

Subalterns and 'ghosts' behind Kiepert's maps of the Anatolian peninsula (1830s-1890s)

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Abstract: Although they are discussed less frequently than his maps of the Balkans, Heinrich Kiepert's maps of Anatolia, and those of the Aegean coast in particular, nevertheless occupy a prominent place in his work. First published between the 1840s and the 1890s, Kiepert's maps reflect the way in which the German "classical Orient" depicted by Said (Said, 1978) became increasingly "real" over the years and emerged as a target for strategic and imperialist penetration. While their archaeological orientation tended to eclipse their ties to the German and Ottoman military, this analysis reveals how civil and military investigations were intertwined from the outset, and linked to a desire for national prestige. Based on the archives of the State Library in Berlin, the Secret State Archives of the Prussian Cultural Heritage Foundation and the Ottoman State Archives, this article aims to highlight the ambivalence and different facets of Heinrich Kiepert's cartographic project in Anatolia. The context of his work will be analyzed in order to understand the conditions under which his cartography was produced and the transimperial exchanges that shaped it.

Keywords: Heinrich Kiepert, Carl Ritter, Asia minor, Anatolia, transnational cartography, 19th century

1. Introduction

Among the territories mapped by German cartographer Heinrich Kiepert (1818-1899), the Ottoman Empire takes pride of place. The Aegean Coast, and in particular the island of Lesbos, was the main focus of his fieldwork: indeed, he travelled there four times between 1841 and 1888. These trips offered him a unique opportunity to practice field cartography and refine his methodological and practical approaches to land surveying. Still renowned today for its breadth and immense erudition, Heinrich Kiepert's cartographic production has often been celebrated as the fruit of one man's genius, but much as he was indeed a major actor of this impressive work, the huge number of maps he succeeded in producing raises questions about the material conditions he benefited from and the actors who helped him. It also brings up a related point: who were the invisible assistants, the 'ghosts' behind Kiepert's maps of Anatolia, and how did Kiepert himself perceive them?

Our objective is to analyze how Kiepert's maps were produced by intertwined networks that blurred an excessively simplistic national and imperial inscription. At the instigation of Kapil Raj, the methodological nationalism that has in some ways influenced the history of cartography can be deconstructed by focusing on "the material, cultural, and circulatory processes involved in [the] conception [of the map]" (Raj, 2007, p. 22). Our aim is to trace a chain of producers and consequently a network of exchanges and circulations, by analyzing

correspondence, field notebooks and drafts annotated by Kiepert¹.

In this article, we will first outline the main phases of Heinrich Kiepert's cartography of the Anatolian peninsula by placing it in its intellectual context of philhellenism and missionaryism. We will then highlight the political and military support his work received in Prussia (and later in Germany) and the close relations he enjoyed with the military expeditions sent by Berlin to Istanbul. Finally, we will show the hidden participation of the Ottomans in this cartography and how Kiepert viewed this "extra-European" contribution.

2. Mapping the places of antiquity: the influence of philhellenism and biblical geography

Heinrich Kiepert was first trained in the cartography of antiquity at the Joachimsthal Gymnasium. He was then spotted by the geographer Carl Ritter (1779-1859) while he was a student at the University of Berlin. He was commissioned to illustrate the last volumes of the universal geography (*Die Erdkunde*), which Ritter devoted to Western Asia. Ritter, who was a Lutheran, promoted exploration in the Eastern Mediterranean in order to improve his knowledge of biblical geography. Kiepert, who later married a pastor's daughter, Sieglinde Jungk (1819-1900), was also influenced by Protestant theology. He began with a map illustrating the research of Edward Robinson and the Protestant missionary Eli Smith in Palestine. The 1:200,000 map was issued in 1838 by the publisher Waisenhaus in Halle, where Carl Ritter's brother Johannes worked. This pietistic publishing house had ties

¹ This work is mainly based on printed and manuscript sources kept in the Berlin archives (Staatsbibliothek Berlin, SBB, Geheimes Staatsarchiv Preußischer Kulturbesitz, GStA PK, Deutsches Archäologisches Institut, DAI). Some of the

documents are in the Ottoman State archives (Başbakanlık Osmanlı Arşivi; BOA). The quoted sources are referenced in the notes. For a detailed list of the sources, see Débarre 2016.

to the German Protestant missions, especially in Asia and Russia.

Carl Ritter was appointed as director of the Royal Prussian Institute of Cartography by Friedrich Wilhelm IV. He was responsible for developing the map collections in Berlin, for which he used the publisher Dietrich Reimer, who hired Kiepert in 1852. The location of the map publishing house in Wilhelmstrasse 73, not far from the University, the Academy and the Royal Library, was a reflection of the synergy between royal power, art and science (Trautmann-Waller, 2007, p. 1189). A wave of philhellenism had been growing in the Germanic states since the 18th century, and Ancient Greece had been a central part of the curriculum since the Prussian school reform of 1810 (Marchand, 1996). In Berlin, interest in the archaeology of the Orient was growing, driven by an increase in philological and historical research at German universities; however, only a few scholarly trips were organized and sponsored in the first half of the 19th century². Heinrich Kiepert was fortunate enough to be assigned to a funded mission in 1841-1842 led by the philologist August Julius Schönborn and the entomologist Friedrich Hermann Löw. The two scholars wanted to go to Lycia (in the modern region of Antalya), where the British were excavating the site of Xanthos under the leadership of Charles Fellows. With the support of Friedrich von Eichhorn, the Minister of Public Instruction and Worship, and Ignaz von Olfers, the Director General of the Royal Museums, the Prussians had the task of discovering antique remains³.

