ANKARA ÜNİVERSİTESİ
OSMANLI TARİHİ ARAŞTIRMA VE UYGULAMA MERKEZİ (OTAM)
YAYIN NO: 7

ULUSLARARASI

PİRİ REİS

SEMPOZYUMU

12 Nisan 2013 /Ankara

BİLDİRİLER

Ankara 2014

Ankara Üniversitesi Yayınları No: 424

Osmanlı Tarihi Araştırma ve Uygulama Merkezi (OTAM) Yayın No: 7

ISBN: 978-605-136-160-4

ANKARA ÜNİVERSİTESİ BASIMEVİ
İncitaşı Sokak No:10
06510 Beşevler / ANKARA
Tel: 0 (312) 213 66 55
Basım Tarihi: 22/08/2014

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Yayına Hazırlayanlar:

Prof. Dr. Yılmaz KURT
Arş. Gör. Ertan ÜNLÜ

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The Uniqueness of Piri Reis's Work

Svatopluk Soucek[*]

Piri Reis was a Turkish mariner and cartographer whose active life can be bracketed between 1490 and 1553. In 1513 he drew at Gallipoli, then the principal naval base of the Ottoman Empire, a world map which since its rediscovery in 1929 has made him famous in the international forum. Less widely known, outside of Turkey, is the *Kitabi Bahriye*, a manual of nautical charts and sailing directions for the Mediterranean of which he produced two version, an initial shorter one in 1520, and a final one in 1526. Both the map and the book can be given the umbrella term of portolans, or, to be more specific, portolan charts and portolan texts.[1]

Portolans were a type of nautical charts and texts of sailing directions which appeared toward the end of the 13th century and were dominant until their gradual replacement by modern charts and manuals four centuries later. It was a new navigational tool, the magnetic needle, that enabled Catalan and Italian chart-makers to create this type based on the points of compass; a network of rhumb lines radiating from a windrose at its center as well as from four or more peripheral centers toward four, eight, sixteen or thirty-two points of compass became the most characteristic feature of portolan charts, just as verbal descriptions of courses from port to port according to the points of compass and indicating the distances marked the portolan texts. These features enabled Italian and Catalan cartographers to represent the Mediterranean more accurately than earlier sketches and verbal sailing directions,[2] which went back

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[*] *Retired Librarian, Princeton University.*

[1] Any discussion of portolans is complicated by the double nature of the term and of the phenomenon: they are two faces of the same coin, nautical tools based on the same principle or key – the magnetic needle – but expressed in two different ways, verbal and graphic. Confusion can arise when a discussion fails to make it clear which of the two forms is meant, or, if both are the subject, how to harmonize the meaning. For this reason, the term portolan chart is rejected by some historians who prefer 'nautical chart', 'sea chart', or 'marine chart' for the graphic form, and use the generic term 'sailing directions' for the verbal form.

[2] The portolan charts represented the Mediterranean and adjacent areas with astonishing precision very early on, except for one inaccuracy that was corrected only in the 16th century with improved recording of latitude made possible by celestial

to antiquity, had done. By the same token, it was the eventual development of instruments introducing celestial navigation that enabled Spanish, Portuguese, French, Dutch and English cartographers to create the modern nautical charts with grids indicating latitude and longitude. This evolution also points to a spatial difference between the two types: the portolan was a Mediterranean phenomenon; the modern nautical chart, an oceanic one. However, the great voyages of discovery, which were one of the salient features of the renaissance, began in the 15th century, gained momentum in the 16th, and reached completion in the 17th. This was the time when the portolan type was dominant, and as a consequence it left its mark on the earliest maps of that vaster space as well. Like the charts of the Mediterranean, the early maps of the oceans are marked by compass roses and meshes of rhumb lines, and even many of those produced in the 16th century when grids showing latitude and longitude, as well as projections reflecting the sphericity of the earth, made their appearance.

