankers, and producers). In the initial discussions of the proposal for establishing the company (Committee of Ministers meeting, 24 April 1856), it was expressly noted that such large-scale enterprises could not function without the help of the state. Eventually, the idea prevailed that this enterprise should be legitimated distinctly as a "movement of own capital" and a "domestic resource of national wealth."[14] The private steam navigation company was incorporated on 17 May 1856; on 3 August, Emperor Alexander II signed a decree formally endorsing the company and its Articles of Association. Article 1 of the latter stated that ROPiT was incorporated "for the development of trade in Russia's southern region and for the development of shipping, commercial, and postal links of this region with Russian and

[13] RGIA, f. 107, op. 1, d. 14, l. 3.
[14] Ilovajskij, *Istoričeskij očerk*, 6.

foreign ports."[15] Its operation was to be financed by a joint-stock company co-owned by the state and private actors, thereby ensuring that its general political objectives and strategies would be compatible with the commercially motivated goals of private merchants, owners, and entrepreneurs. This is why the company's governance should be divided between representatives of the state and of entrepreneurs. The empire's hidden military-political interests determined the initial allotment of ROPiT's authorized share capital. Upon the incorporation of the company, the agreed ratio of state-owned and private shareholdings undoubtedly favored the former. The government held the largest stake, as it had invested 2.1 million rubles in 20,000 shares, which represented one-third of the company's total equity of six million rubles.[16] The state's majority share in the company was justified expressly in the Articles of Association by a desire to inspire greater confidence in shareholders. Nor was it accidental that the Articles of Association stated expressly that ROPiT would be under the special patronage of the emperor, and that an additional holding of 1,550 shares was allotted to members of the imperial family.

As regards economic issues, the government was obligated to support the company's initial activities by granting annual subsidies for shipping along the specified maritime routes (per nautical mile sailed), for purchase of the necessary vessels as well as for exemption of the duties on ships purchased abroad. Regular state subsidies for ship repair were also provided for a period of 20 years. To begin with, the state subsidies were planned to cover the costs of purchasing and operating 21 steamships on eight maritime routes, including both domestic routes and routes to foreign destinations.

3. The founders of ROPiT as systemic actors

ROPiT was established by two emblematic figures, Captain First Class Nikolaj Arkas, and the entrepreneur and state counselor Nikolaj Novosel'skij, who became its first directors from 1856 to 1861.

[15] *Polnoe sobranie zakonov Rossijskoj Imperii. Sobranie vtoroe. Tom 31. Otdelenie 1* (Complete collection of the laws of the Russian Empire. Collection 2. Volume 31. Section 1), www.runivers.ru.
[16] RGIA, f. 107, op. 1, d. 2, l. 21–23.

A representative of Russia's imperial interests: Nikolaj Arkas (1816–1881)

I will not present in detail the remarkable life of Nikolaj Arkas, the cofounder of ROPiT. I will focus on his activities and contacts, which determined his significant role in establishing the company.

Knowledge transfer and intercultural mediation

Arkas was only 11 years old when he started sailoring. Apart from studying briefly at a nautical school, his training was mostly on the job, on three-month-long training voyages along the Caucasian coast, during which he acquired military and technical expertise in navigating seagoing vessels, as well as thorough skills in reading sea and river maps, and knowledge of the reefs, shallows, and other navigational hazards.[17] Later, he sailed on several voyages in the Black Sea and the Mediterranean to Greece and Italy, during which he honed his military skills and also his skills in steering tall ships amid the numerous Greek islands. As a result of those voyages, he wrote an article published in *Morskoj sbornik* (Naval Collection), "Turetskij, grečeskij i neapolitanskij floty v 1852 godu" (The Turkish, Greek, and Neapolitan fleets in 1852).[18] Arkas was fluent in several languages. Born to a prominent noble family of Greek descent, he knew ancient Greek, modern Greek, and French. During his Mediterranean voyages he also studied English because of the numerous "English works on navigation and technical subjects."[19] He acquired personnel-management experience, too, as commander of the crews of various naval vessels. In addition to his military-technical competencies, he had experience in navigating ships. In 1848 the emperor appointed him commander of the naval frigate *Vladimir*, which was under construction in Britain, and he personally supervised its completion and armament.

Arkas's life story shows that he did not merely acquire extensive knowledge in different fields and from different countries, but also applied it in his work. He operated as a transcultural mediator.

[17] A. I. Denisov, *General-adiutant, admiral Nikolaj Andreevič Arkas (biografičeskij očerk)* (Sevastopol: Tipografija D.O. Karčenko, 1887), 4.
[18] Nikolaj Andreevič Arkas, "Turetskij, grečeskij i neapolitanskij floty v 1852 godu" (The Turkish, Greek and Neapolitan fleets in 1852), *Morskoj sbornik* (Naval Collection), 1853.
[19] Denisov, *Arkas*, 20.

Networks – contact with royalty

The aspects that contributed to Arkas's successful career did not just include his acquired cultural capital, but also his social capital – his contacts and relationships with high-ranking persons. His noble descent undoubtedly helped him build such a network. But it was only one of several factors in his success. Arkas was only 15 years old when he was awarded a gold medal for service by the Ottoman sultan himself. His stay in Greece, Constantinople, and Italy under the patronage of the Russian government and with the support of the Russian ambassadors also helped him establish important contacts. His biographer, A. I. Denisov, mentions the royal balls in Piraeus that he attended at the invitation of the wife of the Greek King Otto. During his stay in Livorno, Arkas welcomed the brother of Napoleon I, Jérôme Bonaparte, on board his corvette.[20] In 1851 and 1852, as commander of the flagship of the Russian Empire, the *Vladimir*, Arkas accompanied members of the imperial family and the Grand Duke Konstantin Nikolaevič on their voyages and visits across the Mediterranean and Adriatic seas. Gradually winning Konstantin's full trust, Arkas was able to influence his decisions – for example, upon the elaboration of the new nautical manual. Thus, in addition to his many other qualities, Arkas's close contacts with members of the Imperial Court turned into another advantage that led to his appointment as director of ROPiT.

The systemic actor

Practical and personnel-management experience, versatile and state-of-the-art knowledge, and contacts with influential military and political figures (in Russia and abroad) endowed Nikolaj Arkas with a complex array of qualities characteristic of systems-thinking. These are Historical actors as individuals whose expertise encompassed all systemically interconnected aspects of an undertaking.

An amazing example of such system-creating activity was demonstrated by Arkas in 1844.[21] He was summoned to St. Petersburg by Aleksandr Menšikov, Chief of Naval Staff, and tasked with helping to strengthen the Caspian Sea fleet. To this end, 12 naval vessels had to be delivered to the port of Astrakhan on the Caspian Sea in order to transport and assemble three iron steamships (two built in Britain and one in the Netherlands). Transporting such vessels by land to the north of the

[20] Ibid.

[21] The story is presented in Denisov, *Arkas,* 40–41.

Caucasus from the Black Sea to the inland Caspian Sea was unthinkable because of the lack of roads. The only possible way to transport the vessels was along the Mariinsk Canal System (the Volga–Baltic Waterway) that links the Neva River estuary at St. Petersburg to the Volga River delta at the Caspian Sea via a series of canals, rivers, and lakes. The scope and complexity of the transportation project that Nikolaj Arkas carried out are remarkable. He collected data about the entire waterway from the Department of Hydrogeography, researched the resources of every settlement, and also gained information from local helmsmen and owners of vessels about the specific characteristics of the local waterways and also the state of the auxiliary roads by the rivers and canals, along which horses and men (the "burlaks") hauled barges and other vessels upstream. Arkas also completed the accounting work such as calculating the payments due to local workers and foreign engineers. The transportation, under Arkas's direction, of the iron steamships along the Russian rivers and lakes became an attraction for the local population as well as an opportunity to popularize the advantages of modern Western steamships and to inform local shipowners of how to purchase such vessels. Arkas's inexhaustible energy did not cease upon delivering the steamships to Astrakhan. Because of a lack of ship-repair enterprises there, he quickly organized the establishment of a workshop to assemble the steamships and, upon returning to St. Petersburg, submitted an evaluation of the project to his chiefs, amid a need for much more radical future projects that ought to be implemented with government help.

It is precisely here that one can discern the idea – accepted by the ROPiT management – that the development of transportation infrastructures could not be completed in a piecemeal and partial way. However, expanding water transport and networks to attain a general economic effect and develop the Russian economy, proclaimed as the prime objective, was perceived as impossible to achieve solely through the purchase or construction of a new, more modern type of steamship. In his report to the Chief of Naval Staff in March 1846, Arkas expressly underlined that, in addition to the procurement of ships, maritime shipping would be of true military and commercial benefit if the necessary reconstructions of the Caspian Sea ports were carried out; if easy transport links to them (railways or, in the case in point, equipment to deepen the Volga fairway) were developed further; if the availability of ship resources was bound to the local industry and natural resources (as regards the Caspian Sea, Arkas proposed concrete measures to develop fishing). Arkas

also noted the contradiction between local economic development and the outdated norms of ownership in the Russian Empire.[22]

Arkas's wide-ranging vision, his recognition of the complexity of the measures and actions in managing large-scale state undertakings, and his remarkable knowledge and contacts with the royal family led Alexander II to choose him as the representative of imperial interests in the newly founded ROPiT. He had two main functions: Purchasing new ships from abroad and, as a military officer heading the central office of ROPiT in St. Petersburg, mediating between ROPiT's activities and the empire's strategic military objectives. In this capacity, Arkas was also the representative of the Maritime Ministry in the company.

The day-to-day operation of the company in Odessa and the development of Black Sea shipping was done mostly under the direction of Nikolaj Novosel'skij, who was the other co-founder of ROPiT and chosen as a director from the entrepreneurs.

Nikolaj Novosel'skij: The defender of entrepreneurial interests (1818–1898)

Marriage as a path to network- and career-building

Nikolaj Novosel'skij[23] graduated from Kharkov University with a PhD in Philosophy and went on to work as a civil servant. After he was noticed by Senator Ivan Vacenko, who invited him to become his assistant, Novosel'skij moved to St. Petersburg, where he lodged at Vacenko's home. He thus began his fast-rising career in the civil service, which sped up after he married the senator's daughter. Thanks to his marriage and his father-in-law's patronage, Novosel'skij became a state counselor, a position that gave him access to the elite.[24] Interestingly, after he lost his first wife (it is not clear whether they divorced or she died), he married another daughter

[22] Ibid., 41.

