Ottoman Nautical Charting and Miniature Painting: Technology and Aesthetics

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Secrecy

Nautical charts used to be a significant Mediterranean concern in their early period (13th–16th century). Their technology was developed through the communication of the people of the Mediterranean, that encircled body of water that determined the communication rather than the isolation of the people living around it. Nautical charts and atlases, as the most developed and exact version in the depiction of an area, used to be the pilot in the trade ships’ route, the Theater of the World (Teatrum Orbis Terrarum) for those who wanted to broaden the titles of their crown. But these charts were also the systematized picture of human expansion in the already known, but also in the unexplored lands, a picture that was of great learned interest.

The medieval cartography of mappamundi that involved round maps of the so called T-O type, was of great religious character both in the Christian, as well as in the Islamic Mediterranean. In these charts water and land were depicted in a simplified form placing in the center of the world the one and only Jerusalem, Rome, Mecca or Cairo. Nevertheless, Renaissance people were not satisfied with the

1 Compare the title “Lord of the Navigation, Conquest and Commerce of Ethiopia, Arabia, Persia and India” of the Portuguese king Manuel the Fortunate (1495-1521) to that of the Ottoman Sultans from the early 15th century: “Hâ’i ni’il-Balâreyn Suljand’l-i Berreyn—Lord of the Seas and Lands.”
mappamondi maps, as portolan charts gave a more realistic version of the world. These charts were the fruit of the know-how and the observation on the spot of sailors, that acquired many skills at the cost of much pain. Thus, they were of great value and in some places they were a state secret.

In 1508 the king of Spain established the so called Casa de la Contratación (or Casa para la Contratación y Negociación de las Indias) in Seville, a public service that dealt with discovery missions, colonies and the trade with them. The hydrographic workshop installed in the Casa was enveloped in absolute mystery, while any possible leak of charting material towards foreign powers was prevented at all costs. The chart as a secret (sigilo) follows all ships to their journeys. Spaniards named it padrón real. In turn, the kingdom of Portugal established an analogous service, Casa da Índia in Lisbon. Charts that were produced there, were named padrão real. One of the reasons of the few remaining samples of early nautical charting from Spain and Portugal is the secrecy and the severe protection they were enveloped in.

Commercialization

Charts that were produced in the map workshops of the Italian cities came as result of humanitarian and Renaissance sciences. Florentines, Venetians and Genoese had mainly a learned and commercial interest in them. Nautical charts (sing. portolano, carta de navegar, compasso) became indispensable to navigation, mostly when journeys did not follow the coastline. Nautical charts were reproduced to meet the needs of numerous commercial and war ships, but also the scholars’ thirst for geographic knowledge, the noble and bourgeois collectors’ passion for knowledge and aesthetic enjoyment. These charts were also an excellent present for sovereigns. That way, geographical depiction met various and increased needs. Nautical charts were commercialized. Many individual cartographers as well commercial workshops appeared offering a significantly augmented production of manuscripts and printed charts. Since the middle of the 16th century, the centers of printed maps, Antwerp and Amsterdam, undertook the meeting of the increased demand of the great colonial trade companies, that is Vereenigde Oost Indische Compagnie (United East India Company) and West Indische Compagnie (West India Company). The production, not only of printed nautical


5 Kees Zandvliet, Mapping for money: maps, plans and topographic paintings and their role in Dutch overseas expansion during the 16th and 17th centuries (Amsterdam: De Bataafsche Leeuw, 1998); Dit k de Vries, Uit de kaartenwinkel van de VOC, catalogus van zeekaarten van de Vereenigde Oostindische Compagnie in de Collectie Bodel Nijenhuis (Alphen aan den Rijn: Canalletto, 1996); J. van Bracht, Atlas van kaarten en aanzichten van de VOC en WIC, genoemd Vingboons-atlas, in het Algemeen Rijksarchief te ’s-Gravenhage, Vingboons atlas (Bibwam: Fibula-Van Diisvored, 1983), and Michel
charts, but also of modern atlases in many languages, aimed at meeting the cartographic needs worldwide, which was consistently fulfilled.\(^6\)