It was commercial navigation that gave rise to the creation of portolan charts and fuelled their subsequent production, of which the foremost workshops were in Italy and Catalonia. The men who made and used these charts were primarily mariners on ships that served seaborne trade and passenger traffic over the whole expanse of the Mediterranean, the Black Sea and the adjacent coasts of the Atlantic. While the primary function of portolan charts was that of navigational tools used aboard ships, people noticed that the more elaborately drawn ones had esthetical appeal, and there thus developed a sub-category of charts produced less for practical use than as decorative objects, somewhat like artistic paintings, to be sold or commissioned by wealthy or important customers. Moreover, we can divide portolan charts into two groups, identical in all respects except in the manner of physical presentation: a group of large single sheet charts on whole lambskins or deerskins or even on combinations of two or more such skins, which showed the entire Mediterranean, and a group of smaller segments showing parts of the area such as the Aegean, central Mediterranean, western Mediterranean, or the Black Sea. The smaller segment type lent itself to being assembled and bound in handy volumes, atlases usually composed of between five to nine charts showing the specific parts. Today the number of the known extant atlases is over eight hundred. The Italian scholar Corradino Astengo mentions Palma di Mallorca, Genoa, Venice, Ancona, Naples, Messina, Leghorn, and Marseilles as the main cartographic centers, and lists seventy-eight known cartographers. One example may speak for the rest:

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navigation: charts of the earlier period placed the Strait of Gibraltar at the latitude of Alexandria, whereas the later, correct ones place it at the latitude of Cyprus.

Battista Agnese (1500-1564) was a native of Genoa who spent the greater part of his professional life in Venice, producing 71 known portolan chart atlases. Although they retain their characteristic hallmark – each is an assemblage of on the average six or seven charts of the Mediterranean – they frequently include a map of the world as well. Two of Agnese's atlases were produced for emperor Charles V, one for king Henry VIII, and the rest for other illustrious personages. A splendid specimen dated 1542 contains a portrait of the emperor, the coats of arms of Castile and Aragon, and the inscription *Philippo, Caroli Aug. F. optimo princ.*, and had thus been commissioned as a gift from Charles V to his son, the future king of Spain Philip II. Another atlas bears the English coat of arms in one scroll, the inscription *Henricus octavus dei gratia Angliae, Franciae et Hiberniae rex fidei defensor* in a second scroll, and its inside back cover contains a setting for a small compass decorated with a windrose, in which the names of the winds are given in English. Several similar specimens bear coats of arms or inscriptions referring to Cosimo I Medici, admiral Gaspard de Coligny, cardinal Guido Ascanio Sforza, and four other well-known historical figures. The majority of Agnese's atlases are less lavish, but they still possess considerable esthetical appeal while at least some may have served the original purpose as portolan charts. A specimen made in 1544 includes a world map showing the route followed by the Magellan expedition circumnavigating the globe.

The Mediterranean has since the great Arab conquests of the 7th-8th centuries been divided into two halves, the southern Muslim one and the northern Christian one, while at the apogee of the Ottoman Empire – 16th-18th centuries – two thirds of its coasts came under Muslim rule. Islam, founded by a scion of the commercial city of Mecca, favored commerce no less than Christianity did, and one would thus expect that seafaring for the purpose of trade throughout the Mediterranean was equally lively in both communities; if anything, pilgrimage to Mecca added to the volume of Muslim travel by sea. An indirect result of this manifold maritime activity should thus be the existence of a similar number and kind of nautical literature produced by Muslims.

A survey of the known extant specimens has yielded the following results:

Single sheet charts:

1) The "Maghreb chart", dated by Vernet Ginés to about 1330. Arabic. It bears all the characteristics of an early Western portolan chart, with the familiar pattern of radiating rhumb lines, unnumbered scales, and names drawn perpendicular to the trend of the coastline. It shows the western third of the Mediterranean, and the maghribi script indicates its origin. William Brice ("Early Muslim Sea-Charts," JRAS, 1977, p. 53-61) notes that the rhumb line arrangement is almost identical to the Angelino de Dalorto chart of 1325,

suggesting that the two may have been copied from a common source. Soucek, 2:1:263-64, fig. 14.1.. Milan, Biblioteca Ambrosiana, Ms. S.p. II 259.

2) A chart made by Ibrahim ibn Ahmad al-Katibi of Tunis, 1413/14. Arabic. It shows the entire Mediterranean and includes a diagram of the lunar mansions. Place-names are written in red and black in Maghribi script. Tunis is represented as a castle, alongside which is a golden symbol of the reigning Hafsid dynasty. Soucek, 2:1:164, 165, fig. 14.2.. Hazine 1823.

3) Ibrahim al-Mursi, 1461. Arabic.It shows the entire Mediterranean and Black Sea; with a calendar in the neck of the parchment at is eastern end. The place-names are written in Maghribi. A legend at the northern side of the chart reads in part: "I have made this in the city of Tripoli, may God protect it, on the 15th of Ramadan, in the year of 865 [24 June 1461]." This is partially repeated on the southern border, where the maker identifies himself as the physician Ibrahim, originally from Murcia. Rossi lists several Western charts but especially Albino da Canepa, 1480, and concludes that the main sources were Western but with considerable additions to the topnymy of the Islamic territories. Soucek, 2:1:264-66, fig. 14.3.. Deniz Müzesi no. 882.