[23] I have reconstructed the life of Novosel'skij mainly from the articles by Stanislav Calik, "Transportnyj magnat Rossijskoj Imperii Nikolaj Novosel'skij" (The Russian Empire's transport magnate, Nikolaj Novosel'skij) (https://ros-vos.net/history/ropit/3/1/) and D.A. Stepanov, "Učreždenie Russkogo obščestva parochodstva i torgovli (1856-1857 gody)" (The establishment of the Russian Steam Navigation and Trading Company (1856–1857)), *Vestnik Čeliabinskogo gosudarstvennogo universiteta* (Bulletin of Cheliabinsk State University) 237, no. 22, *Istorija, vyp.* 46 (History Series, issue 46) (2011): 30–38 (http://cyberleninka.ru/article/n/uchrezhdenie-russkogo-obschestva-parohodstva-i-torgovli-1856-1857-gody#ixzz3xQixaIvs).

[24] Calik, "Transportnyi magnat."

of a senator – Pavel Degai, who as a state secretary and director of a Ministry of Justice department, was very influential. According to Calik:

> It was precisely thanks to the efforts of his second father-in-law that Novosel'skij rapidly expanded his transport empire and took control over the Caspian Sea, merging the Kavkaz Steam Navigation Company with the Merkurij and Rusalka river companies which operated on the Volga. He became director of the newly established company called 'Caucase et Mercure.'[25]

Thus, Novosel'skij's marriages provided him with contacts that he used to realize his business interests. But it was not only Novosel'skij's marriages that led to his remarkable success as an entrepreneur. His philosophical education supported his practical endeavors by cultivating the ability – typical for a philosopher – to think holistically and to link the solution to certain problems with the solution to others.

As noted by his friend from his student years, the marine artist Alexej Bogoljubov, Novosel'skij surprised his colleagues with his extraordinary thinking and "speculative mind."[26] His systematic thinking was complemented by initiative and innovations: "Novosel'skij's whole life – witnesses of his life commented – was an eternal leap of obstacles. He carried out many projects at his own expense, even pledging his property, despite the existing great risks."[27] On the one hand, Novosel'skij shared "the ideas of Western political economy about free competition and the government's noninterference in the economic life of its subjects."[28] On the other hand, he realized that large infrastructure projects could not be implemented without state aid and control either. He therefore offered an intermediate solution – a state guarantee for large-scale projects, and private bank lending to entrepreneurs, especially in the construction of roads, improvements to ports, etc. "Then – Novosel'skij emphasized – private entrepreneurs should be allowed to carry out these useful deeds for the country and the repayment of the credits should be realized from the funds, contributed by the persons, using the services of this infrastructure."[29] In this context, Novosel'skij's useful acquaintances and

[25] Ibid.
[26] Nynešnim "otcam" Odessy est' s kogo brat' primer. (The current "fathers" of Odessa have someone to follow) https://on.od.ua 2019/01/29
[27] Sergei Rešetov, Larisa Ižik Rešetov, Sergej, Larisa Ižik, *O dome gorodskogo golovy Odessy N.A. Novosel'skogo* (About the house of the mayor of Odessa N.A. Novoselsky), https://www.odessitclub.org/publications/almanac/alm_54/alm_54-68-80.pdf : 70.
[28] Nikolaj Novosel'skij, *Social'nye voprosy v Rossii* (St. Petersburg, 1881), 14.
[29] Ibid., 29.

two marriages only facilitated his future successful entrepreneurial activity.

His business interests also motivated him to carry out works that can be defined as a public good both for Russia and Odessa.

The systemic actor

The systemic approach of Nikolaj Arkas related to Russia's future and the achievement of geopolitical superiority, while that of Novosel'skij, as managing director of ROPiT in Odessa, was bound in a pragmatic way to the concrete development of the Odessa region and to securing personal gains from its development. Whereas Nikolaj Arkas was the representative of state-military management in ROPiT's affairs, Novosel'skij represented the interests of Russian entrepreneurs and businesspeople. This mutual complementarity was a source both of potential conflict and of positive resources for the development of Black Sea shipping and trade.

I will mention only some of Nikolaj Novosel'skij's undertakings not just as commercial director of ROPiT but also as mayor of Odessa (1867–1877). Guided by the idea that the successful operation of the maritime merchant fleet was impossible without coordination with local land and river transport, which also ensured the sustainability and regularity of cargo and passenger traffic on the Black Sea, in 1858 Novosel'skij initiated the merger of the Kavkaz Steam Navigation Company (which operated on the Caspian Sea) with two shipping companies operating on the Volga. His was the idea that it was necessary to connect water transport with rail transport, which would ensure fast access of goods and people from the coast to inland Russia and vice versa.[30] Novosel'skij realized that in order to develop ROPiT, it was necessary not only to have ships but also to reconstruct and, above all, to develop the existing ports. The enterprising director understood the cumulative principles behind developing transport networks. To intensify international maritime trade, big, deepwater ships were required, as well as ports deep enough to accommodate them. Frustrated by the lack of credit institutions that could finance such a burgeoning economic activity, Novosel'skij organized the establishment of the Odessa Credit Company in 1871.[31] As mayor of Odessa, he also established schools to train the personnel needed for the development of shipping, trade, banking, and insurance. To facilitate the flow of passengers from inland Russia to Odessa, Nikolaj Novosel'skij

[30] Calik, "Transportnyi magnat."
[31] Stepanov, "Učreždenie."

bought out the state's assets of the unfinished Odessa Railway and completed it.[32] Apart from projects directly related to maritime trade, he was also aware of the need to create a well-developed social and urban infrastructure. As mayor, he built (on private shareholder capital once again) the Dniester–Odessa water conduit and a sewerage system in the city.[33] He contracted a 25-year lease (with the permission of the Odessa City Duma) for the Chadžibei and Kujal'nik estuaries, albeit with a clear personal-profit motive, in order to exploit them for profitable extraction of salt and as spas for affluent people. In fact, the connection between this activity and ROPiT lay in the development of tourism in Crimea and its environs for a relatively large (by then) part of the affluent population of Odessa and the rest of Russia. In the following years (especially during his term in office as mayor) Novosel'skij was involved in virtually all infrastructural spheres that were developed or established in the region. In a sense, if we look at all projects implemented with Novosel'skij's participation – those in the sectors of shipping, ports, shops, and client services, the medical, social, and transport infrastructure of Odessa, as well as banking, education, and public utilities – we see a very vivid example of systemic thinking and activity.

4. State goals and private interests meet the challenges of the environment

Under these two modern-thinking and visionary first directors of ROPiT, the joint-stock company got off to a flying start. The modern European experience in implementing large-scale infrastructure and transport projects, such as those that ROPiT members were keen to develop, confirms a clear principle. Infrastructure operations at each microlevel already presuppose a macrolevel framework directed by more fundamental types of institution such as the state. Thus, ROPiT's actions as regards the rapid development of shipping on the Black Sea turned out to depend on what the Russian imperial center had planned in this regard, as well as on the overall development of the social environment.

Steamships and personnel

The first obstacle before ROPiT's enterprising directors was the almost complete lack of maritime vessels. In the first statistical report on ROPiT's activities, Apollon Skal'kovskij found that in the early 1850s "regardless of all the sacrifices and efforts of the government, it owned

[32] Ibid.
[33] Ibid.

only 12 steamships of 1,900 hp boiler power, which serviced two international routes (to Constantinople and Galați) and four domestic routes."[34] The first task of ROPiT was to purchase steamships. By April 1857, ROPiT had bought five passenger and cargo ships from Britain.[35] By the end of 1857, the company had already accumulated 17 vessels, which allowed it to operate not only on Russia's Black Sea and Azov territorial waters but also to launch an international line: Odessa–Constantinople–Marseilles.[36] ROPiT continued to purchase iron steamships not just from Britain but also from France in the following years.

In addition to vessels, ROPiT needed qualified experts in all areas. Long after 1856, it still suffered from a shortage of personnel: Engineers, helmsmen, technicians, and sailors. The problem was not resolved until 1898. The understanding that the training of seamen would be most efficient if completed on board ROPiT's ships ultimately led to the opening of the commercial shipping classes at the Trade School in Odessa on 1 July 1898. Thus, the necessary education infrastructure was added to ROPiT's transport infrastructure.

But the major practical challenge before ROPiT was that of linking the maritime infrastructure to the Russian Empire's overall transport infrastructure.

Infrastructural connections, shipment routes, and the logic of profit

The systemically thinking directors of ROPiT viewed international commercial shipping not only as an opportunity for supplying goods to the Russian market, but also as a chance to develop the inland regions. In this vein, N. Sokol'skij wrote in *Odesskij vestnik* (the Odessa Gazette): "One cannot presume that our region will long continue to exist as a simple and natural economy without industrial activity and the inflow of capital."[37] The development of foreign trade was conceived of as a multilateral activity with both outward- and inward-oriented goals. In a process of mutual complementarity, commercial shipping was thought of as a resource for the Russian economy whose development, in turn, should lead to an increase in the wellbeing of the local population. For ROPiT's members, this increase would additionally intensify trade because of the increased Russian industrial output and also the population's

[34] Apollon Skal'kovskij, *Russkoe Obščestvo parochodstva i torgovli, 1857–1869* (The Russian Steam Navigation and Trading Company, 1857–1869), (Odessa, 1870), 15.
[35] Ilovajskij, *Istoričeskij očerk*, 28.
[36] Ibid., 30.
[37] *Odesskij vestnik* 59 (1857): 294.

opportunities to buy imported goods and travel. This is precisely why the ROPiT management linked "outbound transport," i.e., the expansion of maritime trade, to "inbound transport," i.e., the development of land transport infrastructures (mainly railroads). Furthermore, connecting the Black Sea coast to inland areas by railroad was regarded as the most important element in opening up this region to the rest of the world. One may say that the Black Sea revealed its potential for improving public wellbeing only through being better connected to inland areas by land. The Baltic Sea region's prosperity, a result of "the railroads near our western border," was highlighted as a case contrary to the situation in the Black Sea region.[38] In the same sense, the conclusion was drawn that, "regrettably, until now the Black Sea has been too far from these international transport networks that contribute to wellbeing."[39] In other words, the Black Sea region was a forgotten, natural and undeveloped social territory that was closed to the outside world precisely because of the lack of transport links to the inland areas.