While preparing for his trip, August Schönborn complained about the lack of accurate maps of Asia Minor, and Kiepert was charged with making original topographic surveys. Their routes diverged however, and Kiepert did not follow his colleagues as far as Lycia, opting instead to travel to Lesbos with his translator in the autumn of 1841. He worked meticulously on the Aegean island, which would be his principal investigation site, focusing on landscape surveys and descriptions of the field. The synthesis map of Asia Minor he published on his return to Berlin was not just the result of his observations: he compiled about a hundred itineraries of European travelers, most of which were taken from British and French publications, in order to represent the landscape of the peninsula as accurately as possible⁴. This small-scale map (1:1,000,000) was first sold in 1844 by Simon Schropp in Berlin (see Figures 1a and 1b) and was then published in different editions, one of which, a reduced version, was presented at the Universal Exhibition in Paris in 1855 and sold at a price of one and a half thaler⁵. This simplified product, which was less expensive for the public, had greater sales potential for the publishers. Recommended by the guidebook Joanne, Kiepert's map of

Asia Minor became a must-have for travelers, although they continued to complain about its errors and approximations.

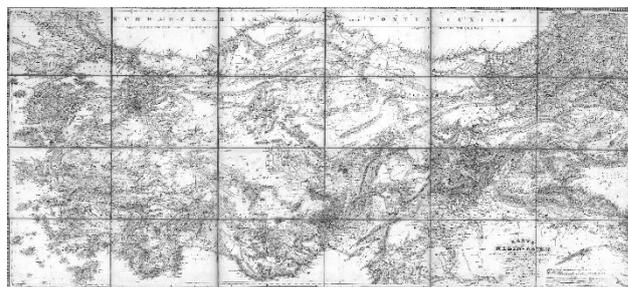


Figure 1a: Heinrich Kiepert's *Map of Asia Minor* on six sheets, 1844. To keep its location secret, Kiepert chose not to show the Heroön of Trysa, a monument his colleagues had discovered in Lycia and could not bring back to Berlin. They were worried that the site would be excavated by the English, whose logistics far surpassed those of the Prussians. Kiepert later helped the Austrian expedition led by Otto Benndorf, Georg Niemann and Felix von Luschan, who rediscovered the site in the 1880s and exported the results of their archaeological excavations to Vienna (Szemethy, 2005).

Source: H. Kiepert, *Karte von Kleinasien*, Berlin, Simon Schropp, 6 Blätter, 154x68 cm, 1:1 000 000, 1844 – French Institute for Anatolian Studies, Istanbul.



Figure 1b: Detail from Heinrich Kiepert's *Map of Asia Minor* on six sheets, 1844

Source: H. Kiepert, *Karte von Kleinasien*, Berlin, Simon Schropp, 6 Blätter, 154x68 cm, 1:1 000 000, 1844 - Staatsbibliothek zu Berlin, Kart. D 5050 - Blatt 4.

This trip was Kiepert's first field experience and formed the basis for his cartographic work on the Anatolian peninsula, which he pursued until the end of his life. In addition to field practice, which included sketches and zenithal plans, Kiepert carried out place-name enquiries with the help of Ottoman guides. His linguistic training focused on the languages of the Ancient East (*Altorientalistik*), which were useful for knowledge of the

² Mainly one by Freiherr von Minutoli (1820-1821) and Richard Lepsius (1842-1845) in Egypt.

³ Letter from Ignaz von Werther to Baron von Werther, July 26, 1841: "Three young scholars, Mr. Kiepert, Mr. Schönborn and Mr. Löw, have come together to [...] make a journey to the less visited regions of the Orient, from which it is hoped, with good reason, to obtain the most magnificent results".

(Geheimes Staatsarchiv Preußischer Kulturbesitz, GStA PK, I. HA, Rep. 81 Gesandtschaft Konstantinopel, XI, No. 27).

⁴ Heinrich Kiepert, *Memoir über die Konstruktion der Karte von Kleinasien und türkische Armenien*, Berlin, Simon Schropp, 1854, pp. 119-164.

⁵ Heinrich Kiepert, *Map of Asia Minor*, two sheets, 1:500,000, 81x45 cm, Berlin, Dietrich Reimer, 1854.

Bible and were conceived as propaedeutics for theology: Arabic, Hebrew, Chaldean, Aramaic and Syriac. Modern Eastern languages were not considered to be valuable at the university, and linguistic learning was not used for communication purposes (Rabault-F Feuerhahn, 2008).

Kiepert primarily focused his work on mapping antique regions. His initial project was to make a historical atlas of the Greek world, and not an atlas of the Ottoman Empire like the one published by Jean-Jacques Hellert in 1843 to illustrate the translation of Joseph von Hammer-Purgstall's *History of the Ottoman Empire*. However, his research interest gradually turned towards Ottoman administrative realities such as administrative districts, which were reformed in the mid-1860s. Although he used exclusively European sources at the beginning of his research, Ottoman administrative documents became crucial in the last third of the century, and even though the quality of the information they contained was still a matter of debate, the relevance of their use in cartography was by now agreed on. Since the "General Map of the Ottoman Empire", which Kiepert published in 1867, his knowledge of the administrative geography of the Empire had increased, and only the limits of the smallest administrative districts, *kaza* and *nahiye*, still remained unclear to him. However, in an 1884 article, he pointed out that the administrative divisions of political territories were not the purpose of geographical science, and that the rationale of these studies was still subjects related to historical geography⁶. In his view, the "changing" administrative boundaries were too ambiguous⁷.