4) Chart by Hajj Abu al-Hasan, 16th century. Arabic. It shows the Mediterranean, the Black Sea, the Atlantic fringe including the British Isles, and the whole of Africa. It has been tentatively dated to the middle of the 16th century. Soucek, 2:1:265, 267, fig. 14.4. Hazine H 1822.

5) Chart by Menemenli Mehmed Re'is, ca 999/1590-91. Turkish. It shows a maritime area between the Ionian Sea in the west, the Marmara Sea in the northeast, Rhodes in the southeast, and Crete in the south, so that its center and principal focus is the Aegean Sea. Soucek, 2:1.283-84, fig. 19; William C. Brice, Colin Imber, and Richard Lorch, The Agean Sea-Chart of Mehmed Reis ibn Menemenli, A.D. 1590, Manchester 1977.

6) An anonymous portolan chart dated to 1652. Turkish. Now in the Bayerische Staatsbiblithek, Cod. Turc. 431. It covers the entire Mediterranean, the Black Sea, the Atlantic coast and the British Isles. Bayerische Staatsbibliothek, *Das Buch im Orient: Handschriften und kostbare Drucke aus zwei Jahrtausenden* (exhibition catalog), Wiesbaden: Ludwig Reichert, 1982, p. 205, no. 132). Soucek, 2:1.288, 290; Manners p. 104-105, fig. 57.

Atlases:

1) The anonymous ***Deniz Atlası***, so named by Thomas Goodrich who discovered it at Walters Art Gallery and has dated it to ca. 968/1560. Turkish. It contains the traditional portolan atlas contingent of six charts, from the Black Sea to the coast of Western Europe, and a world map on an oval projection, similar in form to those in the Battista Agnese atlases. A special addition,

however, is a chart of the Indian Ocean, almost blank except for a few faintly written Ottoman legends: 'Adan (Aden), Bahr-i Fars (Persian Gulf), Ras al-Hadd (a cape of this name at the north-eastern tip of the Arabian peninsula), Sarandib (Shri Lanka), Jazirah-i Aji (Sumatra), and Jazirah-i Zawa (Java). Baltimore, Walters Art Gallery ms. W. 660. Goodrich "The Earliest Ottoman Maritime Atlas – The Walters Deniz atlasi", AO 11 (1986) 25-50; Soucek, 2:1:282-83 and plate 23.

2) The ***Ali Macar Reis atlas.*** 1567. Turkish/Arabic. A specimen in the library of the Topkapi Palace known by the name of its otherwise little known author. It is the only one of the three to have an explicit date of production and the cartographer's name: on fol. 4b, along the right margin of the page, we find the following statement in Arabic: *'The humble Ali Madar Reis wrote it with the aid of the Lord of Decision [= God] in the month of Safer, year 975 [= between 7 August and 4 September 1567]'.* The Ali Macar Reis atlas consists of six portolan charts and one world map, all on double pages. They cover the traditional areas of Western portolan atlases, from the Black Sea to the British Isles. Hazine 644. Soucek, 2:1:279-82, figs. 14.16-17.

3) The anonymous ***Atlas-ı Hümayun.*** 1570? Turkish. It too has been discovered and named by Thomas Goodrich, this time at the Istanbul Arkeoloji Müzesi. He has tentatively dated it to 978/1570. It consists of nine charts, of which charts 1-6 and 8 closely resemble those of the Ali Macar atlas, while chart 7 may be an enlargement of one section of the chart of the central Mediterranean. Arkeoloji Muzesi Kitapligi, no. 1621. Soucek, 2:1:282—83, fig. 18.

To these specimens could be added two hybrid atlases produced at the workshop of the al-Sharafi al-Sifaqsi family in Tunis. The absence of any practical function as portolan charts is reflected in the fact that they bear a strong imprint of the 12th century Arab cartographer Idrisi, whose work in turn drew much on the Ptolemaic tradition. At the same time, however, the overall style is that of the contemporary portolan chart:

4) Ali ibn Ahmad ibn Muhammad al-Sharafi al-Sifaqsi, *Tablah*, 1 Ramadan 958 / 1-2 September 1551. Arabic. It contains 5 charts of the Mediterranean and Black Sea and the Iberian and Moroccan coasts of the Atlantic, a world map similar to the small circular world map of Idrisi, a qibla diagram, a diagram showing the day lengths for each month of the year in the 4th climate, and an agricultural calendar for each month. Paris, BN, MS. Arabe 2278. Soucek, 2:1:285-6 & Fig. 14.21.