Here, the interests of the ROPiT shareholders did not coincide with those of the state. Although the central government had declared support for maritime shipping, it gave priority to the development of rail transport inland, and refused to link these railroads with the Black Sea region. There were several reasons for this: The inland transport network was regarded as a factor constituting state national unity, this railway system was more susceptible to government regulation and control, and there were some economic reasons too. As early as 1856, during a discussion of the draft Statute of ROPiT, the Minister of Finance P.F. Brock emphasized the financial disadvantage to exporting Russian goods by sea: "Since our export goods consist almost exclusively of raw materials transported entirely by sailing vessels, these exports could not be financially covered due to the high costs of using steamships."[40]

Furthermore, the fact that the Russian maritime trade would face strong competition from the already-established British, Austrian, and French shipping companies was also taken into consideration. The third argument stressed the unclear and risky situation on the shores of the Russian Black Sea coast and the Caucasus, immediately after the Crimean War. It concerned the fear of endangering the trade and passenger travels, thus making them unprofitable, between the ports of the Black and Azov

[38] *Odesskij vestnik* 5 (1856): 33.
[39] Ibid., 34.
[40] Denisov, 1887: 13

Seas. The government therefore saw no point in developing maritime trade by building a railway to Odessa.

On the contrary, ROPiT-related interests required the construction of a railway to connect the Black Sea region, more concretely Odessa, with the inland areas. Despite the ROPiT management's multiple appeals to the government, the latter constantly postponed the construction of railroads that linked inland areas with the coast and Odessa. Besides this, ROPiT's plans were for the complete – not partial – linking of the port of Odessa to inland Russia by rail. The required railway routes had to provide easy access by land to all resources necessary for efficient maritime trade. They had to ensure cheap and fast delivery of grain from the fertile rural regions, in order to guarantee the transport of people migrating to the prospering coastal centers, to supply coal from the Donetsk basin for the ships and, if need be, to provide an alternative to the sea routes between ports. As ROPiT became increasingly autonomous and expanded its operations, the company ultimately took matters into its own hands. In the summer of 1870 the company purchased the Odessa–Balta and Odessa–Elisavetgrad lines from the government, and later, the stretch from Tiraspol to Kishinev, and it built the 963-kilometers-long Odessa Railway Line. In this way, ROPiT built the infrastructure that the government had refused to build, and it established a transport center that rivaled that of Volga–Don.

To the topic of the connectedness of transport infrastructure we must also add the corrections that ROPiT imposed on the ships' destinations that had been initially agreed with the government. Two significant changes were made from "below," i.e., by the shareholders. First, ROPiT's shipping routes were specified in its Articles of Association. The government gave priority to the domestic sea lines that linked Odessa with Crimea, the Sea of Azov, the Caucasian coast, and the large Russian rivers. Irrespective of these priorities, however, the logic of private economic interests increasingly drove the ROPiT management toward an expansive development of commercial shipping to international and ever more distant destinations. The divergence of state and private interests in this case is explicable once again as a variant of the conflict between military-political and economic goals. In perceiving ROPiT's resources as a reserve for the future military, and above all, for naval defense operations (the defense of coasts, the deployment of military units, and the transport of ammunition and troops to various Russian cities), the government had insisted that the shipping routes be along Russia's coasts. ROPiT's steamships were referred to as "floating defense" since, according to the central government's intents, they had to serve as a sort of shield, as a

mobile southern border of the empire. Precisely this, however, ran counter to the economic logic of the company's operations, which reflected modern expansionist tendencies and the striving toward eliminating international borders in general. The logic of the economic actors was profit-oriented and international, while the military-political logic of the state was regional.

The founders of ROPiT declared repeatedly the need for the broadest possible diversification of Russian exports based on the principle of "goods of all sorts." The poorly industrialized Russian Empire, however, was incapable of pursuing such a strategy. Until the end of the nineteenth century, it exported mostly primary farm products – grain, wool, skins, animal fat, etc. ROPiT's modernization projects led to an increase chiefly in wheat exports. The comparative tables of I.M. Kulišer, a historian of Russian trade, show that while the range of exported goods remained relatively the same as in the previous decades, at the end of the nineteenth century wheat exports grew dramatically. Whereas at the beginning of the nineteenth century wheat accounted for 18 percent of Russia's total exports, by the end of the century it had become the top export item, with a share of 40 percent.[41] Russia's limited capacity to diversify exports against the background of Russian industry's ever growing need for European raw materials and machines, as well as the fact that grain exports were not guaranteed because of the possibility of poor crops, lay at the base of ROPiT's constant efforts to rationalize its activities so as to increase its profits. Instead of the previous cheaper primary farm products, such as skins or animal fat, there was an increase in the share of more expensive goods such as timber (which made up ten percent of total exports at the end of the nineteenth century), butter, and eggs.

The limited range of exported goods was offset by the launch of new maritime lines and the intensive operation of the most profitable ones. In a sense, profits turned out to be linked to the distancing of ROPiT's ships from Odessa. In 1857, the largest amount of goods (487,907 pounds) was shipped to Constantinople. At the beginning of the 1860s, however, shipments to Britain accounted for the largest share of ROPiT's cargo. This largely contravened the mandatory routes agreed with the government. An ever growing share of the company's revenue came from long-distance destinations and especially the British line, which was not among those initially agreed with the government. In 1863, the British line yielded the

[41] I.M. Kulišer, *Očerk istorii russkoj torgovli* (Essay on the history of Russian trade) (St. Petersburg: Atenej, 1923), 300.

highest revenue (345,000 rubles), followed by the Alexandria (206,000 rubles) and Constantinople (almost 100,000 rubles) lines. While the government originally intended it to operate primarily in Russian territorial waters for defense purposes, ROPiT increasingly expanded its range into international waters. At the end of 1864, the Shareholders' General Meeting argued that the company should "not limit itself to its obligations under the Articles of Association but should increase the number of voyages on particular routes that are most profitable."[42] Driven by the profit motive, ROPiT implemented a series of measures such as streamlining its administration, downsizing excess staff, cutting operational costs, and optimizing the structure of the routes serviced. The company also increased the proportion of its noncommercial activities. With Novosel'skij's assistance, in 1863 ROPiT and the Russian Post Office Department signed a contract for postal services and transportation, under which the company transported mail not only within Russia and the Caucasus but also between Odessa and Constantinople. Mail transportation later turned out to be one of the company's most profitable activities.

The transportation of passengers gradually increased as well. After the practically minded Admiral Nikolaj Čichačëv was elected managing director of ROPiT (1862–1876), he prioritized as a corporate strategy the voyages and routes that had proven to be most effective and more profitable for the shareholders. As early as in 1864 the number of "optional" (but money-making) voyages increased rapidly at the expense of the "mandatory" destinations included in the Articles of Association and agreed with the central government. It is telling that when presented with ROPiT's successive annual report, the shareholders fully approved an almost 50 percent decrease in voyages to "mandatory" destinations.[43]

After the war of 1877–1878, the ROPiT's activity became increasingly independent and concentrated on passenger and freight transport in international waters. Odessa became the center of the commercial and economic goals of shipping in the Black Sea, while Sevastopol and the region of Kerch and the Crimea became the center of the navy. The main tasks for the Russian Imperial Navy were to reequip it with modern, fast, and deep-sea steamers suited for carrying the latest military equipment. In this regard, the possibility of using the existing merchant and passenger ships of ROPiT for military purposes was questioned. An article on armored warships in the *Morskoj sbornik* (Naval Collection) journal

[42] RGIA, f. 107, op. 1, d. 240. l. 74–75.
[43] RGIA, f. 107, op. 1, d. 226, l. 60–61.

explicitly stated that "the use of 'merchant ships for military purposes was never met with much sympathy among the navy.'"[44] Warships were required to have "greater speed, depth, protection of inhabited parts and good maneuverability,"[45] – features that were lacking in merchant vessels.

This technically substantiated difference between commercial and military vessels was definitely important, but no less important was the growing economic autonomy of ROPiT's activity. One of its executive directors, Admiral Nikolaj Čichačëv, despite the predominantly military positions he held, realized the inevitability of the mismatch dictated by the economic expansion of ROPiT with the original military plan of its creation. He declared: "The state is not able to find in the merchant steamers an inexhaustible source for its military armament and for counteraction to a naval war."[46] Thus, the commercial activity of ROPiT was gradually freed from its inherent military-political goals. Proof of this lies in the fact that despite Russia's numerous wars with Turkey, after the last war from 1877–1878, it was trade with the Ottoman Empire that occupied the most important place in ROPiT's activities.[47]

All those processes demonstrated a growing autonomy in ROPiT's operations as well as a gradual shift away from their military purposes and turn toward commercial interests. At the end of the nineteenth century, this drove the government to tacitly relinquish control over the company's operations, which left them entirely up to the enterprising shareholders.