The Map Workshop

Florence, where the Ferrara Council was transferred (1438–42), was one of the centers of humanistic geography. This especially fruitful city managed to imbibe the classical Greek culture, which had been carried to the West through the Arabic culture for years and was now carried there by the Byzantine scholars. People’s love for geography led to a significant demand of charts and gave birth to numerous workshops in Rome firstly and Venice afterwards. The Mediterranean map workshop flourished in the Italian peninsula, mainly in Venice—"La Serenissima," the Ruler of the Mediterranean Sea.\(^5\) The copying tradition of the monasteries, mainly that of the independent copying workshops (scriptorium) was adapted to the increasing demand of geographical and cartographical works. Those who crossed the Mediterranean and the Black Seas were in need of handbooks that could facilitate their journey. That way, a captain that sailed from Venice used to consult a handbook with nautical instructions (portolan text) and a nautical chart (portolan chart)\(^7\) for safe navigation. On the other hand, that captain as merchant used to consult a handbook with geographical and commercial information (on products, currency, weights and measures, questions of

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map. The selection and preparation of the parchment bedding was usually made in other specialized workshops. The first stage comprised the main cartographical procedure: drawing the coastline and the islands, the elements that composed orography and hydrography, cartographic symbols, loxodrome nets (rhumb lines), vertical and horizontal lines, scale bars, wind roses and compasses. The second stage comprised the writing down of place names and any kind of notes. Then, they used to color coastlines, islands, rivers and lakes, to paint miniatures of castles, ports, cities, as well as numerous decorative elements like ships, flora and fauna, legendary monsters of the sea and the land, and sovereigns’ flags. Thus, the chart was not only a handbook for use on board, but also a work of art thanks to the miniaturist’s hand. In the case of printed charts, the engraver undertook the role of the miniaturist. The experienced mariner intervened by adding and correcting the form of coastlines, the recording of reefs, shallows and difficult crossings. In short, he transferred real world on the parchment and contributed to the endeavor to depict land with precision. This mariner, usually a captain, became the owner of the chart and signed it once finished.

While we cannot refer to schools in the nautical cartography of Western Mediterranean, we can discern two aesthetic directions, which maintain their purity until the middle of the 15th century. Catalan charts, produced mainly in Mallorca, are sumptuously decorated, with vivid colors while every free space is covered. This aesthetic fear of the empty (horror vacui), probably due to the Moorish tradition of the Iberian Peninsula, is also used in many samples of the Islamic nautical cartography of an extreme elegance, as it will be shown later on. On the other hand, Italian nautical charts are less painted and decorated. Sometimes inland regions are decorated only with place names. Certainly, mixed tendencies appeared soon in the style of nautical charts. Besides, many were the Catalan cartographers that used to work and produce charts in Italian workshops.


12 For Catalan nautical cartography see Julio Rey Pastor, and Ernesto Garcia Camarero, La cartografía mallorquina (Madrid: Departamento de Historia y Filosofía de la Ciencia, 1960), and Gonzalo de Reparaz, Catalunya a les Marx. Navegants, Mercaders i Cartografes Catalans de l’Edat Mitjana i del Renaixement. Contribució a l’Estudi de la Història del Comerç i de la Navegació de la Mediterrània (Barcelona: Editorial Mentor, 1938). For Mallorquín and Portuguese nautical cartography see Rolando
showed the greatest production in the 15th century, while Froducci and Agnese produced their works in the 16th century. Their workshops produced a great number of charts and atlases. Today all surviving samples are spread all over the world in libraries, archives and museums.

It has already been mentioned that mariners were the most important chart producers; however, there are not many surviving works by them. Their charts were simpler; on the contrary, in order to create a luxurious chart many artisans should assist working in an organized map workshop. Many were also the cases where the miniaturist himself did the job of the cartographer. Benedetto Bordone is a typical example. He produced the first printed world atlas of islands that was reprinted many times.

