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Piri Reis' *Book on Navigation* (Kitab-ı Bahriyye) as a Geography Handbook

Ottoman Efforts to Produce an Atlas during the Reign of Sultan Mehmed IV (1648-1687)

Abstract

The Ottoman Admiral Piri Reis (ca. 1470 - 1553/4) compiled in 1520/1 his *Book on Navigation* (Kitāb-ı Bahriyye), which was based partly on Bartolommeo [da li Sonetti]'s *Isolario* (Venice ca. 1485). His personal observations, though, are of great significance. For the first half of the 16th century this book of nautical instructions and charts (a sort of *Isolario* or *Arte del Navigare*) was the best hydrographical work on the Mediterranean Sea among other Italian and Spanish books of its kind. A larger second version appeared in 1525/6 and a third, not from Piri Reis' own hand though, during the second half of 17th century. This work has a long manuscript tradition for a period of 250 years (till the end of 18th century). More than forty copies seem to have survived nowadays. Kitāb-ı Bahriyye was the first cartographical work in Ottoman language and was used for a long time not as a book of nautical instructions solely, but as well as a Turkish handbook of geography and an atlas of the *old world* of the Mediterranean Sea in Turkish. Its latest copies pay more attention to the cartographical part of the work and less to the text. New maps of large scale are added in the luxurious manuscripts with the aim to produce modern atlases. This paper considers Kitāb-ı Bahriyye as a geography handbook and atlas, actually the more original one in Ottoman-Turkish literature.

The 16th century was for all peoples surrounding the Mediterranean basin an era marked by an intense activation in the sea and a constant and tireless effort to depict it accurately. Those states that could navigate that encircled sea were obsessed with the idea of perceiving and knowing the area. The Italian city-states, the Iberian kingdoms and the Ottoman Empire kept on being in trade and war among each other, registering their own dominion and that of their enemies and allies, and on making their presence felt all around the Mediterranean Sea.
On the part of the Ottomans, who are the latest settlers in the Mediterranean, a state establishment is consolidated at the end of the 14th and the early 15th century, anyhow, based on new, more stable grounds after the capture of Constantinople. The sultan, his court and the Ottoman scholars and scientists of this period are in close dependence on the learned tradition of the East and its achievements, even though they are a few centuries far from the classical Arabic production. Thus, the first works on geography, which are produced within the Ottoman dominion under the aegis of the sultan, are limited both to translations and adaptations of the classical Arabic or Persian geographies and to translations from Greek literature.

Bāyazīd II (r. 1481-1512) bequeaths to his successor, Süleymān the Lawgiver (r. 1512-1566), an organized and competent navy. During Bayazid’s reign, Pīrī Re’îs (ca. 1470-1553/4) grows mature in the Aegean and Mediterranean Seas next to the famous pirate and corsair, his uncle Kemāl Re’îs. The years that
he spends together with his uncle are a period of apprenticeship on the art of navigation and the art of co-existence of Mediterranean people, as Piri Reis comes in close contact with sailors from Italy, Catalonia, Spain, France and Northern Africa.

In 1520/1 Piri Reis has already completed, after a world map (1513)\(^6\) that happens to be one of the oldest maps of America, his *isolario* under the title of Kitāb-i Bahriyye (Book on Navigation).\(^7\) Following the example of the Italians Cristoforo Buondelmonti (*Liber Insularum Archipelagi*, MSS. ca. 1420-30)\(^8\) and Bartolommeo [da li Sonetti] ([Isolario], printed ca. 1485)\(^9\) Piri Reis produced a work with nautical instructions and detailed maps on the whole Mediterranean. His work is a combination of an *isolario*, an *arte del navigare* and a very detailed *portolan-atlas*. Piri Reis made use of the charts of the [Isolario] by Bartolommeo [da li Sonetti], his work yet was based on personal observation and measurements all over the
Mediterranean Sea. Hence, he managed to produce one of the most accurate and complete islorii of the 16th century, getting closer to the real geography of the old sea of the Mediterranean.