Sea and rivers

At the end of November 1859, the ROPiT Shareholders' General Meeting discussed ship traffic on the inland rivers, and especially on the Dnieper. They noted that shipping on that river was negligible compared with the traffic on the Volga. This directly affected the shareholders' profits because grain produced in the lands to the north made up the bulk of exports from the port of Odessa. Since there was no river transport, grain was transported to the south in a primitive way by the "*čumaki*," local workers and stevedores who brought stocks by large ox-drawn wooden carts. An article in *Odesskij vestnik* of 25 February 1860 noted that 500,000 people and more than 1,000,000 cattle a year were employed in this mode

[44] *Morskoj Sbornik* (Naval Collection) 12 (1869): 11.
[45] Ibid., 13–14.
[46] RGAVMF, f. 410. Op. 2. D. 4103. L. 88.
[47] See Hayri Chapraz, *The Ottoman Empire and Russia in the Western Caucasus in the First Half of the 19th Century* (St. Petersburg, Kartlia: SPGU, 2004).

of transport. The shareholders found that this traditional mode of transporting grain for export to the Black Sea coast was extremely unprofitable and that transportation costs took up 20 to 50 percent of its commercial value. This was due to the slow speed of the carts, the frequent diseases that affected draft animals (the term *čumak* originated precisely from the word *čuma*, the Russian for plague, in this case, cattle plague), and the mishandled storage of cargoes that resulted in a deterioration in the quality of the wheat. The shareholders accepted that the transportation of the valuable grain had to be organized by the company itself because otherwise the profits from transportation "went solely into agriculture."[48] Given all the benefits that would come from connecting maritime routes with railroads, this required paying attention to river shipping. The transportation of wheat to the coast by ROPiT's ships and barges was praised in the newspaper as follows: "The timely delivery of grain products to the sea ports will lower their prices and the navigation company will thus be able to flood all Western Europe with them."[49] Because of ROPiT's declared commitment to the government's military policy, the strategy for expanding river transport was justified also with the argument that, should the need arise, ROPiT's ships would be able to transport troops and ammunition by river to the sea. In reality, however, such an activity (along the rivers to the north of Cherson and Nikolaevsk) was not provided. Thus, with flexible ad-hoc initiatives driven by direct profits, ROPiT found ways to circumvent the requirements of its agreement with the government. The measures it took to develop river shipping yielded a positive result. Haulage on the Dnieper and Bug rivers brought the company solid profits as early as in 1861 (179,000 rubles from shipments on the Dnieper and 65,500 rubles from shipments on the Bug).[50] ROPiT was even unable to fulfill all shipment orders because it did not have enough vessels. The above-quoted article in *Odesskij vestnik*, however, misinterpreted the strategy for developing river shipping in a national-patriotic sense: "It must be admitted that rail routes, despite their profitability, must yield primacy to river routes. In our fatherland rivers always have priority."[51] Indeed, in Russian culture, big rivers (especially the 3,531-km-long Volga) are a symbol of the unity and integrity of the Russian people, as a center of communication and intensive economic life. In reality, it was precisely ROPiT's modern project for developing international trade on the Black Sea that transformed domestic river shipping into a significant resource and added modern economic

[48] *Odesskij vestnik* 21 (25 February 1860): 71.
[49] Ibid., 72.
[50] Ibid., 65.
[51] Ibid., 72.

meanings to the symbolism behind big rivers. ROPiT's initiatives affirmed an important principle of infrastructure development: The principle that the realization of large-scale macro-infrastructures produces, subordinates, and integrates into itself a series of macro-infrastructure projects. It was precisely the opening up of the Russian economy to the rest of the world with ROPiT's mediation that also boosted the development of domestic transport. This principle was confirmed also by other concrete undertakings of ROPiT. Labor-intensive and slow manual stevedoring was replaced with mechanical handling. To ensure that the voyages would proceed on schedule, it was necessary to eliminate the delayed or irregular arrival of export goods that the ships had to carry. To this end, one of ROPiT's first initiatives was to build a complex of warehouses at the port of Odessa. In addition, to hedge investments in shipping and steamships, ROPiT set up an insurance system for its shareholders as early as in 1857. Once again under Novosel'skij's auspices, a credit system necessary for seafaring was also developed in Odessa. To service the company's regular lines, branches, and offices were opened, and staff was hired abroad.

Coal

The ROPiT management's systemic way of thinking was demonstrated especially clearly in concrete and apparently very private spheres of activity. Coal mining in the Donetsk basin was one such example. First of all, the significance of coal mining in this basin was linked to domestic Russian consumption. Transporting coal from the mines to the southern Black Sea ports by river became a routine operation for ROPiT because of the significance of coal as a fuel for households, industry, and steamships. By analogy with the abovementioned examples, coal transportation led to new initiatives by the company. ROPiT built warehouses, dredged the harbors, and acquired barges and large-capacity cargo steamships. Nikolaj Arkas solicited from the government the right of shareholders to acquire their own coal mine in the Donetsk basin. It was presumed that this would reduce expenditure on the purchase of imported British coal. Thus, coal mining, as well as shipbuilding, became ROPiT's first purely industrial, not transport-related, undertaking. In 1857 the construction of the company's first coal pit commenced, on the bank of the Gruševka River.

The case of ROPiT's coal-mining project, however, shows another variant of the company's relationship with the state. So far, I have focused on the dormant conflicts and discrepancies between private economic and state military-political interests. In their light, the history of ROPiT can be

read as a history of the emancipation of economic from public actors on the territory of the Black Sea. In the case of coal mining, however, the situation was completely different. The government found this undertaking to be fully justified. The expansion of coal mining was expected to be useful in future military operations, as developing a national coal-mining industry would ensure the independence of the navy. Besides this, Donetsk coal was called "smoke-free" because it did not release the usual black smoke when burned in the boilers of steamships. This was considered an obvious advantage over the Ottoman Navy, since its ships could be recognized from afar by the huge puffs of black smoke. That is also why the coal-mining area in the Donetsk region was leased to ROPiT without any objections. The results, however, were problematic. It was not until 1870 that ROPiT began to mine coal.[52] This delay was due to the lack of experience in this specific production sphere, the inappropriate use of funds, and embezzlement by the mine's management. Another problem came from the fact that the coal seams in the leased area turned out to be very deep underground, but the company initially did not have the necessary mining equipment. Last but not least, the costs of coal mining and transportation to Odessa by river and railroad significantly exceeded those of buying coal from abroad. Even at the beginning of the twentieth century, the anthracite coal mined locally was used only partly by the fleet and Russia was still buying the cheaper British coal.

The case of coal mining shows, then, that the development processes in Russia in the nineteenth century (as illustrated by the history of ROPiT) were not unequivocally dependent on the degree of autonomization of the economy and trade from state geopolitical strategies. Freed from state patronage, most of ROPiT's pragmatic projects did indeed lead to prosperity and development. In the case of coal mining, though, we see the exact opposite result: Inefficiency and even failure. Hence, imperial interests are not necessarily an antipode to private entrepreneurial interests. In a complex dialectic of interactions, the first can be a condition for, and an obstacle to, the second; but the lack of interaction between the two is also not a guarantee of success.

[52] See Ilovajskij, *Istoričeskij očerk*, 321.

5. Conclusion

The construction of Russia's maritime infrastructure in the Black Sea region became possible because of the following factors:

First, the existence of systemic actors who had a comprehensive vision of the development not merely of maritime infrastructure but of infrastructure as a large technological system (cf. Hughes). The realization of this vision was possible for at least two reasons: The systemic actors were competent in different spheres as well as familiar with the experience of foreign countries; in this sense, they transferred knowledge and were transcultural mediators (Arkas). Second, securing a position of power that would allow them to realize their ideas required building a network of contacts with high-ranking persons both from the government and from the Imperial Court. This network was developed through personal achievements (Arkas) as well as marriage (Novosel'skij).

Second, the analysis of the case of the ROPiT shipping joint-stock company rejects the thesis that the development of the Russian Empire was sustained by "strong-handed" state intervention,[53] and shows that at least the development of transport infrastructure was a much more complex process, a result of the constant negotiation and confrontation of state and private entrepreneurial interests. This complex process enabled the cumulative development of infrastructure as a series of modern institutions due to the need for efficient operation of the already-built infrastructures.

[53] Lieven, *Towards the Flame*; Taki, *Tsar and Sultan*.

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Integrating the Danube into Modern Networks of Infrastructure: The Ottoman Contribution

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Abstract:
For the Ottoman Empire, the Danube served not only as a border, but also as a means of communication and transport. This function was determined by the river's prevailing natural conditions. Because of the geopolitical, economic, and technological developments of the eighteenth and nineteenth century, global connections came to substitute older connections with Eastern and Central Europe. This article examines the Ottoman role in this transformation of the Danube between 1830 and 1878. It focuses on infrastructure projects such as the regulation of the Iron Gate and those in the Danube Delta, and construction efforts in the Danube Province during the last decades of Ottoman rule around the Danube.
Keywords: Danube, river transport, Ottoman Empire

1. Introduction

Hayrullah Efendi (1818–1866), an Ottoman doctor, official, and intellectual of the Tanzimat period, was also the author of the first Ottoman tourist guide. His *Travel Book* (*Yolculuk Kitabı*), which he wrote in

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1864 but for unknown reasons was not published, is an account of the author's journeys to Europe.[1] In contrast to earlier such accounts, which had been written exclusively by Ottoman ambassadors, Hayrullah adds practical information about the best travel routes, ticket prices, necessary luggage, places to eat, and places to stay, just as any present-day guidebook would. While a large part of the book focuses on the author's extended stay in Paris, it begins with Hayrullah's first trip to Europe, which led him to Vienna. Leaving Istanbul on a Black Sea steamer, he changed to a train in Köstence (Constanţa) and reached the Danube at Boğazköy (Cernavodă). From there he took the steamer upriver and passed Ottoman cities such as Silistre (Silistra), Rusçuk (Ruse), and Vidin before landing on the Walachian side in Turnu Severin to change boat and pass through Austrian customs in Orşova. From there he continued his journey up the Danube via Semlin (Zemun) and Buda to reach his destination.

In the nineteenth century, as with other European rivers, such as the Rhine and Rhone, the Danube was turned into a modern waterway for trade and travel. This became possible thanks to the technical development of steam shipping and the large-scale regulation works undertaken on these rivers. Typically, such regulations and the subsequent reorganization of traffic involved several international actors. Therefore, scholars identified this as the beginnings of modern international cooperation not only among states and politicians, but also among communities of experts. Similarly, turning the Danube into a modern waterway involved state actors such as the European Powers and the riparian states, and also nascent international institutions such as the European Danube Commission, as well as private actors such as transport enterprises and engineers. While previous research has stressed this international perspective,[2] this article focuses on the Ottoman role in planning and constructing the new infrastructures, which was an important aspect of the general geopolitical transformation of the region. More precisely, it will examine the Ottoman position on the regulation works at the Iron Gate in the 1830s, and the various regulations in the delta in the 1860s, and will finally turn to the Danube Province in which the

[1] Hayrullah Efendi, *Avrupa Seyahatnamesi*, transl. Belkıs Altuniş-Gürsoy (Ankara: T.C. Kültür Bakanlığı, 2002); Ömer Faruk Akün, "Hayrullah Efendi," *Türkiye Diyanet Vakfı İslâm Ansiklopedisi* 17, 67–75.