**Libraries and Cabinets of Curiosities**

Nautical charts along with other cartographical works, especially their expensive and luxurious samples, were hardly found on a ship, never got in touch with sea water, never were in risk due to storms. They were produced to serve not as technological tools, but as the creations of an experimental science and of extreme aesthetic value for people with exquisite taste. Renaissance people desired knowledge based on science. They searched and cultivated a culture based on curiosity for unknown lands, tribes and civilizations. Nautical charts bear the most accurate and up-to-date information. Thus, they soon found a place among the strange objects brought from the exploration of new continents, routes and civilizations in the libraries of monasteries, courts, noblemen, bourgeois and rich merchants. Renaissance people were obsessed with the collection of strange objects, of flora and fauna (pictures of plants and stuffed animals), of stones, metals and art works from unknown cultures. All these composed a "macrocosm in a microcosm," they were the geography of an extended planet, of a completely new world, whose diversity was put in order on a map canvass. Thus, in a cabinet of curiosities of cartographers with one or two charts. However, there were many well-known indefatigable cartographers or families working on charting. Benincasa's workshop


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The Ottoman Response

Forerunners of Cartography

Geography in the Islamic East was connected to the classical Arabic and Persian geography handbooks, which were followed by round maps of the T-O type. Those were works by al-Balṭ, al-İṣṭaḥrī, Ibn Hwakal, al-Wardī, al-Kazwīnī, al-İdristī, as well as by al-İsāghārī. Muslim geographers also went in for diagram maps that showed the way to Mecca and Ka‘ba or their topographical plans.

Only a few Arabic nautical charts have survived. One third of them, three in number, are in Istanbul; they were produced in the Maghreb and Eastern Mediterranean from the beginning of the 15th century until the first years of the reign of Süleyman the Lawgiver.


passing afterwards to the hands of the Ottoman Sultan. The oldest one, that of al-Kātibī, is a plain chart without decoration, while the other two remind us of Catalan charts, rich in colors and drawings. Even though there are no Ottoman copies left of these charts, they might have been used as models for the creation of similar Ottoman works.21

Nakkashane and Galata Workshops

Meşhurmed the Conqueror possessed many of the features found in the sovereigns of Western Europe. His insistence on conquering the former Rûm areas and on coming closer to Europe supported his special personal interest in geography and cartography. It is said that he owned European maps, and that he ordered the Arabic translation of the Ptolemaic Geography from the scholar Georgios Amiroutsiz. His tendency to resemble European kings, in combination with his inclination towards beautiful and important things, made him invite numerous scholars and artists into his court. Italian painters, like Bellini, painted the powerful man of the East bringing an aesthetic language that set a good precedent for the Ottoman art of depiction. Moreover, there were Ottoman miniaturists, like Sinân Beg, who, after visiting Venice, returned to Istanbul and taught their students what they had learnt during their journey.

According to testimonies, since the era of Süleyman the Lawgiver there were many artists and artisans, the so-called chi-i hıref in the palace of Topkapı. Part of them was the Guild of Painters (cemâ'at-i nakkaşân) who worked in nakkâşhane. Its members were divided in two groups, the bûlûk-i Rûmiyân comprising painters from Anatolia and the Balkans and the bûlûk-i 'Acemân, comprising painters from Iran. In the first group are found names denoting people from Hungary, Austria, Bosnia, as well as Franks. In mid 16th, as it is observed from the payrol

22 The Venetian Giacomo de' Languchi, or Langasto, saw a map possessed by Fârîh that depicted the states and provinces of Europe. See Bernard Lewis, Istanbul and the civilization of the Ottoman Empire (Norman: University of Oklahoma Press), 26. See, also, Franz Bâhîner, “An Italian map of the Balkans, presumably owned by Mehmed II, the Conqueror (1452–55).” Imago Mundi 8 (1951): 8–15.
The island of Naxos (Naxa) in the Aegean Sea. Chart of the isolario style in Szyżyd Nılıh, Delitze Kütüphane, an expanded adaptation without text from Pir Re's, Kitab-i Bahriye. Considered as a 3rd version Bahriye manuscript copied ca. 1645-50. Biblioteca Universitaria di Bologna, Bologna (MS 3609, f. 32b).