He maintained a deep interest in antiquity until the end of his life, as can be seen from his close relations with archeologists. His second trip to the Near East, which began with the inauguration of the Suez Canal, to which he was invited by Napoleon III, was unexpectedly halted by the outbreak of the 1870 war, but he had enough time to travel to Palestine, Cyprus, Rhodes and Caria before returning to Berlin via Smyrna. His extensive network of correspondents in the Ottoman Empire allowed him to continue his cartographic work from Berlin until he returned to the Ottoman Empire sixteen years later.

German unification and the ensuing political and economic development gave him the opportunity to make two further trips to Asia Minor in the 1880s (Wulf, 1999, pp. 63-78). On his first trip in 1886, he visited the archaeologist Carl Humann (1839-1896), with whom he had been corresponding regularly for several years, in Bergama⁸. He also met the Ottoman painter and archaeologist Osman Hamdi Bey (1842-1910), who had just passed a law on the protection of ancient remains in the Ottoman Empire, and who had initiated the creation of an archaeological museum in Istanbul. Kiepert rode for days to identify archaeological locations in the Smyrna

region, and returned to Lesbos, then Magnesia and Smyrna, where he embarked for Germany in November 1886. In the spring of 1888, he traveled to Aydin and again to Lesbos, which allowed him to publish two new maps of the island upon his return to Berlin. The second of these maps illustrated the work of the German archaeologist Robert Koldewey (1855-1925), who was excavating on the Aegean coast at the time before turning his attention to Mesopotamia.

Kiepert would use this accumulation of data to produce his "Special Map of Asia Minor", which was begun in the 1880s and first published in 1890 (Figure 2). Although this map was initially intended to benefit archaeologists, and remained known for this reason, it was later also used as a basis for military cartography, as we will see in the following section.

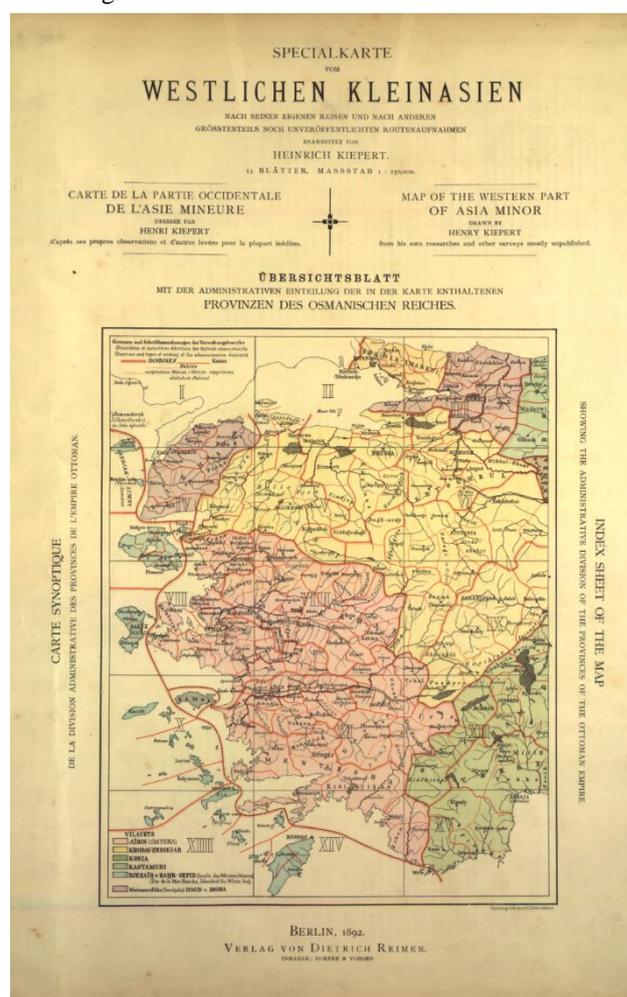


Figure 2: Heinrich Kiepert, *Special map of Western Asia Minor*, Berlin, Dietrich Reimer, 1890-1892.

Source: H. Kiepert, *Spezialkarte von westlichen Kleinasien*, Berlin, Dietrich Reimer, 15 Blätter, 1:250 000, 1890-1892 – French Institute for Anatolian Studies, Istanbul.

⁶ Heinrich Kiepert, "Die gegenwärtige Administrativ-Eintheilung des Osmanischen Reiches", *Zeitschrift für allgemeine Erdkunde*, vol. 19, 1884, pp. 405-410.

⁷ Heinrich Kiepert, "Notice", *Spezialkarte der westlichen Kleinasien (1/250 000)*, 15 sheets, 61x49 cm, Berlin, Dietrich Reimer, 1890.

⁸ Most of the letters are archived in the German Archaeological Institute in Berlin, DAI "Nachlass Heinrich Kiepert".

3. Enduring connections with the military and public institutions

When Heinrich Kiepert published his first maps in the late 1830s, Prussia was only a second-class power in the European political arena. Confined to a minor role by the Metternich system, its voice had little impact in Europe and even less of one in the East. At the beginning of the 19th century, its navy's limited capacity greatly restricted the opportunities for economic and political investments, and consequently its ability to develop abroad, from a military point of view as well as from the standpoint of State-organized expeditions or scientific voyages. The pre-eminence of England at the time was particularly evident in its capacity to finance scientific travels. Although Prussia did not have as many resources at its disposal, it nevertheless attached great importance to establishing its influence in Europe and the Ottoman Empire. The new German customs union (*Zollverein*) was seeking outlets for its manufactured goods and raw materials for its industries. The Prussian Ambassador in Istanbul therefore asked Prussian scholars to take advantage of their first trip in 1841-42 to "support the efforts of the Prussian government" and the "young Zollverein (...) to expand towards the East"⁹. This was probably due to the influence of Friedrich List's National-Ökonomie, which argued that Germany's economic future lay in the East, in Central Europe, in the Eastern Mediterranean and in Asia Minor in particular. Scholars, ministers, diplomats, businessmen and soldiers placed their energies in the service of German economic interests, and also encouraged a "civilizing" and "regenerative" mission in the East.