5) Idem, a portolan atlas dated 979/1571-1572. Arabic. It has a small, round corrupt Idrisi-like world diagram, and charts: the Gulf of Sidra, Italy and the Adriatic, the western Mediterranean, the Aegean Sea and Crete, the Black Sea, and the eastern Mediterranean. All the charts are oriented to the south.

Oxford, Bodleian Library, MS. Marsh 294. Soucek, 2:1:287 and figs. 1422 and 1423.

A survey of the known extant specimens made by Muslims has brought to light six single-sheet charts, and three or, if we add two hybrid ones, five atlases. This brings us to the conclusion that production of portolan charts and atlases must have been extremely reduced in Muslim countries, unless for some reason there had been a wholesale destruction of them, which is unlikely. It also forces us to ask the question of why this was so, and the sole plausible explanation is that in the Mediterranean, Muslims practiced less commercial navigation than Christians did. We have enough historical evidence to support this explanation, for seaborne trade that crossed the religious line was almost exclusively Christian – it was the Venetians, Catalans, Frenchmen, and other Europeans who frequented Muslim ports to sell and buy and carry passengers, whereas the Arabs or Turks reciprocated only on a marginal level. What is more, even the traffic serving Muslim merchants and passengers in the Ottoman home waters increasingly had recourse to Christian, chiefly French carriers.

As for the oceanic version of portolans, charts of exploration and discovery, a comparative survey is equally useful but the elusive nature of evidence on the Muslim side makes our conclusions more tentative. On the Christian side, we see a distinct chronological watershed situated in the last decade of the 15th century (or, to use a date that could hardly be more eloquent, 1499/1500). In 1489 the Portuguese quest for a maritime route to India was crowned with success when Bartolomeo Diaz rounded the Cape of Good Hope and, discovering the passage into the Indian Ocean, sailed back to Portugal with the good news; in 1493 Columbus returned to Spain with the sensational report that his 1492 expedition had demonstrated the feasibility of reaching the Orient by crossing the Atlantic on a westward course; and in 1499 Vasco da Gama's two ships returned to Portugal from a triumphant voyage with a load of pepper bought at Calicut on the south-western coast of India. These expeditions were what one might call the opening salvo marking the explosion of European voyages of discovery which in turn gave rise to a new era of mapping the whole world. After the voyages of Diaz, Columbus and da Gama, the circumnavigation of the globe by Magellan's expedition in 1519-1522 provided sufficient information for the final step taken at the cartographic section of the Casa de Contratación in Seville, the official Spanish agency monitoring overseas trade, where in 1529 the *cosmógrafo real* Diego Ribero made the first map of the world that included a correct image of the Pacific.

We have seen that Muslim cartography of the Mediterranean area, when compared with that produced by Christians, was minimal. It could be expected that the situation was different in the Orient. No antagonistic religious divide plagued the Indian Ocean, and commercial navigation there had been lively

since antiquity. It was at its height when the Portuguese made their appearance in 1498, and most of its practitioners were Muslim Arab, Gujerati and Indonesian merchants while pilgrims traveling to Mecca increased the volume of passenger traffic. There is even a famous story that the most famous author of Arabic sailing directions, Ahmad Ibn Majid, guided Vasco da Gama's ships from the African port of Malindi across the ocean to Calicut on the Malabar coast. Of late, doubts have been cast on this story, partly on the premise that Ibn Majid would hardly have volunteered to facilitate the infidels' irruption into an up till then safe Muslim preserve, but his existence is amply documented and his work has been preserved. Nor was he the only one; there were others, one of whom, Sulayman al-Mahri, is also known by his extant work. Both men compiled textual sailing directions, however, and what cartographic work there may have been is unknown. At any rate, the style and structure of the sailing directions written by Ibn Majid and Sulayman al-Mahri are different from the portolan text type characteristic of the Mediterranean, and the charts they or their peers may have drawn and used most probably were different from Mediterranean portolans and from the charts made by Europe's Christians showing the oceans as well.