The island of Rhodes (Rodos) in the Aegean Sea. Chart of the isolario style in Pir Re's, Kitab-i Bahriye, 3rd version manuscript copied 2nd half of the 17th century. İstanbul Üniversitesi Kütüphanesi, İstanbul (T. 6665, 101a).
The term nakkâş comprises many kinds of artists and artisans: those who paint and decorate surfaces, those who embroider clothes, manuscript miniaturists and wall painters. In the shipyards of Istanbul the same term (also as sahibi) is used for the painters of wooden and metal surfaces as well for the painters of a ship’s sails. As for nakkâş as a painter there are also many different specializations: kırış (engraver), nakkâş (color painter), nusayıf (portrait painter), tarâv (decorator or landscape painter), reşât (draughtsman). Those painter-miniaturists drew the world maps that accompanied the classical Arabic geographies as well as the topographical maps and plans of the Islamic holy sites.

Apart from the map production in the palace, there is also a reference by Evliyâ Çelebi in his Seyahatnâme (1648/1638) to map workshops in Galata:

28 The numerous rich regional collections of Ottoman officers in the area of Bulgaria are a typical example. The remains of these collections, which contain codices with geographical texts, are studied in Muciara II. Cântărești, Oceanariumul Național în București. Gustave Flaubert și oamenii săi. cenușii (Ottoman Libraries in Bulgarian Lands, XV-XIX centuries. Studies) (Codre: Cărturești, din Național, 2009). Source: “Histria” Geaumea (București: ”Gesturi”, 1992).

The guild of mapmakers: Their class comprises eight workshops and 15 artisans, who know every occult and strange science. They know many languages, mainly Latin and the similar ones and read books like Atlas Minor, Geography and Mappamundi. works of elder wise men dealing with cosmography. They draw and measure whatever is on the surface of the earth: the Black Sea, the Mediterranean, the Oceans, the Sea of Oman, the Sea of Suez, the Caspian Sea or Sea of Gilan, the Sea of Ormuz, the Venetian Gulf and the Van Lake; every sea, Gulf and strait, every big river and rocks. Then they sell them to the mariners. For every seaman, those are the soul of the science of cartography. If there are reefs or precipitated rocks, deep or shallow waters near the land or the island they go. If there is a natural port, they draw it out on the eight winds and the seventy (sic) kertes. Captains who are experienced in these charts, use them to travel and cross the Sea of Oman. It is a great science. (…) Finally, during the guild parade these cartographers march past with pomp on carriages, carrying their products: charts, world images drawn by them and representations of many cities and countries that decorate their workshops.

It is possible that these workshops had started working much earlier. In 1535 Paolo Giovio wrote in one of his letters that he had acquired a topographical plan of the Dardanelles from his relative Pietro.
Ottoman Topographical Mapping and Nautical Charting

For the Ottomans, the 16th century was rich in topographical maps and nautical charts. Molla Kasırga was the most important miniaturist who illustrated historical manuscripts with topographical maps. He was the writer of texts on the Lawgiver’s campaigns in Mesopotamia and Hungary and managed to depict the campaign stages, the castles and the cities they had met in a masterful way. His paintings, rich in colors and shapes, are quite naïve and give a rather vague aspect of perspective using the so called bird’s-eye view. Beyazıt I, Menzil-i Sefer-i ‘Trakya-i Sultan Süleyman Han (The Stages on Sultan Süleyman’s Campaign in the two Iraqs), ca. 944/1537–8, is his most important work, while in his Tarhi-i Felhi Silkçe and Usturgan ve Ustunbelğrâd (Conquest of Sirklos, Esztergom and Székesfehérvár), ca. 952–7/1545–50, and Tarhi-i Sultan Bayezid (History of Sultan Bayezid), ca. 952–7/1545–50, are found numerous topographic versions of ports like Marseille, Antibes, Toulon, Lepanto, that differ from his usual miniatures, following the so called portolan style, as they seem to copy the style of relevant European works, like that by Jerôme Maurand. Works of urban topography are related to the sea, the coloring of which gives a more vivid pictorial result. This kind of cartographic works are found in the Islands Book.