Carl Ritter was the hub of an important network that linked the Academy to the military and political spheres, as he taught at both the General War College and the University of Berlin from 1820 to 1853. Two German military expeditions were carried out in the Ottoman Empire during the period when Heinrich Kiepert was active: the first major official mission sponsored by Berlin was led by Helmuth von Moltke (1836-1839), and the second by Colmar von der Goltz (1883-1895). Kiepert obtained the surveys and field notes that were brought back by the first mission through Carl Ritter, who remained close to his former students at the General War College. Over the course of three years, Moltke travelled across the entire Empire, from Varna (now in Bulgaria) to Mesopotamia (as far as Mosul). Although he lost some of his maps during the defeat by the Pacha of Egypt, Mehmet Ali, and his son Ibrahim, he kept some precious sketches, all of which he sent to Ritter. They were then compiled by Kiepert and published in Berlin:

"Most honored Professor, I hereby send you, with my respects, the copy of the profiles of Asia Minor, which you

have judged so kindly. At the same time, I would like to enclose the notes that I have written to explain our upcoming map and I beg you to be so kind as to send them to Mr. Kiepert, who has undertaken to gather all our notes in a memorandum accompanying the map. It would be very kind of you to let me know if, for our purpose, these notes should be even more detailed or if they could be shortened"¹⁰.

The collaboration continued with the "Plan of Constantinople and the Bosphorus" that Moltke sent to Ritter in March 1849. Kiepert reduced it to a quarter of its original size and sold it at the 1855 World Exhibition for 15 silbergröschen¹¹. The contributions of the military mission lasted until the early 1850s, when Moltke transmitted the plans of the cities of Anatolia and Mesopotamia that he had drawn up:

"Highly esteemed Professor, in the 11th part of your Geography of Asia Minor, you express your regret that there are no plans of Mosul and Urfa. I just found them in my papers, as well as other plans made on the spot, although only drawn in pencil and ink. There are in particular Mosul, Kharpout, Birecik, Samsun, Sayd Bey Kalessi, Urfa, Rumkaleh, Marach. If these drawings can still be of interest today, I would like to make them available to you"¹².

Kiepert's cartographic project developed its full scope through the data collected by the Moltke mission: the map of Asia Minor that Kiepert published in 1844 (which we have presented previously, see Figure 1) and the editions that followed were to a certain extent the result of the work of the Prussian military mission. However, the topographical survey was still very incomplete. The few altitudes indicated were expressed in English feet because only English travelers had produced any measurements. Their reliability was questionable, since they had been made with rudimentary equipment, namely a thermometer and a kettle, which made it possible to observe variations in the boiling point of water. The only German measurement Kiepert mentions is that of Mount Olympus in Bursa, which was carried out using the same method by Friedrich Löw and August Schönborn. In the absence of any geodetic triangulation, the cartography of the Anatolian peninsula was approximate, and the work of his son Richard prolonged his father's maps using quite similar methods. Kiepert himself acknowledged the lack of information, admitting that only the regions of Troy, Lycia and Palestine had been sufficiently investigated to produce a decent cartographic representation.

After the departure of the Moltke mission, some Prussian soldiers remained in the service of the Ottoman government and continued to play the role of informants

⁹ Letter from Ignaz von Werther to Baron von Werther, July 26, 1841 (Geheimes Staatsarchiv Preußischer Kulturbesitz, GStA PK, I. HA, Rep. 81 Gesandtschaft Konstantinopel, XI, No. 27).

¹⁰ Letter from Helmuth von Moltke to Carl Ritter, March 5, 1843, in Fischer, 1944, pp. 30-31.

¹¹ Heinrich Kiepert, 1853, *Konstantinopel und der Bosphorus*. The plan was later revised by Dietrich Reimer and published in 1880 in color on a scale of 1:200,000. See letter from Moltke to Ritter, March 19, 1849, in Fischer, 1944, p. 31.

¹² Letter from Moltke to Ritter, November 17, 1851, in Fischer, 1944, p. 31.

to Kiepert¹³. Using their work as his foundation, Kiepert expected to have a complete network of roads on the peninsula, the representation of which was still very incomplete. After the Crimean War, Berlin sent additional personnel, including the officers Wilhelm Strecker and Julius Blühm, whose cartographic work was published by Kiepert in the *Zeitschrift der Gesellschaft für Erdkunde* and the *Zeitschrift für allgemeine Erdkunde*. Since the 1850s, a special geography course taught by a student of Ritter, Captain Emil von Sydow, had prepared officers who had to operate in foreign countries. Kiepert later reinforced this training by publishing in 1875 a guide for topographical observation and drawing, to be used especially by naval officers¹⁴. In the 1880s, the German military was again officially based in Istanbul, this time with more substantial resources than in the 1830s. Colmar von der Goltz became the head of this base in 1885. His frequent exchanges with Heinrich Kiepert provide an important source for understanding the type of cooperation that existed between German and Ottoman civilian and military cartographers¹⁵. They highlight the fact that the close collaboration between Kiepert and the German military continued, even after Carl Ritter's death in 1859, and also evidence the role of Kiepert's maps as one of the foundations of the Ottoman military survey in the 1890s.