Piri Reis introduced a second version\(^\text{10}\) of the Book on Navigation in 1525/6. Its size was increased and its quality was improved. This version contained much more maps. The 131 chapters of the nautical instructions and the 105 to 142 charts of the many first version copies that have been preserved until today (26 copies are known), turned to 219 chapters and 215-39 charts in the second version (ca. 10 copies). Besides, the poet and corsair Seyyid Murād\(^\text{11}\) assisted Piri Reis to compose an introduction in verse, which was, actually, the first theoretical text on the art of navigation written in the Ottoman language. It includes information on the winds, the orientation, the use of the compass and the map, as well as astronomical and
geographical knowledge for the whole known geography of the time. Furthermore, it provides information on all seas of the earth, after the discovery of new lands and sea routes. There are chapters on the Indian Ocean, Abyssinia, the Atlantic Ocean and its curiosities, the expansion of the Portuguese Empire, the Chinese Sea, the Persian Gulf, the eastern shores of Africa, the Camore Islands. The epilogue of the second version is also in verse. It explains the reason for the improvement of the first version and describes its process. Finally, Piri Reis sets the work at the disposal of God, the sovereign, the scholars, and the people of the future.

A century after the hydrographer’s death and during the second half of the 17th century there is a production of copies from the Book on Navigation in a third version, which, nevertheless, lets the text of the second version unaffected, while enriches the cartographical part of the manuscripts. These third version copies are not produced by Piri Reis’s own hand, of course. Thus, they have been susceptible of additional new large-scale maps. These maps depict the Black Sea, which is not comprised in the original, as well as parts of the Aegean Sea, the Adriatic Sea, the Tyrrenian Sea, and the Central Mediterranean. Circular and oval world maps, normal portolanos (according to Nordenskiöld), depictions of Istanbul and Candia are also included.

These manuscripts have some features in common. They are luxurious presentation copies. Their background material, inks, design, colors and binding are of excellent quality. They bear neither copyists’ name, nor date of production. The copyists seem to give priority to the cartographical part and not to the nautical-instructions text, which turns out to be of secondary importance. The Ottoman art of miniature painting is here prevalent. This fact reveals that the second and third versions of the Book on Navigation were not produced to serve the sailors’ needs on board, but the scholarly quests of the Ottoman sultan, his court and the high functionaries of the empire. In a few copies there is a list of contents (maps), whereas in others the text has been omitted. These copies bear only the charts, so they take the form of an atlas and titles such as: «portolanı kebîr great portulan», «deñiz kitabı
Seven are the copies that belong to the group produced during the second half of the 17th century. These are divided into two subgroups. The second one does not include any text but the maps of the Book on Navigation:

First Subgroup

2. İstanbul, Deniz Müzesi [Nautical Museum], MS. 988 (239 maps).
3. İstanbul Üniversitesi Ktph. [Istanbul University Library], MS. T. 6605 (228 maps).17
Second Subgroup (no text)


5. Bologna, Biblioteca Universitaria [University Library], MS. 3609 (204 maps).\footnote{Copy No. 5 is supposed to have been made by a Seyyid Nuh, who is considered to be a fictitious person by some scholars.}


It is likely that the copies of each subgroup were produced in the same atelier, either that for the palace or the map workshops in Galata, as mentioned by the traveler Evliyâ Çelebi.\footnote{The supposedly lost during the Second World War copy of Berlin (No. 4) flirts with the text of the first version, which surrounds the maps in form of long marginal inscriptions.}

Even if the original corpus of the maps in the Book on Navigation is of great originality, the supplementary maps are copies of Italian and Dutch works. Their sources are the numerous atlases of the Battista Agnese atelier (fl. 1535-64),\footnote{Their sources are the numerous atlases of the Battista Agnese atelier (fl. 1535-64), the Ottoman atlases of the period 1550-75, and finally, the oval world maps by Jacopo Gastaldi dated in 1546 and 1560 and that by Abraham Ortelius from his Theatrum Orbis Terrarum (Antwerpen 1579-).} the Ottoman atlases of the period 1550-75,\footnote{The supposed sources are the numerous atlases of the Battista Agnese atelier (fl. 1535-64), the Ottoman atlases of the period 1550-75, and finally, the oval world maps by Jacopo Gastaldi dated in 1546 and 1560 and that by Abraham Ortelius from his Theatrum Orbis Terrarum (Antwerpen 1579-).} and finally, the oval world maps by Jacopo Gastaldi dated in 1546 and 1560 and that by Abraham Ortelius from his Theatrum Orbis Terrarum (Antwerpen 1579-).