Except for the inevitable piracy, there had not been much naval warfare on the seas of the Orient, so that merchant states bordering their shores were quite unprepared to resist the irruption of the infidels whose sailing ships were not only commercial vessels but also men-of-war. By 1515, the Portuguese maritime empire in the Indian Ocean spanned a huge space encompassed by bases on critical points: Mombasa in east Africa, Hormuz at the entrance to the Persian Gulf, Goa in India, and Malacca in Malaysia. As in the Mediterranean, the driving engine of navigation and enterprise here was seaborne trade and access to valuable commodities. The lure was pepper, spices, silks and other treasures of India, Indonesia and China, merchandise that since antiquity had been peacefully reaching the Near East and consumed there or transshipped to the Mediterranean on its route to Europe. Benefiting from their naval superiority, the Portuguese deflected the flow of this trade to the maritime route around the Cape of Good Hope toward Lisbon and Antwerp. For the native shippers and monarchs drawing profit from seaborne trade, this was an alarming loss of revenue, besides the fact that it was a dangerous invasion by the infidels of a largely Muslim sea and land space. Once the Ottoman Empire reached the shores of the Red Sea (1517) and Persian Gulf (1546), it had every reason to embark on an offensive against the infidel intruders and substitute its own seaborne empire for the Portuguese Estado da India. Such a policy would of course have needed determination and preparation, with adequate reconnoitering and mapping of the area. This in turn would have been reflected in the creation of sea charts made by Turks rivaling those made by the Portuguese. It also brings us back to Piri Reis.

Piri Reis

Cartographic and hydrographic expression of navigation in the Mediterranean as well as on the world's oceans, and of the voyages of discovery marking the renaissance and rise of the modern world, was thus primarily a Christian affair. The one great Muslim exception is Piri Reis. His importance is grounded in the two above-mentioned maps – especially that from 1513 – and the second version of the *Kitabi Bahrije* made in 1526. Both stand out as special, even unique forms of the portolan genre.

The map of 1513

If we step back and examine the map from a broader perspective, we see that the original sheet was torn longitudinally: the area covered, the shape of the extant portion and the disposal of its wind roses all suggest that in its original state the map had been three times its present size. On the eastern (right-hand) side only the western half of the Iberian peninsula and the westernmost portions of Africa are shown. The bulk of the extant portion covers the Atlantic Ocean, islands of the Caribbean, parts of Central America, and the eastern bulge of South America.

The map is drawn, like most portolan charts, on parchment, and the size of the extant part is 65 x 90 cm. Its portolan character is apparent from the five concentric focal points of rhumb lines (two in the form of full-fledged windroses), the mesh of rhumb lines themselves, and two scale-bar ribbons – as well as from the characteristic absence of projection of latitude and longitude grading. Place names along the coasts are disposed, as always in portolan charts, on the landward side perpendicular to the coast. That the map was intended for presentation is evident from the eye-catching depiction of ships, inland cities, monarchs and curious creatures, from natives to animals and birds, and the legends accompanying these features.

The map thus should be ranged among portolan charts of the age of discoveries, a genre that is broader in scope, both geographically and historically, than the relatively static, conservative Mediterranean portolan charts. Its uniqueness, however, also sets it apart from the rest of similarly ambitious world maps made by Christians in this period. One aspect of this uniqueness is obvious: it was made by a Muslim Turk. In its pristine state, the map must have been three times as large as the extant specimen: only the third which shows an area encompassed by the western fringe of Europe and Africa and the eastern fringe of central and southern America – or, expressed in different terms, the Atlantic Ocean with the eastern and western fringes of the Old and New World – has survived. Somebody, perhaps the Ottoman sultan Selim I, had torn the original sheet longitudinally along the eastern edge of the extant third. It is fortunate that Piri Reis inscribed the colophon indicating his name and place and date of the map's creation on this section:

> *"The person who drew it is poor Piri Reis son of Haci Mehmed and paternal nephew of Kemal Reis – may God pardon them both! – in the city of Gallipoli, in the month Muharrem the sacred of the year 919 (9 March – 7 April 1513)."*

Moreover, several legends on this sheet contain bits of information about the newly discovered land. Especially valuable, however, is an account about how Piri Reis made this map:

> *"This is a unique map such as no one has ever produced, and I am its author. I have used 20 maps and mappaemundi (yapamondolar). The latter derive from a prototype that goes back to the time of Alexander the Great (Iskender-i Zulkarneyn) and cover the entire inhabited world – the Arabs call such maps cağferiye – I have used eight such cağferiyes. Then I have used one of the Arab maps of India, four maps made by the Portuguese who applied mathematical methods to represent the Orient (lit. Sin, Hind, and Çin); finally, I have also used a map drawn by Columbus (Kolonbo) in the western part [of the world]. I have brought all these sources to one scale, and this map is the result. In other words, just as the sailors of the Mediterranean have reliable and well-tested charts at their disposal, on this map too [the depiction of] the Seven Seas is reliable and worthy of recognition."*