At Goltz's request, the German military mission in Istanbul undertook a 1:210,000 scale transposition of the "Special Map of Western Asia Minor" published in 1890 by Kiepert (see Figure 2). This map did not cover the eastern part of the peninsula, however, and Goltz asked Kiepert how to extend the work further eastward: "In two months (...) my surveyors, who work very skillfully, will complete the transposition into the scale 1:210,000 of the 15 sheets you published. If we wanted to continue eastward, what map can we use as a frame?"¹⁶ Goltz sent Kiepert the work done by German soldiers stationed in Eastern Anatolia, such as the routes of General Wendt between Erzurum and Rize and between Erzincan and Trebizond. The objective was to prepare a detailed map of the entire Anatolian peninsula and not only the Aegean regions that were of interest to archaeologists. The reasons for this enterprise were as much strategic as they were economic. Since 1889, the Company of the Ottoman Railway of Anatolia, which had been created with German capital, had had the ambition to extend the coastal railway network to the interior of the country. To this end, Goltz had accompanied Otto Kapp, the director of the railroad works, who was carrying out topographic surveys between Izmit and Ankara in the summer of 1889 (see Figure 3). The plan to connect Istanbul and Baghdad, which was in a period of growth at

the beginning of the 1890s, required precise altimetric measurements, as the railroad could not handle a steep slope. Goltz was confronted with the lack of a correct representation of the relief on existing maps and complained to Kiepert: "In general, maps represent the terrain too flat. You don't get the impression that you are in the mountains. Yet, we are entering a large wooded mountain."¹⁷

Goltz's cartographic project was an ambitious one, but unlike Moltke fifty years earlier, he could rely on the skills acquired by the Ottoman officers and the maps produced in the Empire to carry it out.

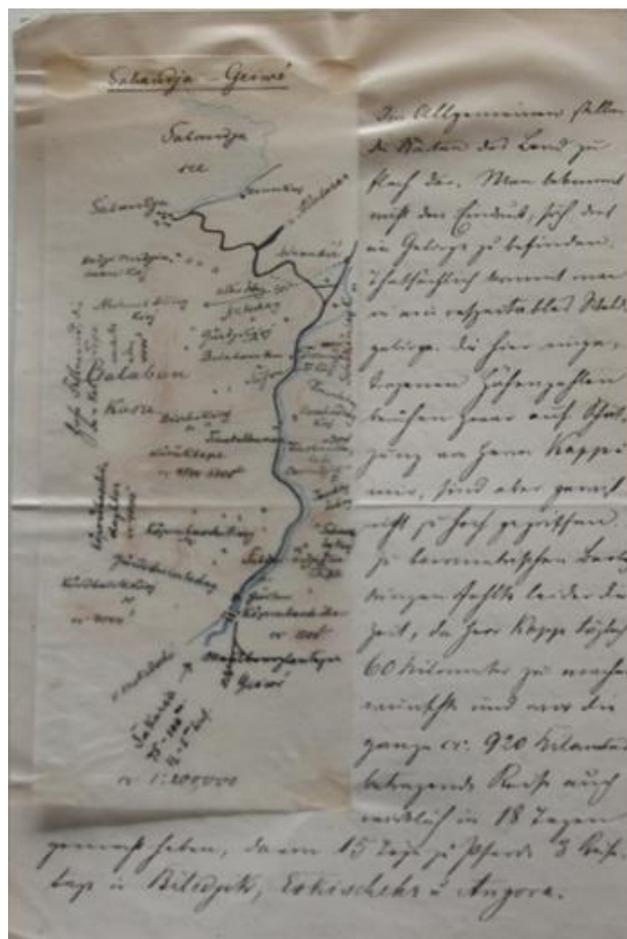


Figure 3: Excerpt from Colmar von der Goltz's letter to Kiepert with sketch of the Sabanca lake surroundings, August 30, 1889.

Source: Nachlass Kiepert, Heinrich, Staatsbibliothek zu Berlin.

¹³ Following the Moltke mission, eight officers and 16 sub-officers were delegated to Istanbul to assist the Ottoman army alongside other foreign instructors.

¹⁴ Heinrich Kiepert, "Topographische Beobachtung und Zeichnung (Flying survey, Levée à coup d'œil)", in Georg von Neumayer, *Anleitung zu wissenschaftlichen Beobachtungen auf Reisen. Mit besonderer Rücksicht auf die Bedürfnisse der Kaiserlichen Marine*, Berlin, Robert Oppenheim, 1875, pp. 39-48.

¹⁵ 15 letters between October 24, 1887 and April 14, 1897, with an interruption between 1893 and 1897 (SSB, Nachlass Kiepert (Heinrich), Nachlass 372, Korrespondenz).

¹⁶ Letter from Colmar von der Goltz to Kiepert, March 17, 1893 (SBB)

¹⁷ Letter from Colmar von der Goltz to Kiepert, August 30, 1889 (SBB)

4. A subaltern role for the Ottomans in Kiepert's cartography

At the beginning of Kiepert's career in the 1830s, Ottomans were most often regarded by the German cartographers as "informers" or "guides" in the mapping of Ottoman territories, and not as "partners". During the Moltke mission in 1836-1839, Ottoman soldiers were responsible for carrying the instruments (mainly plane tables) and protecting German officers, and were occasionally asked for some help with the measurements: when Moltke drew his plan of Constantinople in 1837, for example, he used the Valens Aqueduct as a basis for his triangulation, but he did not have a surveyor's chain to measure it, so he used his own steps and those of the Ottoman soldiers. This example brings to mind Kapil Raj's analyses of the exploitation of indigenous bodies by British map-makers (Raj, 1997). However, cartography, topography and astronomy had been included in the curricula of Ottoman military and engineering schools since the late 18th century, and the Ottoman School of Marine Engineers (*Mühendishâne-i-Bahrî-i Hümayun*) was a pioneer in the field, followed by Ottoman military schools (*Mekteb-i Harbiye*) in the 1830s (Üçsu and Günergün, 2016).