In the same article, Fabris cites documents involving the ordering of a map in Venice by the Ottoman Court.

(isolarii), nautical cartographic products created in order to describe the Mediterranean islands since the beginning of 15th century.42

Nigâr or Haydar Re‘is, a mariner43 and realist painter, combines nautical knowledge and the art of depiction. It is not known whether he designed nautical charts or just assisted in their decoration; however, it is rather certain that he lived in an ambience where Ottoman nautical charting and miniature painting met each other.44

Piri Re‘is (ca. 875–961/1470–1554), Ottoman corsair and admiral, with his two world maps (in 919/1513 and 935/1528–9) and his isolario entitled Kitâb-i Bahriye (Book on Navigation)45 identified his name with the Ottoman nautical cartography. His two charts are richly decorated, reminding us of the Catalan and Portuguese charts, that served as a model to the cartographer, according to his own testimony. His isolario, a text divided into different chapters with nautical instructions, is accompanied by charts of the island or the coast he describes and is compiled in two different versions (1520–1 and 1525–6) produced by himself. In the 17th century and mainly during the reign of Mehmed IV (1648–87), this work was reproduced in a series of richly decorated copies, diverse in content, as a third version.46 The Book of Navigation was reproduced a century after his first production, as the Ottomans wanted to have a cartography and geography handbook. It was written in their own language and described the Mediterranean in an accurate and detailed way.47 The copies of the first version intended for mariners. Texts were

45 Facsimile reproduction of one of the best second version copies is Piri Re‘is, Kitâb-i Bahriye, ed. E.Z. Öztâ, 4 vols. (Ankara: The Historical Research Foundation - Istanbul Research Center, 1988). The Aegean Sea part is translated in Greek and studied in detail in Dimitris Lopatis, O Ippi Peiz, η Οθωμανική παγκόσμια πεζογραφία ως η άλλη του Αυγαλον [Piri Reis, Ottoman Cartography and Aegean Lake] (Athens: Trokhalia, 2000).
47 The copying of Piri Re‘is’s work during this period is studied in Dimitris Lopatis, “Piri Reis’s Book on Navigation (Kitâb-i Bahriye) as a Geography Handbook”, unpublished paper presented in the 18th International Conference on the History of Cartography (Athens, 1–16 July 1999).

Texts were shorter and charts simpler. Numerous mariners, who signed their own copy, reproduced them probably in the workshops of Galata. They must be among the simple and cheap products of these workshops. On the contrary, the second version copies, which were intended for the Lawgiver, were more complex and rich, luxurious and well-designed, since they were supposed to meet Sultan’s learned and aesthetic interests. Those copies were anonymous and must have been of the most expensive products of Galata workshops. The even more luxurious third version copies were produced with the use of expensive material. Elegance and sumptuousness in their design are well discerned in the drawing of coastlines, the combination of colors, the decorative elements, the castle and city miniatures. The chart turns out to be not only a strictly technological product, but also a feast of beauty, intended for exquisite tastes. This kind of manuscript could only be produced in the miniature workshop of the palace.