We thus know how, where and when the map was made; we also know that four years later, Piri Reis presented it to Sultan Selim I in Cairo after the Turkish conquest of Egypt. Its subsequent fate, however, is unknown except that somebody had truncated it and the remaining third was deposited in the library of the Topkapı Palace. The map lay there, forgotten, for over four centuries until scholars examining the collection discovered it in 1929. Its fortunes since then have been prodigious. Piri Reis's mention of a map drawn by Columbus as one of his sources created an international sensation and became a point of pride in the home country as a demonstration that Turks too had participated in the discoveries and rise of the modern world. The president of the republic, Kemal Atatürk, ordered that a facsimile reproduction be made, which was done in 1933 and published together with an accompanying booklet containing a thorough analysis and translation into English, French, German and Italian. The original has ever since then been valued as a precious treasure of the Topkapı Palace library, a work of art and science, and unique for being based on both western and eastern sources.

The Kitabi Bahriye

There was a sharp division between portolan charts and texts made by Europeans in the sense that they were kept separate from each other: the charts, even when assembled as atlases, were not accompanied by texts, while the texts remained strictly verbal without any cartographic illustrations.[3] As in

[3] A partial exception can be made for *isolarios*, volumes of texts accompanied by maps describing islands of the Mediterranean which made their appearance in 15th century

the case of portolan charts, a great number of portolan texts has been preserved, most of them authored by Italian and Catalan mariners in their respective languages. While generally anonymous, some mention the name of the author and place and date of compilation; and while most describe specific segments of the Mediterranean, some cover the entire sea and venture into the fringes of the Atlantic Ocean.

By contrast, the *Kitabi Bahriye* is divided into chapters of texts accompanied by charts: this is its most striking feature that makes it unique in portolan literature. The second, longer version contains 210 chapters and charts. Moreover, it stands out for several other reasons as well. One is its coverage of the entire Mediterranean, and, despite a brief initial deviation, a rational counterclockwise treatment of the entire basin, with the Dardanelles as the starting and finishing point. A special feature is also a long versified introduction to the second version, which describes the world's oceans, discusses navigational tools and techniques, and gives an account of voyages of discovery including Columbus's. Finally it is its intensely personal aspect adopted by the author that too sets the *Kitabi Bahriye* apart. In the preface to the second version, Piri Reis reveals the two reasons for the compilation of the book: one was to offer the new sultan, Suleyman, a present on the occasion of his enthronement; the other was to provide Turkish sailors with a nautical manual. His own words best convey his message and confession:

> *The reason for compiling this book is that a number of master craftsmen have now brought forward offerings from their various trades to the auspicious threshold and felicitous gate of His Majesty the World-protecting Emperor, so as to gain high status in society and attain name and renown through the matchless favor of that well-favored sovereign. Harboring the same hope, I, this weakest of insignificant slaves, paternal nephew of the late Captain Gazi Kemal, the lowly Piri Reis, son of Haci Mehmed, have also compiled – within the limits of my abilities – a memorable book on the science of navigation and the profession of the mariner, so as to present it to the celestial abode of the Emperor. Until now, nobody has produced a useful manual of this type dealing with the above-mentioned science.*
>
> *...I have [thus] devised a method which will facilitate – with God's help – the work of this craft's practitioners: by the use of the directions contained in my book, [they will be able to navigate] without a pilot's assistance, even if they have never seen or been told of the parts they happen to be sailing in. I thus hope that my brothers in the profession, while consulting this book during their work, will not forget me in their prayers.*

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and multiplied in the 16th, when some also included islands of the world's oceans. They were not meant to be navigational tools, but comparison of some of them with the *Kitabi Bahriye* shows that Piri Reis was influenced by their example and even may have used some as his source.

I wrote down all this information in Gallipoli and had completed my work by the year 932 [= 1526] since the Emigration of the Prophet – peace be upon Him! I collected the illustrations together with the texts, and this book is the result. I have organized it in such a manner that the point of departure is the fortresses known as Sultaniye and Kilidülbahir near Gallipoli; proceeding place by place and spot by spot, I describe the entire sea, and after this grand tour I again end up at the two fortresses. This [consistent route has been followed] in order to avoid hesitation and facilitate finding the necessary passage in times of emergency.