It seems that the Ottoman society of the era of Mehmed IV (1648-87), under the grand vizierate of the Köprülü, kept seeking after a geography handbook of its world. The empire was already in territorial stagnation since the late 16th century and had started going the way of a slow, long introversion. Nevertheless, as Mehmed IV never gave up hunting, even during his campaigns, the Ottomans did not stop being active. The conquest of Crete in 1669 and the second siege of Vienna in 1683 revealed the
fig. 5: Sardinia Island. Piri Reis, “Kitab-i Bahriyye” (1525-6), third version copy written in the mid-17th Ct. Attributed to Seyyid Nuh. Biblioteca Universitaria, Bologna (MS 3609).
empire's ultimate effort to revive the time of the conquests (15th-16th centuries). The empire's world, however, and its potentiality were limited within the encircled sea of the Mediterranean and its surroundings. In the various copies only very large-scale world maps can be found. They depict a remote world, which once could be conquered. It could have been conquered, however, when the vivid and lively world map (1513) by Piri Reis was displayed on the battle board, if it ever was. Not any longer. The empire was soul-searching. It could not have its own fresh map production of the enlarged world. Trying to revive the 16th century conquests, the empire discovered again Piri Reis, renovated his work and tried to update it. The renewed *Book on Navigation*, however, was still limited in the Mediterranean and the Black Sea, even though in one of the new copies there is a Caspian Sea map. Their inclination to a contemporary knowledge of the space found shelter in Piri Reis' work, passing over translations or imperfect adaptations of classical Arabic and Persian geographies and cosmographies, produced from the 9th to the 14th century. What made the *Book on Navigation* the most preferred geography handbook was that it was a pioneering work for its epoch and Turkish, above all. It was a work composed by an Ottoman subject and satisfied the Ottoman state needs. What the Ottoman society needed was a Turkish-speaking, of Turkish origin, geography handbook and a detailed atlas of its Mediterranean world.

The disadvantages of this choice led to a quite not satisfactory result. The *Book on Navigation* remained a text of nautical instructions. Its depictions were of good quality, but represented the previous century world's image. The Ottoman society of the second half of the 17th century could not ignore the progress of geography and cartography that was taking place in Italy and then in Central Europe. The Ottomans were in no position to have a production of their own—a Piri Reis of the 17th century did not exist—and were necessarily switched to translations.
Kâtib Çelebi, the most important Ottoman scholar of his era, translated the *Atlas Minor* by Mercator and Hondius (printed Arnheim 1621) under the title *Rays of light in the darkness – Atlas Minor* (Lavâm‘iü’n-nür fi ẓulmāt - ʿAṭlās Minor) in 1653. The same author wrote his most important work on geography, the *Panorama of the World* (*Cihannümā*), from 1648 up to his death in 1657. It would be a great cosmography, but was left incomplete. Making use of Mercator’s atlases he added his own up-to-date information especially on maps of the Ottoman dominion. The numerous copies found today in several libraries indicate how famous this work had been. However, Kâtib Çelebi was a scholar cartographer, who translated and adapted in the Ottoman language. He neither took soundings, nor made any investigation on the spot, as Piri Reis had done earlier.

The translations made by Kâtib Çelebi and the creation of the first Islamic atlas of Mercatorian and Copernican conception

gave fresh impetus to the production of works, such as the Ottoman version of the voluminous Atlas Major sive cosmographia Blauiana qua solum, salum, coelum, accuratissime describuntur (Amsterdam 1662) by the Dutch Janszoon Blaeu. These works marked a turning point for the Ottoman cartography as, henceforth, it was necessary for the latter to follow closely the European map production. Blaeu’s work was presented to the Ottoman sultan Mehmed IV by the Dutch ambassador Justinus Coljer on the 14th August of 1668. The sultan commissioned Alexandros Mavrocordatos, a dragoman to the Porte, to translate it into the Ottoman language, but the task was to be completed by Ebubekir el-Behram ed-Dimishki, who started in 1675 and finished his work ten years later. It consists of nine volumes and has the sonorous title of Nusretü’l-islâm ve’l-süürû fî taḥrîr-i Atlâs Mayor (The Triumph of Islam and the Joy in the Writing of Atlas Major).
The aforementioned production exists due to the inclination of the Ottomans to acquire, during the second half of the 17th century, a geography handbook, and mainly an atlas in their own language. The Book on Navigation was called out to satisfy first of all that certain demand, before the Ottomans proceed to translations of European works. This paper makes an effort to look on the later luxurious copies of the Book on Navigation under this light.