[2] Starting with Edward Krehbiel, "The European Commission of the Danube: An Experiment in International Administration," *Political Science Quarterly* 33 (1918) to Luminita Gatejel, "Imperial Cooperation at the Margins of Europe: The European Commission of the Danube, 1856–65," *European Review of History/ Revue Européenne d'histoire* 24, no. 5 (2017): 781–800.

Ottomans created a new institutional framework for a more systematic modernization of infrastructures.

In this article, the Lower Danube region serves as an example of a space of interaction, exchange, and mobility in the context of Transottoman connections with Eastern Europe.[3] In particular, it seeks to demonstrate the transformative role of new technologies and the modernization of transport infrastructures on the river and in the region during the second half of the nineteenth century. I argue that during this time Transottoman connections were integrated in and, in the long run, superseded by global connections. This is a process that we can observe by looking at the history of infrastructure, the actors involved in its planning and use, and these actors' interests.

2. The Danube: From Transottoman space to international mobility space

From a geopolitical point of view, the Danube played an important role for the Ottoman state from the beginning of its conquest of the Balkans. We do not have to adopt the rhetoric of a famous German Orientalist who called the river the Ottoman "stream of destiny"[4] in acknowledging this role. In the fourteenth and fifteenth centuries, the river served as the northern border that protected the flank of Ottoman conquests in Southeast Europe. This gradually changed when Walachia on the northern bank became a more or less stable Ottoman vassal from the early fifteenth century and the empire directly occupied the Danube Delta and the region north of it, the Bucak. After the conquest of Hungary in the first half of the sixteenth century, the Ottomans directly controlled an even larger part of the river.

Two important land routes connected the Ottoman capital with the Danube and the lands north and east of it. These were centrally maintained connections that had an important military function but also were used by merchants and others for transregional trade and travel.[5] To the west, this

[3] Stefan Rohdewald, Stephan Conermann, and Albrecht Fuess, eds., *Transottomanica – Osteuropäisch-osmanisch-persische Mobilitätsdynamiken* (Göttingen: V&R unipress); Florian Riedler and Stefan Rohdewald, "Migration and Mobility in a Transottoman Context," *Radovi* 51, no. 1 (2019): 37–55.

[4] Franz Babinger, "Die Donau als Schicksalsstrom des Osmanenreiches," *Südosteuropa-Jahrbuch* 5 (1961): 15–25.

[5] Yusuf Halaçoğlu, *Osmanlılarda Ulaşım ve Haberleşme (Menziller)* (Istanbul: İlgi Kültür Sanat Yayıncılık, 2014).

was the Belgrade road, which formed the spine of a region called the Middle Corridor (*orta kol*) in Ottoman administrative parlance, a region where the power of the center was particularly strong.[6] In Belgrade, travelers could cross the Danube by ferry for the road to Temeşvar (Timişoara), from where there were connections to Transylvania. Alternatively, from Belgrade the road continued along the right bank of the river, and headed in a northwesterly direction to reach Budin (Buda) via Ösek (Osijek).[7]

The road connection from Istanbul to the mouth of the Danube and beyond established the Right Corridor (*sağ kol*). It ran parallel to the Black Sea coast, but moved inland, and crossed the Danube at Tulçı (Tulcea), the main city of the Dobruja region, or alternatively a little to the west at İsakça (Isaccea), the nearby fortress at which the river was so shallow that it could be forded at certain periods. Beyond the river, the route went via Akkerman (Bilhorod) at the mouth of the Dniester to its ultimate destination Özi (Očakiv), an important fortress at the mouth of the Dnieper. An alternative route began at Tulçı, which connected the empire to its northern neighbors, such as Walachia, Moldavia and Poland–Lithuania, and led via Iaşi and Hotin to Lviv. In the sixteenth and seventeenth centuries, Oriental textiles, weapons and other luxury goods were traded along this route to Poland, in which they played an important role in the self-representation of the Polish nobility.[8]

As a waterway, the Danube was not only a border and an obstacle for people and goods on their way to the north, but also a connection in its own right. Traditionally, the Ottomans used it to ship Walachian grain via the Lower Danube to Istanbul and, until the first half of the sixteenth century, this part of the river was also integrated into the trade route that brought Oriental goods, such as spices, silk, and cotton cloth via

[6] Florian Riedler, "'Orta Kol' als osmanischer Mobilitätsraum: Eine transregionale Perspektive auf die Geschichte Südosteuropas," in *Jenseits etablierter Meta-Geographien: Der Nahe Osten und Nordafrika in transregionaler Perspektive*, ed. Steffen Wippel and Andrea Fischer-Tahir (Baden Baden: Nomos, 2018), 131–149.
[7] Olga Zirojević, "Das türkische Straßennetz (Land und Wasserstraßen) auf dem Gebiet der heutigen Vojvodina und Slawoniens," *Acta Historica Academiae Scientiarum Hungaricae* 33, no. 2/4, (1987): 393–403.
[8] Dariusz Kołodziejczyk, "Polish-Ottoman Trade Routes in the Times of Martin Gruneweg," in *Martin Gruneweg (1562–nach 1615): Ein europäischer Lebensweg*, ed. Almut Bues (Wiesbaden: Harrassowitz, 2009), 167–174.

Transylvania to Central Europe. Especially after the conquest of Hungary, provisions for the garrisons were frequently shipped up the Danube.[9]

However, the Ottoman political and military domination of the river from Upper Hungary to the river's mouth, as well as its importance for transport, cannot hide the fact that in the Ottoman period too, the river's function as a pathway for trade and travel always remained precarious. Before its regulation, which began in the nineteenth century, it was very difficult to use the full length of the river because of the hydrological and geological conditions.[10] The Danube Delta as well as the Iron Gate, one of a series of cataracts that mark the border between the Middle and the Lower Danube, were difficult to navigate and impassable during certain seasons when the water level was too low. In winter the river frequently froze, and the accumulating ice made passage impossible for ships. This is the reason why until the nineteenth century all bridges across the Danube were temporary pontoon bridges that were seasonally disassembled. Because of these factors that restricted traffic and transport on the river, roads that ran along the river or crossed it were just as important for ensuring mobility of people and goods.

These natural conditions still proved an obstacle to trade and transport, when the geopolitical and economic conditions began to change from the eighteenth century. To the west, the Habsburgs conquered Hungary and the river between Belgrade and Orşova was established as the border between the two empires. In the economic treaty of 1718, the Austrians acquired the right of free navigation on the Danube as far as Rusçuk; for the rest of the journey down the Danube and on the Black Sea they had to hire Ottoman ships. But although general trade between the Ottoman Balkans and Central Europe was increasing, most goods were still transported along the above-described land routes. For Ottoman exports to Central Europe, the river was even less attractive, as the upstream journey was difficult.[11] Only toward the end of the century did Habsburg merchants conduct a series of commercial expeditions that used the Danube as a route to establish a link to the Crimea and the northern Black Sea coast. However, because the state's support of such expeditions

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[9] Halil Inalcik, *An Economic and Social History of the Ottoman Empire*, vol. 1, *1300–1600* (Cambridge: Cambridge University Press, 1994), 295–311.
[10] W.G. East, "The Danube Route-Way in History," *Economica* 37 (1932): 321–345.
[11] Numan Elibol and Abdullah Mesud Küçükkalay, "Implementation of the Commercial Treaty of Passarowitz and the Austrian Merchants, 1720–1750," in *The Peace of Passarowitz, 1718*, ed. Charles W. Ingrao, Nikola Samardžić, and Jovan Pesalj (West Lafayette: Purdue University Press, 2011), 159–178.

soon ceased, they did not transform the Danube into a permanent trade route in contrast to the maritime route from Trieste, which became very successful.[12]

The Black Sea became an attractive goal for trade expeditions from the Habsburg Empire, and also from France, after Russia had conquered the Crimea and the northern Black Sea coast between 1774 and 1792. The geopolitical and economic position of the Black Sea changed, alongside that of the Lower Danube. From the northern Black Sea coast, Russian expansion continued toward the Danube, which became a zone of contact and conflict between the Ottoman and the Russian Empires. The northern branch of the Danube Delta became the border between the two empires after the war of 1806–12 when Bessarabia together with the Bucak were conquered by Russia. Subsequently, Russia gained control over the entire delta in the Treaty of Adrianople after the war of 1828–29.

Together with this territorial expansion, Russia gained the right to trade on the Black Sea. After 1774, the Ottomans had to tolerate the free navigation of Russian merchant ships – a privilege that was soon extended to other European states. This stimulated grain exports from the Russian Black Sea provinces through its main port Odessa to Western Europe and particularly to Britain. These exports reached significant quantities during the Napoleonic Wars and continued to grow in the postwar period. They were completed by Greek merchants, originally Ottoman subjects, whose trading and shipping companies rested on wide-reaching family networks, and who transformed the Black Sea from a Transottoman space to a space of global connections.

The Danube's importance as a route for trade grew, when, in the 1829 Treaty of Adrianople, Walachia and Moldavia gained freedom of trade, while still remaining vassals of the Ottoman Empire. The same treaty opened the Danube for ships of all nations. Grain from Walachia and Moldavia was exported through the river ports of Galaţi and Brăila, located to the west of the delta. Under normal conditions, these ports could be reached by seagoing ships that enter the delta from the Black Sea. However, because of continual silting this became increasingly difficult during the first half of the nineteenth century.

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[12] Hans Halm, *Habsburgischer Osthandel im 18. Jahrhundert: Donauhandel und -schiffahrt 1781–1787* (Munich: Isar, 1954); Manfred Sauer, "Österreich und die Sulina-Frage (1829–1854)," *Mitteilungen des Österreichischen Staatsarchivs* 40 (1987): 199–206.

Austrian economic interests created a similar entanglement of river regulation and politics on the western limits of the Lower Danube. Here, the introduction of a new technology to the river, steam shipping, was decisive. In 1829, with the founding of the Donau-Dampfschiffahrts-Gesellschaft (DDSG) in Vienna, waterborne traffic became more reliable and profitable. First, the DDSG served the inner-Austrian route from Vienna to Semlin, the border city of the Austrian Empire near Belgrade, but by 1834 it was able to extend its service to Galaţi and ultimately to Istanbul. The precondition for this connection becoming quicker was regulation works at the Danube cataracts.