A generation of Ottoman officers were sent to study in Europe, especially in London and Paris. One of the group of London graduate officers, Dervis Mehmed Emin Effendi, was assigned by Sultan Abdülmecit to supervise a mission on the Iranian-Ottoman border in 1849 (Günergün, 2003): his task was to draw new maps to make the border's demarcation line consistent with the diplomatic conventions. Another student, Bekir Pasha, was appointed as head of the Imperial School of Engineering, and directed a committee dedicated to the realization of a general map of the Ottoman Empire: "The *Seraskierat* [the Ottoman Ministry of War] intends to publish maps of some little-known provinces of the Ottoman Empire, and he wants them to be accurate. He has already published (in 1850) a map of the countries located along the Shatt al Arab from the Persian Gulf to Baghdad¹⁸, and the map of Bosnia will soon be published. A commission formed by order of the Sultan [Abdülmecit I] and chaired by Bekir Pasa must soon start an official map of the Empire."¹⁹ The creation of new maps by the Ottoman officers fulfilled two of the Ottoman government's priorities. Firstly, it wanted to control the movements of nomads, not only along the borders of the Empire, but also within its own borders. Maps were used in a policy of forced settlement of nomad populations. Cevded Pasa, who was the governor of the Vilayets of Aleppo and Adana in the 1860s, ordered a map of Cilicia in 1865 that was prepared by officers under his command. He gave it personally to Kiepert in 1869. According to

Kiepert, it was one of the only "autonomous" Ottoman cartographic achievements. Although "roughly" drawn, Kiepert conceded that it did contain "some useful data"²⁰. Even though he minimized their topographical originality, he admitted the important work in the surveys carried out by the Ottoman officers. Secondly, maps were used to make it easier for the Ottoman administration to collect taxes and enforce conscription. Mapping was only one of the elements of a much broader policy reform aimed at strengthening the (central) state system, including its administration and army.

The Ottomans' mapping efforts were accompanied by the encouragement of engraving and printing: during a trip to Istanbul in the early 1850s, Heinrich Petermann, a Professor of Oriental Languages at the University of Berlin and a former professor of Kiepert, reported on the rise of map printing in Ottoman military schools. He wrote: "After climbing to the top of the Galata Tower, we went to (...) the artillery school above Pera, where we were led by Commander Mehmet Effendi. We admired the exemplary institution and its order and cleanliness, which would be unthinkable in Europe, according to [Ludwig] von Wildenbruch (the Prussian Ambassador to Istanbul). Mehmet Ef[fendi] had brought in a printing press that had already printed a few useful books, and they were on the point of reproducing Kiepert's map of Asia Minor on it."²¹ The copying and reproduction of European maps, in particular those of Heinrich Kiepert, increased in the second part of the 19th century. Hafiz Ali Esref, a captain in the Ottoman army, was one of the people who played a role in this.

Hafiz Ali Esref went to Paris in September 1862, at the age of 20. He studied first at the Ottoman Imperial School in Paris (*Mekteb-i Osmani*) and was then trained by the Parisian publisher Erhard Schieble from 1864 to 1869. He was admitted to the Geographical Society of Paris, before finally returning to Constantinople in 1869 to work in the Ottoman General Staff. He devoted himself to the translation of Kiepert's *Map of Asia Minor* (1864) into Ottoman Turkish, and probably also contributed to the translation of Kiepert's *Map of European Turkey* on 73 sheets (1853), which was transposed to a larger scale (1:500,000) in 1870. Hafiz Ali Esref did not have time to complete his translation of Kiepert's *Map of Anatolia* on 100 sheets that he had been preparing since 1900 before his death in 1907 (Aygün, 1980). As Klaus Kreiser has clearly shown, the effects of multiple translations (*Rückübersetzungen*) of place-names (from spoken indigenous languages to European languages and from European transliteration to written Ottoman) resulted in numerous deformations of the Anatolian toponymy (Kreiser, 1975).

¹⁸ Ali Ağa, 1848, *Map of the country of the Euphrates and Tigris downstream of Baghdad*, Istanbul, War Academy.

¹⁹ *Bulletin de la Société de Géographie*, Paris, January-June 1851, p. 89 and pp. 587-588.

²⁰ Heinrich Kiepert, 1884, *op. cit.*, p. 406.

²¹ Heinrich Petermann, 1865, *Reisen im Orient, 1852-1855. Berichte und Ergebnisse einer Forschungsreise in der Levante, in Mesopotamien und in Persien*, Leipzig, 1865, new edition, Philo Press, Amsterdam, 1976, p. 26.

Ottoman cartographers embraced the process of validating scientific productions by joining European scientific institutions and participating in international congresses. At the World Exhibition in Vienna in 1873, the Ottoman delegation exhibited a handwritten *Map of the European provinces of the Ottoman Empire* that Hafiz Esref had translated and enlarged from Kiepert's work²². Two years later, for the International Congress of Geographical Sciences in 1875, Istanbul sent two officers, Colonel Mehmet Hulusi Bey and Adjutant Şakir Effendi, to Paris, a sign of Ottoman involvement in cartography. In a small room, the Ottoman Empire presented several cartographic achievements. Six of the maps shown by the Ottoman delegation were recognized by the Congress jury²³; however, Heinrich Kiepert, who was a member of the jury, was critical of the Ottoman productions: in his view, the essential element of the Ottoman maps was that they were a "copy". He wrote: "Until now, there is no official map of the whole territory of the Empire, including its provincial divisions: what has come out of the lithographic printing works of Constantinople is limited to copies, most often of very small French or German products, with a translation of the names into Arabic. What was produced in the remote provinces by the agents of certain zealous governors was not only based on European models, but was already largely obsolete and moreover concerned only a small part of the imperial territory."²⁴ According to Kiepert, Ottoman cartography could not be considered to be reliable. There was a hierarchy in the value of observations: the "sketches made by the natives", which were often "rough", were "trustworthy only to a certain extent"²⁵. Kiepert was ironic about the Ottoman initiatives: "That today, in a report on the constitution of the Turkish army, one can still speak very seriously of a 'topographical department of the Turkish General Staff', and one can only produce a comic effect on those who know the Orient"²⁶. He refused to emancipate Ottoman cartography and give it any other life than as an "imitation", with its lack of innovation. For Kiepert, Ottoman cartography remained subaltern and in a position of "dependence".