There are three more nautical atlases of the same style, of which one is attributed to ‘Ali Macar Reis’s and the other two are anonymous. The Hungarian convert ‘Ali Macar Reis’s seems, apart from his name, to have added some place names in his atlas. In the Atlas-i Hümayun, the anonymous atlas in the Library of the Archaeological Museums in Istanbul (MS. 1621), place names can be hardly discerned while simplified tiny castle and city vignettes are spread in the inland of the illustrated lands, attributing a slight sense of miniature painting in the charts. The masterpiece of Ottoman nautical cartography, an example of unique aesthetics, is an anonymous atlas known as the Walters Deniz Atlas, situated now in the Walters Art Gallery in Baltimore (MS. W. 660). In the charts of this atlas, the miniaturist reveals by letting the Islamic aesthetics in miniature painting spread all over the canvas. City vignettes cover every free space (horror vacui). For example, the topographic depiction of Istanbul is extended all over the Balkans. The producer of this work uses every decorative possibility afforded by cartography. He makes pure art. Cartography is the pretext, painting is the desired result.49

In these atlases, geography and topography are combined according to Ptolemy and Renaissance rules.50 Within the framework of


51 For the Ptolemaic and Renaissance meaning of the terms cosmographia, geographia and topographia or chorographia, that is the transition from the depiction of macrocosm to the microcosm, see David Woodward, Maps as Prints in the Italian Renaissance—Makers, Distributors & Consumers, (London: The British Library, 1996), 5-20, and Catherine Beaux-Armandot, “L’œil du cartographe ou refections sur un monde vu de près.” In l’œil du cartographe et la represention geographique du Moyen Age à nos
charting, miniaturists have the possibility of developing their drawings in the form of sumptuous decorative compositions or city topographies, and that way they act as painters that use a specific pictorial language. The portolan style is distinctively used on city miniatures. That is the point where the topographer-chorographer acts as painter. This aesthetic language isolates the object from the total, attributing a central position to it and, as with the art of painting, it is quite abstract. The morphology of landscape geometry (ratio geometrica), the perspective (ratio perspectiva), the liquid and movable sea mass, the mountain profile, the flora and fauna of each culture are quite distinct. The illustrated landscape is described on a geometric background, as if it was a painting. The picture has architectural elements combining realism and symbolism. Color is indicative of masses, which are naturally illustrated. Color in geographical maps is a valuable accessory, while in topographical maps it becomes an indispensable element. Limited expressiveness is typical of a gray printed map. Through their decorative skills, miniaturists aim to reach an unexpected pleasant result that will be appreciated by those who ordered or shall receive the work.

Ottoman nautical charting follows the European cartography model. Besides, the cartographical background, as the fruit of an experimental science, comes from Central Western Mediterranean. Ottoman nautical charts differ from European ones in two respects: place names and all inscriptions are written in the Arabic alphabet and the Ottoman language, and the decorative elements, the aesthetic part of the map, are influenced from the Islamic art of depiction.

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On the other hand, Suleyman the Lawgiver had the good fortune to be the powerful monarch of a state that enjoyed great prosperity. The power of the mighty empire found a point of reference in his person and moved forward towards the development of a distinctive civilization, the Ottoman. The Lawgiver was at the head of the empire during an extremely multidimensional productive period and accepted the products of its civilization. In his palace, there were many different cultural elements like that of Kitab-i Bahriye. After the conquest of Buda in 1526, Suleyman himself visited the library and the collection (Wunderkammer) that the Hungarian king Matthias Corvinus (Hunyadi) owned. He felt personally the atmosphere of these Renaissance collections and transferred part of it in Istanbul enriching that way his own palace. A second wave of influence from the West had come to the Ottoman world after that of the Conqueror. In the second half of the 17th century, Ottoman hydrography and cartography mark a recovery. It was already mentioned that during the reign of Mehmed IV (1648–87) Piri Reis's work was enriched and reproduced, while Evliya Celebi refers to numerous active cartographic workshops in Galata. At the same time, another important scholar, Kâtip Celebi, brings the European cartographic science to the East, translating Mercator's atlas into the Ottoman language. Thanks to his cartographic works Cihannümâ (Panorama of the World) and Levantî'î n-süfî ftıbalât-i Atlas Minor (Rays of Light in the Darkness of Atlas Minor) Ottoman Islamic cartography becomes totally dependent on European productions, as Kâtip Celebi was the first Ottoman who, relying on European sources, offered an accurate and modern depiction of the world. On the 4th August 1668 the Dutch Ambassador Justinus Colijer offered

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35 “Ve hem işbu kiót şütet gerekcol, hâzayinde bulunmak yegerekkî; Tabûth kiât getîr içına behane, ki teşir idêveyi şahî cihât.” See Piri Reis, Kitab-i Bahriye (Süleymanie Library, MS Aya Sofya 2612, f. 427a).