The following section will examine the role of the Ottoman state and its politicians in regulating the Danube, triggered by the growing trade opportunities. First, we will consider the regulation of the Danube cataracts and especially of the Iron Gate initiated by Austria, which resulted in the destruction of some of the underwater rocks from 1833 onward. In a second step, we will turn to the mouth of the Danube at which a canal was planned but not realized, although the European Commission of the Danube was successful in clearing the delta's sandbanks.

3. Regulation works at the Iron Gate

For the DDSG steamers, just as for all the other ships that had traveled on the Danube previously, the Danube gorges with the river's series of cataracts located approximately halfway between Belgrade and Vidin posed a serious obstacle. Of these, the last of the cataracts between Orşova and Turnu Severin, commonly called Iron Gate or Demirkapı Girdabı by the Ottomans, was considered the most dangerous. This was because here the river valley became wider, and the water level fell to such a low level that underwater rocks reached close to the surface and prevented the passage of ships altogether when the water level was low.

In the seventeenth and eighteenth centuries, the Ottomans named an official called *girdap ağası* whose role was to supervise the cataracts and help ships to pass through them safely. They were partly unloaded, their cargo was transferred to special boats with a flat bottom and a shallow draft, or transported by land, and local pilots steered the unloaded ships and the boats with their cargoes through the difficult passages. In addition, land crews tried to keep the ships away from the rocks with ropes. When going upriver these crews, which were recruited from local Christians,

towed the ships against the stream. For this service, the passing ships had to pay a fee, but were insured in case of an accident.[13]

The idea of easing this difficult passage through the cataracts was discussed in Austria immediately after the introduction of steamers to the river. Not only the steam-ship company but also the government – many politicians and members of the court were also shareholders – saw the potential of the Danube as a transregional route for trade and traffic. Chancellor Metternich was interested in promoting Austrian trade with Southeast Europe, and through him the plan to make the Danube more viable received support from the highest echelons of government.[14]

In 1830, Istvan Széchenyi, a Hungarian nobleman and politician, prepared an expedition to explore the possibilities of exporting Hungarian grain to Southern Europe via the Danube. Initially, he was skeptical and stated that "for us, the Danube flows in the wrong direction, and at its mouth it does not belong to us, but to others." His expedition with a ship built for this purpose in Buda was a private initiative, but coordinated with the government. According to Széchenyi's diary, the Iron Gate posed no problem for the ship; however, during the rest of the journey he was sick with malaria from which he was only able to recover after reaching Istanbul. On his way home, he preferred to take the land route, which took him 20 days from Istanbul to Belgrade.[15]

Széchenyi was a conservative reformer who wanted to stimulate Hungary's trade and economy, but also the country's transport infrastructure, by modernizing feudal laws and institutions. Many of his projects were based around the Danube, e.g., the construction of the first permanent bridge between Buda and Pest and the construction of a shipyard in Buda. Consequently, he also advocated the idea of regulating the Danube cataracts either by blowing up the rocks in the river or by bypassing them by building a canal inside the bed of the Danube, which would have enough draft all year round. Additionally, a road running along its northern shore all along the canyon was planned. In 1833, he was nominated president of the Danube Commission and, in this capacity, mostly addressed the project's political tasks such as liaising with the

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[13] M. Emre Kılıçaslan, "XVIII. Yüzyılda Tuna Demirkapısı ve Girdaplar İdaresi," *Karadeniz Araştırmaları* 25 (2010): 59–76.
[14] Miroslav Šedivý, "From Hostility to Cooperation? Austria, Russia and the Danubian Principalities, 1829–40," *The Slavonic and East European Review* 89, no. 4 (2011): 646–650.
[15] Andreas Oplatka, *Graf Stephan Széchenyi: Der Mann, der Ungarn schuf* (Vienna: Zsolnay, 2004): 190–198.

different bodies of the Austrian government and the local foreign authorities of Walachia, Serbia, and the Ottoman Empire. The Hungarian civil engineer Pál Vásárhelyi planned and executed the actual regulation works. On an extended trip through Europe, both sought the advice of other experts and thus linked the project up with the nascent community of hydraulic engineers. Among others, they met with the Russian diplomat Pëtr Mejendorf who was undertaking a very similar fact-finding mission to Széchenyi's, aimed at the regulation of the Dnieper rapids.[16] This shows that the region's geopolitical and economic restructuring went hand-in-hand and was supported by an attempt to open new routes for modern transport infrastructures.

While the regulation on this part of the Danube was an Austrian initiative, it involved a host of other international actors, because of the location of the cataracts. In a pioneering article Luminita Gatejel has pointed to the conflicts at the different administrative levels and between political entities, e.g., on the Austrian side between the central government and that of Hungary.[17] The same was true for the Ottoman side where the two dependent countries, Serbia and Walachia – the latter still under Russian occupation at that time – and the Ottoman central government had divergent positions regarding the regulation. In 1833, when the engineers realized that they could not survey the river properly from the Austrian shore of the Danube alone, and therefore wanted to cross over to the Ottoman side, they were stopped by the Ottoman authorities. While the local commander of the Ottoman fortress on the Danube island Ada Kale opposite Orşova was open to the Austrian project, the central government was hesitant. Still, the Austrian engineers were able to carry out some of the works on the Ottoman side. They even blasted some of the rocks in the riverbed, probably with the tacit agreement of the local pasha.[18] But to resume their work in full, they had to wait a full year until the Porte (i.e., the Ottoman central government) gave its permission. The frustration ran high, especially with the Austrian ambassador in Istanbul. He reported to Vienna that the Ottoman side had told him that removing the rocks from the Danube was against God's will. It is particularly odd that he ascribed this view to Pertev Efendi, the Ottoman minister of the interior and early representative and sponsor of the reform movement. In

[16] Luminita Gatejel, "Overcoming the Iron Gates: Austrian Transport and River Regulation on the Lower Danube, 1830s–1840s," *Central European History* 49, no. 2 (2016): 172–174.
[17] Gatejel, "Iron Gates," 168–172.
[18] The Pasha of Vidin's report to Istanbul would give valuable hints as to his view of the situation. Unfortunately, I have not been able to see the respective document in the Ottoman Archive, Istanbul, HAT 1200/47107 dated AH 1249 (=1833/1834).

hindsight, it is hard to tell who was fooling whom with this story, if it were not an outright invention of the Austrian ambassador. Other reports seem more reasonable, which state that the Ottoman government did not subscribe to the Austrian argumentation that the works would be economically beneficial for all, but rather saw the matter from a military point of view, and feared that a warship could sail down the river just as easily as an Austrian passenger ship once all obstacles were removed. However, when the Austrians asked the Russians for support in the matter of the Iron Gate, at the very end of 1834 the Ottomans gave their consent to continue the works.[19]

For the Ottoman government, this cautious cooperation paid off in several respects. It would be seen as doing Russia a favor, its principal ally against Mehmed Ali, the ruler of Egypt who threatened the Ottoman position in Syria. At the same time, as it turned out, also after the regulation, the Iron Gate remained a formidable obstacle. Vásárhelyi was able to blow a small passage through the cataracts, through which the Austrian steamers could pass. But this was possible only when the water level was high enough. Like Hayrullah Efendi, who traveled up the Danube to Vienna in the 1860s, passengers usually had to change at Orşova from one steamer that operated on the Upper Danube, to the other on the Lower Danube. Under these conditions, not only were special boats used, but the new road on the left bank of the Danube also proved very important for the transport of passengers and goods from one ship to the other.[20] In the decades following the first regulation of 1834, there were several plans to make the Iron Gate passable for big steamers too; but only in the 1890s this was finally achieved by blowing up the last rocks and building a dam in the riverbed, which separated a bypass channel.[21]

The regulation of the Iron Gate has been retold here in detail, because it happened at a time when Ottoman statesmen began to adopt a modern understanding of infrastructure and because it opened the door to a string of projects in this field. In the 1830s, the sultan's policy of asserting his own role and that of the central state against political rivals such as provincial power holders as well as the Janissaries, as representatives of the traditional military, had finally been successful. The Ottoman civil bureaucracy emerged as the leading group to shape the empire's future

[19] Šedivý, "Hostility," 648–650.
[20] Hayrullah, *Seyahatname*, 18.
[21] G. Luther, *Die Regulierung der Katarakte in der unteren Donau (Eisernes Thor)* (Braunschweig: Meyer, 1893).

political structure. Together with a new understanding of political authority, and the practical functioning of government, this group also promoted new economic policies in which the modernization of the country's infrastructure played an important role. In his writings, one of the leading politicians from the civil bureaucracy, Mehmed Sadık Rifat Pasha (1807–1858), advocated state investment in roads so as to give the population the opportunity for economic development. As an Ottoman ambassador to Vienna from 1837 to 1839, he was influenced by cameralist ideas about economic development, which were similar to those held by Széchenyi. In the 1840s, as president of the Supreme Council (Meclis-i Vala), a new institution in the central administration, as an official in the Ministry of Public Works (Nafia Nezareti), and as member of the Reform Council (Meclis-i Tanzimat), Sadık Rifat decided on and oversaw many infrastructure projects. These mostly concerned the empire's main road connections, to which railroads were added only in the 1850s. Another newly created institution, the Ministry of Trade and Public Works, was also responsible for the regulation of rivers. In the 1856 reform decree, the sultan even declared the construction of roads and canals a state goal.[22]

To sum up, from the 1830s to the end of the century, alongside changing understandings of political authority and legitimacy, infrastructural development became an important state goal. As a result of the Ottoman politicians' adoption of a modern understanding of infrastructure and infrastructural governance, the Ottoman Empire was increasingly involved in international infrastructure projects as the next section will demonstrate.