In the latter part of the 19th century, however, the Ottoman military acquired skills in surveying, drawing and printing maps. While Kiepert was still asserting in 1884 that "the development of maps of the [Ottoman] remains as previously left to the scientific interest and zeal of European geographers"²⁷, the Ottoman General Staff had intensified its production of maps and officially created a department of military topography after the Russo-Turkish War of 1877-1878. Ottoman State Staff maps had a hybrid character: the use of the 1:210,000 scale relied on Russian

recognition, and the Ferro meridian was based on that of Austria (maps to 1:300,000). The diverse nature of the cartographic documents that were consulted reveals the multiplicity of the knowledge networks that were hybridized in the Empire. The Ottomans cleverly took advantage of the expertise of foreigners and took advantage of their rivalries to map the imperial territory.

Kiepert's considerable reluctance to admit the merits of the Ottoman military's albeit imperfect initiatives was due to the fact that they destabilized him by blurring the dichotomy between the "knowing" and the "ignorant", and between the "civilized" and "barbarian" worlds, and yet from the 1880s onwards, circulation was actually in both directions: in 1887, Goltz sent Kiepert an Ottoman map on 24 sheets covering a broad area across Asia Minor between the 48th and 54th degrees of longitude east: that is, between Izmit and Samsun. Six additional maps of the east were also later sent to Kiepert. Goltz's opinion of Ottoman cartography was mostly positive, and he explained the weaknesses of Ottoman maps by a lack of material resources. He emphasized how poorly equipped the Ottoman officers were to carry out their work: "They²⁸ have to do the survey with only a pencil and a sheet of paper. It easily explains the imperfection of the work". The officers travelled into the field themselves, but they did not have the necessary geodetic instruments. Another letter reiterated this issue: "The map that was sent [to you] was conducted by redif officers, no additional instrument for surveying - pencil and paper, that's all they had on the field." He urged Kiepert to avoid making hasty judgments about the achievements of Ottoman officers: in 1888, he wrote to Heinrich Kiepert "It would be unfair to the Turks to present these sheets as samples of Turkish topography. I have received some wonderful topographic works during the last months, but they are hidden away in the General Staff archives because of the reluctance to use the maps that exist in the spheres of power."²⁹

The Ottoman agency did not stop at the production of maps; it also was concerned with circulating them in the Empire. The political significance of cartography was closely controlled by the government, which had no hesitation in censoring representations that were contrary to its views. Although Kiepert himself stayed away from publishing political writings, and seemed to keep his distance from contemporary issues, his work was called upon several times during diplomatic negotiations: thus his

²² Heinrich Kiepert, *Karte von europäischen Türkei*, Berlin, Dietrich Reimer, 1853.

²³ The "Map of Turkish-Greek borders" and the "Map of Montenegro" by Brigadier-General Mustafa Celaleddin; the "Map of Turkish-Persian borders", by Redif Effendi, Battalion Commander at the Imperial Military School; the "Mining map of Turkey"; and the "Bosphorus Map" by Captain Wood and Ahmet Bey.

²⁴ Heinrich Kiepert, *op. cit.*, 1884, pp. 405-406.

²⁵ Heinrich Kiepert, *Carte synoptique de la division administrative*, 1890-1892. In French.

²⁶ Heinrich Kiepert, 1876 quoted by Kreiser, 2000.

²⁷ Heinrich Kiepert, *op. cit.*, 1884, p. 406.

²⁸ The officers of reserve division (*redif*) were chiefly responsible for mapping the Empire.

²⁹ Letter from Colmar von der Goltz to Kiepert, February 24, 1888 (SBB). On the confidential nature of maps in the Ottoman Empire, see Débarre, 2014.

"Ethnographic Overview of the European East"³⁰ carried important political weight as regards the Balkans, and his maps of Eastern Anatolia were used during the Berlin Congress (1878). Indeed, he had just published a *Special Map of Turkish Armenia*³¹, and the Armenian representatives at the Congress of Berlin used his *ancient atlas* to justify the historical basis for their claims. This link between Kiepert's maps and the Empire's minority populations at the end of the century worried the Ottoman authorities. The Ministry of Education (*Maârif Nezâret-i Celîlesi*) therefore tried to have the mention of "Armenia" on Kiepert's maps of Anatolia imported into the Empire deleted at the end of the 1890s, but they were still being sold in Istanbul at the turn of the century (see Figure 4).