In the final segment of this preface, Piri Reis makes an allusion to the portolan's first version, explaining why he had failed to produce a finished copy, and tells the reader what helped him succeed five years later: appointed as pilot of the ship that took the grand vizier Ibrahim Pasha to Egypt, he often consulted his manual; the vizier noticed it, grasped the book's importance, and exhorted the author to produce a more polished copy that could be presented to the sultan.

However, because I despaired of being able to present the book [i.e., the first version] *to the World-protecting Emperor's threshold of felicity and nest of happiness, I felt too exhausted to produce a finished copy. Now, words that command respect have been directed at this insignificant slave and contemptible person, with the order that I convert the draft into a finished copy. Conforming thus to the order obeyed by the world and to the command that requires compliance, issued by the occupant of the mansion of the vizierate and the incumbent of the office of grand vizier, that sun of felicity and moon of happiness, His Excellency Ibrahim Pasha – may God facilitate what he desires! – I set to work and, as far as my abilities allowed me and my powers sufficed, and with the help of God, I fully converted this draft into a finished copy. It is hoped from God – may He be glorified and exalted! – that it will be graciously accepted by His Majesty the Sultan. Amen, O Helper!*

Besides these intensely personal segments in the preface and epilogue, Piri Reis inserts a number of reminiscences and topical digressions in the portolan text proper. The most vivid passages of this type can be found in the segments describing North Africa, whose coasts were used by Turkish *gazi*-corsairs on their forays against infidel shipping and coasts. A good example is the reception Kemal Reis, the author's uncle and the earliest and most famous of such *gazi*-corsairs, was given at the Algerian port of Bijayah:

Once Kemal and I came to Bijayah whose sultan was a person named Mawlay Abd al-Rahman, a relation of the sultan of Tunis. As we approached Bijayah, boats manned by inhabitants of the city came ten miles out toward us. They asked who we were and came right up to us and climbed on our ship. The late Kemal Reis asked them, 'Why were you not wary of us? After all, no Turk has come here as yet!' They answered: 'Three days ago Sidi Muhammad Tuwati informed us that a gazi *was coming from Turkey and told us to go and meet him. When we saw you today, we went and told the shaykh. He asked how many ships there were, and we answered, "Three, one a square-rigger." No sooner had we said this than the shaykh exclaimed,*

> *"Go forth, it is the* gazi*!" So we have come to you.' They stayed a short while and then returned to the city. One of our ships was a* barça*. The weather was suitable for putting to port. We slowly approached the harbor. No words can describe how much they celebrated and fired from the cannon. After we had arrived and cast anchor, first of all we went with several of our companions to the zaviye of Sidi Muhammad Tuwati. The shaykh inside – a holy man said to be 122 years old – was told about our coming. They helped him come to the door, and he greeted us. Each of us kissed his hand after our fashion. He placed his right hand on Kemal Reis's head, recited the* Surat al-Ikhlas *three times, and said, 'God willing, the Ottoman sovereign will bestow his favor upon you.' He gave both Kemal Reis and me a rod of aspen wood, saying 'In the next three days, you will meet enemy ships. Brandish these rods at them!' We did indeed meet enemy ships, and did as the shaykh had told us: the wind turned in our favor, and we sailed forth unharmed... Out of love for this saint, we spent two winters at Bijayah, sailing out each summer on our raids.*

The *Kitabi Bahriye* thus occupies a special place in the genre of portolan charts and texts on account of its comprehensiveness, personal tone, and expanded subject matter. None of its counterparts produced by Christians possess similar qualities, and the difference should be sought in the Turkish author's identity grounded in a different civilization and special occupation, besides the important factor of his own personality. Piri Reis was a Muslim and a *gazi*-corsair, which meant that to him and his peers the Mediterranean was more an area of confrontation with the infidels and of opportunity for gain from maritime *gaza* than a space of lucrative seaborne trade: he compiled his portolan primarily for the benefit of Ottoman *gazis*, and only secondarily for Ottoman merchants, hence the book's special structure, inasmuch as the needs of the two were not identical: the captain of a merchant vessel sailing from Istanbul to Venice needed to know the shortest and safest route, whereas a corsair setting out from his base needed to know a variety of convenient harbors, anchorages, watering places and hideouts in the area where he was going to prey on his victims. To be sure, the two modes overlapped up to a point, as Piri Reis's own story of how he piloted the ship taking the grand vizier Ibrahim Pasha from Istanbul to Egypt shows. Essential was also the experience he gained by the side of his uncle as a *gazi*-corsair during the long years of contacts with the Christians of the western Mediterranean, which allowed him to observe their ways, accumulate knowledge about their manner of seafaring and the discoveries they were making, and build a collection of captured or purchased portolan charts and manuals and other navigational tools. At the same time, during these twenty-odd years of activities over the entire expanse of the Mediterranean, Piri Reis never lost the awareness of being the subject of the Ottoman sultan to whom he owed loyalty and whom he served whenever summoned to do so. All these aspects contributed to the creation of the *Kitabi Bahriye* and are reflected in it, making it a special book like no other.