4. Regulation of the Danube Delta

The idea of regulating the mouth of the Danube arose at approximately the same time as the regulation of the cataracts, but initial steps were taken later because here the political situation was even more complicated. The 1829 Treaty of Adrianople had given Russia the entire Danube Delta including the Sulina (Sünne) river branch, the only one through which seagoing ships could pass relatively easily. Almost immediately, Austria and Britain, the two main trading nations on the Danube, began to blame the Russian authorities for having taken

[22] Ali Akyıldız, "Sâdık Rifat Paşa," *Türkiye Diyanet Vakfı İslâm Ansiklopedisi* 35, 400–401; Florian Riedler, "Crossroads Edirne: Building Modern Infrastructures on Ancient Routes," in *The Heritage of Edirne in Ottoman and Turkish Times: Continuities, Disruptions and Reconnections*, ed. Birgit Krawietz and Florian Riedler (Berlin: DeGruyter, 2020), 438–446.

advantage of the situation by hindering the free passage of merchant ships, which the treaty guaranteed. According to these allegations, the Russian authorities took illegal fees, implemented quarantine in an excessive manner and, most importantly, neglected the river channel's maintenance. The situation was negatively compared with the period before, when the Ottoman authorities had dredged the channel regularly. Despite the Russians' pragmatic attitude in allowing a dredging ship to operate, the situation did not change fundamentally until the Crimean War.[23]

The diplomats and merchants who objected to the Russian possession of the delta also looked for other solutions. One involved cooperation with the Ottoman Empire to a much higher degree than had been present with the cautious works at the Iron Gate: this was the project of building a canal from the Danube to the Black Sea through the Dobruja region, which bypassed the delta in the south. Apparently, by the 1830s merchants in Hungary had discussed such a solution. In 1837, the British Foreign Office sent a fact-finding mission to the region, and also the Ottoman government, which was negotiating with the DDSG about the possibility of building such a canal, sent a group of officers from the Prussian military mission in Istanbul to Dobruja. Most of the contemporary reports, except for one by an Austrian military engineer, warned of the high costs the building of a canal would incur. Thus, the negotiations ended without any conclusive results, perhaps also because Russian diplomats in Istanbul were working to stop the canal project.[24] Instead, starting from 1840, the DDSG transported luggage and freight by road from Boğazköy (Cernavodă) on the Danube to the Black Sea harbor Köstence (Constanţa), in order to bypass the delta at times when low water prevented shipping.[25]

The canal plan was back on the agenda when political tensions between the Ottoman Empire and Russia mounted at the beginning of the 1850s. On this occasion it was also supported by Romanian reformers and intellectuals, such as Ion Ionescu (1818–1891) and Ion Ghica (1816–1897), who were residing in Istanbul after the failed 1848 revolution.[26] Together

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[23] Sauer, "Sulina-Frage," 185–196.

[24] Constantin Ardeleanu, *International Trade and Diplomacy at the Lower Danube: The Sulina Question and the Economic Premises of the Crimean War (1829–1853)* (Braila: Editura Istros, 2014), 185–190.

[25] *Vereinigte Ofener-Pester Zeitung* (8 March 1840): 190.

[26] Mihail P. Guboğlu, "Boğazköy-Köstence Arasında İlk Demiryolu İnşası (1855-1860)," in *Çağını Yakalayan Osmanlı! Osmanlı Devleti'nde Modern Haberleşme ve Ulaştırma Teknikleri*, ed. Ekmeleddin İhsanoğlu and Mustafa Kaçar (Istanbul: İslam Tarih Sanat ve Kültür Araştırma Merkezi, 1995), 221–223.

with other options such as different railway schemes, the Ottoman council of ministers discussed the canal once again, as did a commission in the Ministry of Trade. The various councils and ministries – particularly the Supreme Council (Meclis-i Vala) and the Council of Reforms (Meclis-i Tanzimat), which had been founded in the 1840s and 1850s, offered the institutional framework to discuss and take decisions on the modernization of infrastructure.[27]

In his article, Erdoğan Keleş presents in detail the negotiations of these institutions with foreign engineers and investors, with both sides now reproducing the discourse of economic development. Especially British engineers, some of whom came to the country during the Crimean War, were submitting such projects. The legal instrument needed to realize them was a concession, which gave a company the right to build and run a certain infrastructure. Such concessions were often awarded for a long period, e.g., for 99 years, after which the infrastructures would fall to the Ottoman state. Construction costs were usually shared between the company side and the Ottoman side; the latter often also granted land, provided labor, or both. The company usually retained profits, and in some concessions, the Ottoman state even guaranteed a certain annual profit in case of losses.

In the case of the Danube–Black Sea canal, the Ottoman administration was presented with no less than three project proposals between 1853 and 1855, some of which also included a railway line.[28] Finally, in 1856, after complicated negotiations, a company founded by a group of English, French, and Austrian investors won the concession to build the Abdülmecid Canal (Mecdiye Cedveli), named after the sultan. The canal was advertised as benefiting mainly the Ottoman lands along the Danube and rescuing them from the Russian economic stranglehold at the mouth of the Danube. Also, the fact that Sadık Rifat Pasha – one of the company's founders on the Ottoman side – was to receive a total of three percent of the company's annual profits may explain why this group was given the concession.[29]

However, as with many other infrastructure projects, the Abdülmecid Canal was never built, despite a company having been founded, a

[27] Erdoğan Keleş, "Sultan Abdülmecid Döneminde (1839–1861) Tuna-Karadeniz Arasında Kanal Açma Teşebbüsü," *Çanakkale Araştırmaları Türk Yıllığı* 16, no. 25 (2018): 174–175.
[28] Keleş, "Kanal," 177–191.
[29] Ibid., 193.

concession issued, and the Ottoman government having begun the expropriation of the land along the planned course of the canal. The reason for this was that a little while after the canal concession had been granted, the British investors in particular wanted to change it into a railway concession. They had to renegotiate and were successful in obtaining a concession for a railway linking the Danube to the Black Sea along the same route and the construction of a new harbor at Köstence. The railway concession's stipulations were more favorable to the Ottoman side. The railway company immediately started construction and was able to open the line, which Hayrullah used on his way to Vienna two and a half years later in October 1860, as the first railway in Ottoman Europe. For John Trevor Barkley, the leading engineer of the project, it was a successful start to his career. Together with his three brothers, he built or planned a number of other railways in the Danube region such as the Rusçuk–Varna line and the Giurgiu–Bucharest line.[30]

The history of the planning of the canal and railway is indicative of the entwined nature of transport infrastructures. Water and land transport cannot be assessed in isolation, but for travelers and goods both are combined on larger routes.

The failing canal project was not only substituted by the railway line, but also by the improvement of shipping in the Danube Delta, which made it redundant. The Russian defeat in the Crimean War (1853–1856) offered the opportunity for an experiment that combined infrastructure development with the river's internationalization, following the example of the Rhine after the Congress of Vienna. While the right to free shipping on the river was maintained, the Russians had to cede the delta to the Ottoman Empire. Moreover, the seven states involved in the war (Britain, France, the Ottoman Empire, Piedmont, Prussia and Russia) together formed the European Commission of the Danube (ECD), which was charged with implementing measures to ensure passage through the delta. Originally envisaged for just two years, the commission was continued because the regulation proved complicated. While the chief engineer proposed turning the southernmost branch of the Danube into the main shipping canal, provisional works – which had begun at the middle Sulina branch – ultimately proved successful. It was possible to raise the water level with two dams that were completed at the beginning of the 1860s

[30] J.H. Jensen and Gerhard Rosegger, "British Railway Builders along the Lower Danube, 1856–1869," *The Slavonic and East European Review* 46, no. 106 (1968): 105–128; Keleş, "Kanal," 198–200; also cf. Boriana Antonova-Goleva's article in this issue.

leading into the sea, and so even large ships could pass the sandbanks at the mouth of the river most of the time. By 1817, an Ottoman fortress engineer had proposed a very similar solution, but his plan was never implemented.[31] Until the First World War, the ECD continued overseeing traffic and infrastructure development in the delta. It was one of the first international expert commissions that became an example for similar forms of cooperation among experts.[32]

Ottoman participation in the commission was characterized by a fundamental dilemma. On the one hand, the Ottoman state wanted to assert its territorial rights over the delta that it had just won back from Russia. Therefore, it insisted that the Ottoman delegate, Ömer Fevzi Pasha, a general who had spent some time in Vienna for his education, acted as president of the commission. For the same reason, it was also keen to see the commission come to an end after two years and its tasks be taken on by a commission of the riparian states, which existed in parallel. On the other hand, the commission offered an arena in which the Ottoman state could participate in the "European Concert," to which it had been formally admitted by the Paris Peace Treaty at the end of the Crimean War. Moreover, Ottoman officials had a good understanding of the economic advantages that the regulation works in the delta would give to their country, especially as concerns the export of grain from the Danubian lowland. Therefore, the Ottomans continued to work in the ECD, offered a loan so that it could start the works and provided material support in the form of building material.[33]

Furthermore, the abovementioned commission of the riparian states (Württemberg, Bavaria, Austria, the Ottoman Empire with two additional delegates for Serbia and Walachia), offered another arena of international cooperation. In 1871, Austria and the Ottoman Empire, as the principal members of this commission, collaborated on a new plan for the regulation of the Iron Gate. However, this regulation was never implemented, because the Ottoman Empire ceased to be a riparian state after 1878.[34]

Even Hayrullah Efendi's tourist guide broached these issues of international prestige with its readers: "Because most of the places the

[31] İlhan Ekinci, "Tuna Komisyonu ve Tuna'da Ticaret (1856–1883)" (PhD diss., Samsun, Ondokuz Mayıs Üniversitesi, 1998): 19–20.
[32] Gatejel, "Imperial Cooperation."
[33] Ekinci, "Tuna Komisyonu," 120–155.
[34] Ibid., 176–179.

Danube crosses from its source to its mouth belong to the Ottoman Empire, the presidency of the commission founded by the states along its shores should have belonged to the Ottoman state [...] In fact, I am very interested in the question of how to profit from the Danube (and therefore I have thought a lot about it)."[35] It is possible that Hayrullah, who started his career in the Ottoman Imperial Medical School and later became its director before being employed in other government councils, even had firsthand professional experience of this question.

In the above examples concerning the regulation of the Danube Delta, the Ottoman Empire mostly played the role of a cooperation partner either with international investors or the European Powers. However, in the Lower Danube region it also experimented with a new approach to developing its own territory in order to reinvent itself as a modern infrastructure state. This approach was spearheaded in the Danube Province, which was founded in 1864.