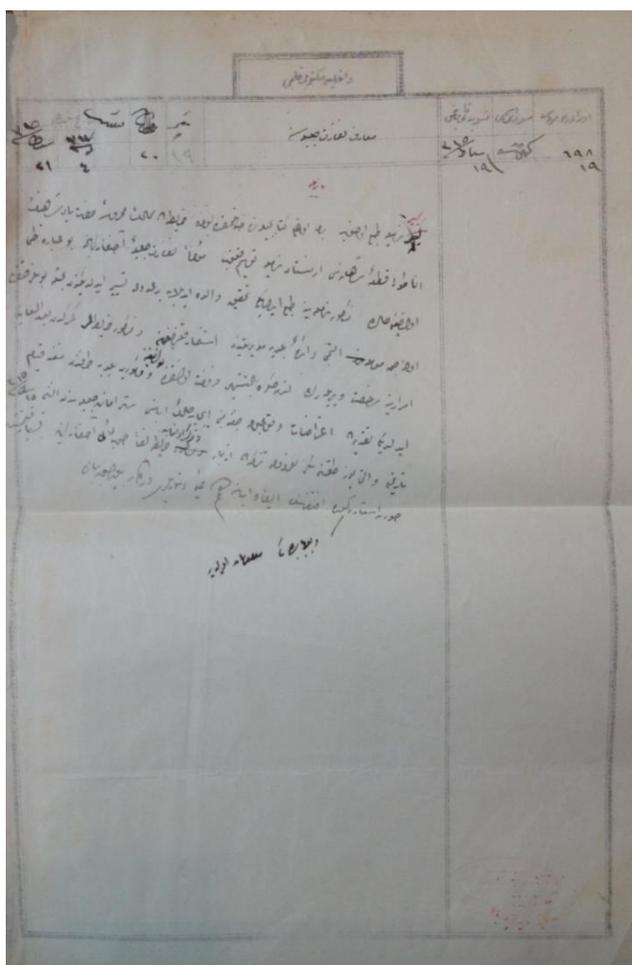


Figure 4. Report sent to the Ottoman Ministry of Education (*Maârif Nezâret-i Celîlesi'ne*) regarding a map of Anatolia by Kiepert sold in bookstores in the Beyoğlu district that mentioned Armenia by name ("Ermenistan nâmıyla"). Because they had not been refused by Customs, the maps could not easily be withdrawn from circulation by Beyoğlu City Hall.

Source: Ottoman state archives (Başbakanlık Osmanlı Arşivi), Istanbul - DH.MKT_2314-68.

5. Conclusion

The Prussian maps of Anatolia that were produced between the 1830s and the 1890s relied heavily on German and Ottoman military data, contributions that were often hidden by the name of Kiepert. During this period, strategic and academic interests critically overlapped, first in Prussia, and then in the German Empire. The military contribution had its limits, and Germany did not have the means to undertake a triangulation of the Anatolian peninsula. In Germany itself, the unified mapping of the territory was a recent phenomenon: at the time of Goltz's arrival in Istanbul in 1884, the Prussian, Bavarian, Saxon and Württemberg armies had just completed the first major unified map of the German Empire (*Karte des deutschen Reiches*, 1:100,000). Although the Royal Prussian Land Survey (*Königliche Preussische Landesaufnahme*) continued to play a central role in the Wilhelmine Reich, the issue was whether to extend the mission to foreign territories, as this decision had an impact on the cartographic projects carried out in Germany. Triangulation was an expensive and labor-intensive undertaking, and a few cartographers alone were not able to survey enough points to create a sufficiently dense grid. Berlin's resources were modest compared to those of France and Great Britain: when Goltz left Istanbul, Britain had completed its triangulation of the Indian Peninsula, and France that of Algeria, but Anatolia still had no initial terrestrial geodetic basis. The Ottoman army began triangulating the peninsula thanks to French support just after the departure of the German mission from Istanbul. However, the measurements directed by the captains Defforges and Barisien were soon interrupted by the outbreak of the Greek-Turkish war of 1897. Although they continued after it ended, it was only in 1941 that the Turkish triangulated staff map was completed. This explains why Kiepert's publications were still being used as a substitute for the official map of the Empire during the First World War and the Greco-Turkish War³².

The Ottoman authorities may have had the feeling that their territory had suffered a certain "scopic dispossession"³³, especially because they believed that the German maps promoted the interests of the Empire's minorities, but this tendency was counterbalanced by the Ottoman government's involvement and the benefits it gained from the enterprise. It knew how to use maps to serve its political purposes, and it expressed a real determination to adopt cartographic standards so that it would be able to become a fully-fledged protagonist in cartography. Its role in both the production of maps and their circulation disrupted the excessively simplistic dichotomy between an imperialist Europe and a passive "rest of the world," as Kapil Raj has pointed out in the case of South Asia (Raj 2007, p. 22 and p. 229). Ottoman elites

³⁰ Heinrich Kiepert, *Ethnographische Uebersicht des Europäischen Orients*, 1:3,000,000, Berlin, Dietrich Reimer, 1876. See Dörflinger, 1999, pp. 31-43.

³¹ Heinrich Kiepert, *Special-Karte des Türkischen Armeniens*, Berlin, Dietrich Reimer, 1877. Online: <https://gallica.bnf.fr/ark:/12148/btv1b53098601g>

³² His cartographic work was carried on by his son Richard until the First World War. See Richard Kiepert, *Karte von Kleinasien*, Berlin, Dietrich Reimer, 1:400,000, 1902-1915, 24 sheets.

³³ See Débarre, 2016, p. 9 and p. 318.

benefited from the know-how they learned from foreigners, and they grasped the opportunity to acquire a global vision of the imperial territory. Although the Ottoman Empire was not able to carry out its cartography on its own during the nineteenth century, its actual contribution was certainly minimized. The investment made by the Ottomans – from the rural inhabitants who participated in the collection of toponyms to accommodation and the transport of instruments, to the guides, translators and, of course, the military officers trained in cartographic work – has largely disappeared behind Kiepert's name, but these "mapping ghosts" nevertheless provided crucial elements for his cartographic publications.

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