The number of extant copies of the *Kitabi Bahriye* – both of its first and second version – shows that Piri Reis's wish came true as far as its use by mariners and reception by readers was concerned; there is no evidence, however, that his other wish – to be noticed and rewarded by the sultan – did. The fact that he drew an incipient part of a second world map in 1528 shows that for a short time after producing the final version of the *Kitabi Bahriye* he continued his work as a cartographer, but the unfinished state of this map also shows that he must have given up on that line of career. The profession in which he carried on was that of a mariner, begun in his adolescence by the side of his uncle Kemal Reis as a *gazi*-corsair, and after the latter's death in 1510 he continued with gradually more official and elevated functions in the imperial navy to the very end of his life in 1553. Given his excellence as cartographer and hydrographer, however, it was a life of wasted talent and opportunities. The two sultans to whom he gave or dedicated the 1513 map and the *Kitabi Bahriye* showed no appreciation and offered no encouragement to continue with such work. Neither did the rest of the Ottoman elite except for Ibrahim Pasha, and he, despite his closeness to Suleyman the Magnificent, failed to stir the monarch's interest. The loss was not only Piri Reis's. He and his two sovereigns lived in a time when a new modern world was rising in the Christian West, and one of the manifestations of this rise was overseas expansion, exploration and mastery of trade routes with benefits that were not only economic but also scientific. Improved navigation techniques and constantly updated cartographic tools were indispensable for successful pursuit of these activities, and the governments of Portugal, Spain and other powers gave vigorous support to agencies engaged in producing and developing them. This enabled the Portuguese to penetrate the Indian Ocean and establish, in the 16th century, a maritime empire which they called Estado de India. They remained dominant there until gradually pushed out by the Dutch and the English in the 17th century. As we have seen, this area was predominantly Muslim, besides being, geographically, the Ottoman Empire's oceanic backyard. The Porte had every reason for substituting its own maritime empire for that of the infidels. In order to do that, however, it needed to do what the Portuguese and others were doing in the West – establish an agency in charge of organizing the broad range of activities to this end, one of which was supporting Ottoman navigation by producing adequate and constantly updated sea charts. Had the Ottoman sultan or the viziers of the divan decided to do so, they needed a man to take charge of such an office where he could have started producing more and constantly updated maps, besides training a competent staff of disciples. Piri Reis was such a man, but he was ignored in that capacity, and his work became unique also in this respect – an impressive but isolated achievement.

This is, indeed, the other, less fortunate, even tragic fact of Piri Reis's role in the history of Ottoman Turkey. If he used, among other maps, one made by

Columbus, it means that it must have been part of the no doubt considerable collection of portolan charts, world maps and other nautical tools which he had assembled in the course of his life as a mariner. That collection disappeared after the cartographer's execution, and with it also Columbus's map – possibly the earliest the discoverer of America had made. What happened to it?. Had this collection survived, we might also be able to answer the question of what kind of charts the Arab navigators used in the Indian Ocean. And there is the puzzling question of the 1513 map's own mutilation. What happened to the missing two thirds? If some accident caused their destruction, why didn't the sultan ask Piri Reis to make another such map, or, better still, more of them, constantly updating them with the arrival of new sources, or even training disciples to pick up where he had left? Suleyman the Magnificent remained indifferent to such vistas, however, and in the end had Piri Reis executed and the splendid collection of maps, including that of Columbus, fell victim to dispersal and destruction. These are disturbing questions which should be asked but never are. They have important implications, especially when placed in the broader context of the Ottoman Empire's might and civilization at the time of its apogee. The empire's greatness was real and impressive, but of a kind that stood aloof from the new kind of achievements being attained by the rising West. The Ottoman sultan spurned the efforts made by Piri Reis to awaken his interest in the world beyond the confines of his vast empire, and the mariner-cartographer had to wait four centuries before the president of Turkey, Kemal Atatürk, recognized his merits and rendered him his due.