*Atlas Maior* by Janszoon Blaeu to the Sultan. The Sultan asked Ebü Bekir bin Behram ed-Dimishti to translate it into Ottoman. Both works are in the Topkapı collection.

The French traveler J.B. Tavernier visited the Treasure at the time. He was one of the few foreigners who had access to it. In his description he referred to books in various European languages, to celestial and terrestrial globes, and geographical maps probably produced by a Turkish corsair after observations on the spot during his trip. Tavernier believed that these maps had been offered as a gift to the Sultan. Finally, he noted that dust had covered the rich carpets already described, as well as the books. These latter seemed to be covered by the mist of an old victory against Christians. They were considered as monuments of this victory rather than tools in use.  

It seems that the maps that Tavernier found in hazine were not related to the modern cartographic works, all these sumptuous and accurate atlases. It is likely that they were not creations by Katıb Çelebi or Ebü Bekir, but depictions that revealed the gathering of the geographical knowledge of the previous century in the Ottoman Empire. Despite the gleam of its power (occupation of Candia, Crete in 1669) the empire seemed to be more productive in learned and aesthetic cartography rather than in a cartography used as a military tool in order to survey the lands to be conquered. Mehmed IV preferred hunting, feasts, and the sweet serenity of the palace in Edirne. In his hazine many were the presents that arrived, all extremely sumptuous and precious. The maps he received were elegant samples of Islamic aesthetics, ornaments rather than technological products endowed only with scientific accuracy. Mehmed IV did not get Pirî Reis’s Kutub-i Behriye, but one and a half century after it he was offered *Dehşet Kitabı* by Seyyid Nûb, decorated with golden rivers and nice colored islands whose origin goes back to the hydrographical knowledge of the early 16th century. Hazine was very rich but its gleam was hidden under layers of dust. What was called decline of the Ottoman Empire should be seen in relation to the transition from the Mediterranean World towards the World of Great Oceans and New Lands. Cartographic centers had moved northern in Europe. The wind that deposited all that dust in hazine, deposited dust in the Venetian libraries and collections, too. The center of cartographic activity had changed place.

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62 See XIV-XVIII yüzyıl portolan ve doni kartoları, İstanbul Topkapı Müzesi ve Venedik Çoror Müzesi koleksiyonardan/Portolani e carte nautiche XIV-XVIII secolo dalle collezioni del Museo Correr Venezia, Museo del Topkapı-Istanbul. (İstanbul: İstituto Italiano di Cultura di Istanbul, 1994), 146-55.

63 "Et le dessus de l' échafaud est plein de livres Latins, Français, Italiens, Allemands, et d'autres Langues de notre Europe. Il y en a pour la navigation, et ils sont accompagnés des deux Globes célestes et terrestres, et de quelques Cartes Geographiques dessinées sur du velin; ce qui fait juger que tout cela a été pris sur mer par quelque Corsaire Turc, et envoyé au présent au Grand Seigneur. Mais la patrie que l'on n'a pas point est mise en lumière, et la tapisserie et les livres, qui ne servent la que de monument de quelque victoire remportée sur les Christenens." See J.B. Tavernier, *Recueil de plusieurs relations et traités singuliers & curieux de J.B. Tavernier... avec la Relation de l'intérieur du Serrail de Grand Seigneur, contenant plusieurs singularitez qui jusqu'ici n'ont point été mises en lumière*, (Paris: s.n., 1692), 474.
64 See Nurhan Atsızoy and Filiz Çağman, *Turkish Miniature Painting* (İstanbul: R.C.D. Cultural Institute, 1974), 71-2.