5. The Ottoman Danube Province

The Danube Province (Tuna vilayeti) in many respects grew out of the logic of the Tanzimat, i.e., the reform program that the Ottoman administration had proclaimed in 1839. The new province was an instrument of centralization, because it united several smaller provinces under one governor who answered to the authority of Ottoman central government. At the same time, the councils that were created on its various administrative levels opened a way for better representation of the local population, which was mostly Christian. Thus, these councils can also be seen as an Ottoman-government instrument in fighting nationalism in the Balkans.[36]

Besides this administrative logic, the new provincial administration – tested on the Danube and later exported to other parts of the empire – was also to implement the economic goals of the Tanzimat. While in the 1840s

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[35] Hayrullah, *Seyahatname*, 16–17: "İşbu Tuna nehirinin menba'ından munsabbına kadar dolaştığı yerlerin a'zam-ı kıt'ası memâlik-i devlet-i Osmaniyye dâhilinde olmakla, nehrin idaresine Tuna etrafında bulunan devletler taraflarından bir komisyon teşkil olunmuş olsa riyaseti devlet-i Osmaniyye'nin hükmünde olmak lâzım gelir iken, [...]. Zira Tuna'dan istifade etmek maddesi benim ziyadesiyle heves eyeldiğim bir madde(dir) (olduğundan bu bâbda pek ziyade sarf-ı efkâr onlunmuştur.)"

[36] Roderic H. Davison, *Reform in the Ottoman Empire, 1856–1876* (Princeton: Princeton University Press, 1963): 142–159; İlber Ortaylı, *Tanzimattan Cumhuriyete Yerel Yönetim Geleneği* (Istanbul: Hil, 1985): 56–61.

infrastructure projects were mostly restricted to modernizing important road connections from ports to the hinterland, in the 1860s the Ottoman administration tried to spread and deepen these measures. In 1861, Midhat Pasha, an official in the central administration, was appointed as governor of the province of Niş (Niš) at the border to Serbia. He started a modernization program of the road network and the transport system there by founding a coach company, which linked the border city to Sofia and Filibe (Plovdiv). Under Midhat's governorship, urban infrastructures were also overhauled and he tried to strengthen the local economy by founding vocational schools for orphans (*Islahane*) and a local fund (*memleket sandığı*) that gave credit to farmers at moderate rates of interest.[37]

To develop this new approach to provincial administration, in 1864 the Danube Province was formed by combining the smaller provinces of Niş, Sofia, Vidin, and Silistre and appointing Midhat as its governor. Thus, the province comprised the whole Ottoman shore of the Danube from the delta to the Iron Gate at the Serbian–Ottoman border and the lowland as far as the Balkan mountain range. The only part of the new province not linked to the Lower Danube was Niš, and consequently it was separated a few years later in a territorial reform.

As governor of this exceptionally large province, Midhat continued the program he had earlier pursued. Apparently more than 3,000 kilometers of new roads and around 1,400 bridges over smaller rivers were built during his three and a half years in office. A coach company ensured a connection between the province's capital Rusçuk (Ruse) and the inland cities in which new streets, markets, prisons, barracks, and other official buildings were constructed. In 1866, a railway line that connected the provincial capital with Varna on the Black Sea was opened, which had been planned and built by the engineers who had also built the Boğazköy–Köstence line. Apparently, Midhat also planned other lines, e.g., one from Plevna (Pleven) to Niğbolu (Nikopol), which included a new Danube port to be called Sultaniye. However, this project was not pursued further under Midhat's successors.[38]

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[37] Nejat Göyünç, "Midhat Paşa'nın Niş Valiliği Hakkında Notlar ve Belgeler," *Tarih Enstitüsü Dergisi* 12 (1982): 279–316.

[38] Milen V. Petrov, "Tanzimat for the Countryside: Midhat Paşa and the Vilayet of Danube, 1864–1868" (PhD diss., Princeton, 2006), 111–133; Felix Kanitz, *Donau-Bulgarien und der Balkan: Historisch-Geographisch-Ethnographische Reisestudien aus den Jahren 1860–1879*, sec. ed. (Leipzig: Benger, 1882), 2:67.

While the railroad construction was still organized through the model of a concession owned by a foreign company, the provincial government could plan and build its roads by relying entirely on its own resources. Local peasants were obliged by law to do the heavy earthmoving labor. The first Ottoman provincial newspaper, the bilingual *Tuna/Dunav*, published in Rusçuk by the provincial government, publicly justified this measure with the argument that peasants would profit most from better roads.[39] For the planning and supervision of the works, the Danube Province employed its own engineers. In addition to Ottoman engineers, it could also rely on a group of Polish engineers who had gained asylum in the Ottoman Empire after the failed revolution of 1863.[40] As with Hungarian political refugees after the failed revolution of 1848, it was the political neutrality of the Ottoman Empire that made it a convenient place of exile. At the same time, it demanded skilled workers and had a long tradition of integrating foreign experts.

Because the province stretched all along the Danube from Vidin to the delta, the river as a waterway also played a role in Midhat's development plans. Before, only the Ottoman Navy had attempted to operate ships on the Danube, but their draft proved too large to effectively run when the water level was low. Therefore, as with the coach company, a steamboat company, the İdare-i Nehriye, was established by the Danube Province administration. In addition, for a few years a private Ottoman company owned by two Bulgarians also operated with one ship on the river. In parallel, the wharf of the provincial capital Rusçuk as well as the ports of the other cities on the river were modernized. By the 1870s up to seven smaller steamboats had been purchased from England and Austria and were used for military as well as civilian purposes. They were never serious competition for the DDSG service, but they made the Ottoman administration more independent. Most importantly these boats served between Rusçuk and the Romanian side at Giurgiu. In this way, they established a missing link for the Orient Express from Paris to Istanbul, which ran via Vienna, Pest, and Bucharest to Giurgiu, from where passengers used the Rusçuk–Varna railroad, before continuing by steamer to Istanbul.[41]

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[39] Petrov, "Tanzimat", 134-139.

[40] These were the engineers Karol Brzozowski, Gavronijski, and Menejko, cf. Ortaylı, *Yerel Yönetim*, 57 and Kanitz, *Donau-Bulgarien*, passim. A certain Zagorski Efendi was the acting president of the commission of public works (*nafia komisyonu*) of the province; cf. *Salname-i Vilayet-i Tuna* 1 (1285): 25.

[41] Ekinci, "Tuna Komisyonu," 75–93.

In the Russian–Ottoman war of 1877–1878 the Ottomans lost the Danube Province and the river became the border between the newly independent states of Serbia, Romania, and Bulgaria. Only Ada Kale was forgotten in this territorial reorganization, and it remained an Ottoman enclave until the end of the empire in 1923. Most of the ships of the Ottoman Danube fleet had been sunk by their captains to prevent them from falling into Russian hands. After the war, only a few could be recovered and began to serve in Izmir.[42]

6. Conclusion

For the Ottomans, the Danube served as a border, but also as a means of communication and transport, although these functions were restricted by the river's prevailing natural conditions. Especially the Lower Danube was a connecting region between the Ottoman Empire and its northern neighbors such as the tributary states of Transylvania, Walachia, and Moldavia as well as Poland–Lithuania and Russia. Because of the geopolitical, economic, and technological developments of the eighteenth and nineteenth century, these older Transottoman connections with Central and Eastern Europe were increasingly substituted by global ones. Typically, for Hayrullah the Danube was a path to Central Europe as the gate to the West. After 1878, the Danube even lost this function, when in 1888 the direct rail link from Istanbul via Belgrade to Vienna was completed.

The infrastructures that were planned and constructed in the Danube region to connect it with the wider world were heavily dependent on European capital and know-how. But, as a state bordering the river, the Ottoman Empire had to be involved in the planning and construction. In the Danube Province it developed a framework and a testing ground for an independent infrastructure policy. Because the other states and political entities in the region were in a similar condition, we can witness numerous instances of cooperation and exchange of knowledge and personnel in the field of infrastructure development. These continued the older forms of Transottoman exchanges, which were now integrated in larger, global circuits.

On a larger level, the Danube played an important role in the formation of an ideology of infrastructure and its implementation in the form of modern infrastructural governance. As much as it provides

[42] Ibid., 92–93.

practical information for travelers, Hayrullah Efendi's *Travel Book* also offers a good example of this ideology.[43] In general, it celebrates European achievements in culture, education, and wealth, and illustrates the overall goal of the Tanzimat. In practical terms, traveling to Europe means studying the development model for the Ottoman Empire. In his conclusion, Hayrullah also offers his readers a method for how to deal with the obvious discrepancies between progress abroad and backwardness at home. Anger and frustration are understandable, says the author, but not a productive way forward. Instead, Hayrullah reminds his readers that even in Europe the achievements of that time stand at the end of a long process, and he stresses what had already been achieved during the process of Ottoman reform. First, he enumerates the promises of the Tanzimat, the freedom of possession, life, and honor. But, as if sensing the emptiness of these slogans he continues to give more material proof of progress in the Ottoman Empire:

> Did they not start three years ago to build railways in your country, the Ottoman Empire, like in Europe, where they simplified traveling and the transport of goods? And did they not also for ten years extend telegraph lines in all parts of the empire, which ten years ago amazed you by conveying news from the whole world in an instant. And similarly, did they not also found new factories and steam companies, which are the result of security and trade, in your fatherland, the Turkish land?[44]

This list of achievements demonstrates the central position that real material progress in the field of transport infrastructure and the economy had acquired. And, as Hayrullah's own travels show, the Danube was an important area in which such progress became manifest.

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[43] Caspar Hillebrand, "Narrative Strategien der Autor-Leser-Identifikation in Vor- und Nachwort von Hayrullah Efendis Europareisebericht (1863/64)," in *'Wenn einer eine Reise tut, hat er was zu erzählen': Präfiguration – Konfiguration – Refiguration in muslimischen Reiseberichten*, ed. Bekim Agai and Stephan Conermann (Berlin: EB-Verlag, 2013), 119–150.
[44] Hayrullah, *Seyahatname*, 190–191.

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