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NOTES


1. In 857 [1453] the earliest Ottoman geographer Yazıcıoğlu Ahmed Bicân introduced the ‘Acâibü’l-mahûkât (Strange Creatures), which is an abridgement of the famous work by the Arab geographer Qazwînî under the same title. The cosmographical works Dürr-i Meknûn (Hidden Pearl) and Mirâtü’l-avâlim (Mirror of the World) belong to the same author. See FRANZ TAESCHNER, “Die geographische Literatur der Osmanen,” Zeitschrift der Deutschen Morgenländischen Gesellschaft 50 (1923): 36-8. If those works are not just simply translations, the translators' personal intervention is little productive, although Mehmed el-‘Aşîk and his Menâzirü’l-avâlim (Panorama of the World), which was completed in 1006/1598, had to be excluded. Beyond that it is a cosmographical work as well, that follows Qazwînî, Dimâşqî and Abû al-Fidâ‘, it also contains contemporary geographical data on Roumelia (Balkan peninsula), something that is not to be found in the rest Islamic geographies. Its list of the cities according to the system of the seven climates by Ptolemaeus is also significant (TAESCHNER, loc. cit., 48-55).

2. Mehmed the Conqueror asked the Byzantine scholar Georgios Amoiroutzes and his Arabic-speaking son to translate the Γεωγραφική Ὑφήγησις (Cosmographia) of Claudius Ptolemaeus into Arabic. Two Greek manuscripts of the 13-14th Ct. (Gl 27 and 57) that preserve the Ptolemaic Geographia, can still be found in the Topkapı Museum Library, while in the Aya Sofya Library (today part of the Süleymaniye Library) two copies of the Arabic translation can be found [No. 2596 (without maps) and 2610]. See ADOLF D. DEISSMANN, Forschungen und Funde im Serai; Mit einem Verzeichnis der nichtislamischen Handschriften im Topkapu Serai zu Istanbul (Berlin & Leipzig: Walter de Gruyter, 1933), 68-9 & 89-93; JULIAN RABY, “Mehmed the Conqueror’s scriptorium,” Dumbarton Oaks Papers 37 (1983): 24.

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4. See SVAT SOUCEK, *Piri Re’is*, Encyclopaedia of Islam² [abbr. EI²], and FUAT EZGO, *Piri Re’is*, Islam Ansiklopedisi [abbr. IA].


8. This work is published in *Christophori Bondelmontii Florentini Librum Insularum Archipelagi*, edited by G.R.L. de Sinner (Lipsiae et Berolini: G. Reimer, 1824).


15. Copy of Biblioteca Universitaria, Bologna (MS. 3609).
17. A few charts of this copy are reproduced in Kemal Özdemir, Piri Reis (İstanbul: Başkent Ofset Kültür Yayınları, 1994).
25. For its fragmentary translation in Latin see Haggi Halifa (Kâtip Çelebi), Gihân-Numâ Geographia Orientalis (pars secunda) ex Turcico in Latinum versa a M. Norberg, 2 vols (Londoni Gothorum, 1818; reprinted Osnabrück: Biblio Verlag, 19732). The greater part of the first section (Europe) was translated in German by Joseph von Hammer, see Rumeli und Bosna, geographisch beschrieben von Mustafa Ben Abdalla Hadsch Halifa, aus dem Türkischen übersetzt von J. von Hammer (Wien: Kunst- und Industrie-Comptoir, 1812).
27. See XIV-XVIII yüzyl portolan ve deniz haritaları, İstanbul Topkapi Müzesi ve Venedik Correr Müzesi kolleksiyonlarından/Portolani e carte nautiche XIV-XVIII secolo dalle collezioni del Museo Correr Venezia, Museo del Topkapi-İstanbul (İstanbul: Istituto Italiano di Cultura di Istanbul, 1994), 146-55.