Gasparo Tentivo, a ship’s captain attached to the Venetian Convoy to Syria, and together with his father Antonio, a client of the Venetian Capitan del Nave Paolo Michiel, produced a portolan text of the Aegean ca. 1683, accompanied by maps of the chief harbors of the Adriatic and Aegean seas. This manuscript portolan contains information, which is superior to the printed portolans of the period, and its maps include much more accurate depictions of the coastlines of the Morea and of many of the Aegean islands than printed maps of the period. However, the portolan was never printed, but was used as a prototype by one or more miniaturist-studios, which produced copies of the manuscript as gifts for important Venetian notables. The questions which concern me, and which I hope to discuss briefly at the Conference, include: 1. The history of the portolan and the circumstances under which it was originally produced. 2. A comparison of the various texts, as well as the maps, of seven of the eleven copies of this manuscript, which I have so far discovered, and how they differ in style and content, in an attempt to isolate, if not identify, the several workshops, which produced these copies. 3. The manner in which this manuscript left the hands of Tentivo and reached that of the miniaturists who copied it, and what this can tell us of the process of map production in Venice in the late 17th century, and finally 4. Whether the history of this manuscript can shed any light on the production of earlier portolan-charts.

Serendipity accounts for many of the most interesting discoveries in scholarship. My field is the bibliography of early travel in the Eastern Mediterranean. In Chicago, several years ago, I took the opportunity to visit the Newberry Library. While looking through the catalogue, my eye fell on an intriguing entry, a name and a title, which I did not recognize as part of the bibliography of this area. And so I came across the manuscript, which I want to tell you about today, Gasparo Tentivo’s “Il Nautico Mediterraneo”, produced in Venice in the
late 17th century. My paper will take the form of a working report, since my research is still continuing.¹

There are two ways of approaching the problem of mapmaking, one theoretical and the other functional. As a cartographical document, Tentivo’s “Il Nautico Mediterraneo” is an example of the functional approach. It is a portolano or pilot book accompanied by harbor charts originally made by a practicing seaman, not by a professional cartographer. Although produced at the end of the 17th century, and thus a late example of this type of cartographical production, this manuscript still falls into the category of the portolano, which developed from the periploi of antiquity, the descriptions of the coasts, which served as a guide for seafarers.

But Tentivo’s manuscript text is also rooted in the long-standing Italian tradition of the isolarlo, based on Buondelmonti’s “Liber Insularum” of 1420. It reflects the classic pattern of the isolarlo, beginning with the harbors in the Adriatic, and moving through the Ionian Islands, along the coasts of the Peloponnese and into the Aegean, across to Asia Minor and Constantinople, and on to Cyprus, Syria, and Egypt, as do the manuscript works of Antonio Millo and Piri Reis, and the printed isolarios of Bartolommeo dalli Sonetti, Benedetto Bordone, Tomasso Porcacchi and others.

However, there are a number of points which distinguish it from the works mentioned above. Firstly, the sailing instructions it furnishes are much more detailed than those in the printed portolano texts of the period; secondly, its illustrations differ greatly from those to be found in the classic isolarlo; thirdly, it combines a number of cartographical elements within the portolano context: that is, the various manuscripts include a portolan chart, coastal charts and detailed harbor charts with its text. However, perhaps the most striking thing about this illustrated portolano text is that, although it is a very late example of its type, it exists in at least eleven manuscript copies scattered throughout Europe and America.

Let us take these points in order. First the text:

If we examine the printed portolano texts available to seamen
in the 16th and 17th centuries, we find that these texts are quite simple in nature. For example, Pietro Coppo’s portolano of 1528 consists of a list of distances in miles and directions from one place to another. The portolanos which succeed it contain much the same information, with very few improvements. In some cases the actual text remains the same through many editions.

The works of Buondelmonti (1420), Bartolomeo dalli Sonetti (1485), Benedetto Bordone (1528) and Marco Boschini (1658) are types of isolarios; they are related to portolanos in that they often contain navigational information, but this information is not in portolano form, and is never as detailed as the information in a proper portolano. If we compare Tentivo’s text with the information provided in the printed isolarios or isolario-type productions of its period, e.g. Boschini’s Arcipelago (1658), or Coronelli’s Isola di Rodi (1689), or Piacenza’s Egeo Redivivo (1688), there is no question but that the information provided by Tentivo was much superior. Not only does he give sailing directions and instructions, he describes the waters of the individual harbours in detail, and also provides information on where to find fresh water, wood and other supplies, and he discusses the cargos to be found in one island or another.

In fact Tentivo’s production in its typological form is much closer to the printed rutters and wagonners. The earliest of these rutters to contain navigational information for the eastern Mediterranean is Blaeu’s Licht der Zeevaerdt, 1618, discussed below. With the appearance of this work, Dutch pilot guides containing information on the eastern Mediterranean began to be published by the major map publishers. As yet I have not been able to examine the Dutch rutters contemporary with Tentivo to determine exactly which ports of the eastern Mediterranean are included in these works, apart from the familiar chart which occurs in van Keulen’s Zee Fackel of 1682 (discussed below), but a similar English production, John Seller’s English Pilot, first published in 1671, contains harbor or coastal guides for Modon (Methoni), Zea (Kea), Chios, and Cyprus. Edmond Halley and Nathaniel Cutler’s Atlas Maritimus of 1728
contains a leaf with harbor guides for Zea, Mytilene, Chios, Famagusta, the gulf of Smyrna, Alexandretta and Alexandria, all places included in Tentivo’s work. We cannot know whether Tentivo was directly influenced by these works, but the concept behind his work and that of published pilot guides is the same. However, when we compare Tentivo’s production with pilot books like Seller’s, we find a curious duality. Tentivo’s coastal charts and harbor guides are in fact very similar in style to the few harbor guides of the eastern Mediterranean to be included in these works. But Tentivo’s text is very different. It has a great sense of the personal and the immediate. It is clear that we are dealing with first hand information provided by someone with great experience of the waters of the Adriatic and the Aegean. However, the text begins to change, particularly in the later manuscripts. The literary vogue of the isolarlo begins to affect the text, and information based on isolarlo typology is added to the navigational text, which never occurs in printed rutters.

Secondly the charts: the illustrations in the Tentivo manuscript take the form mainly of detailed harbor charts. These types of harbor charts are not found in 15th and 16th century printed portolano texts, not even those which contain maps, although harbor charts are found in 16th century manuscript roteiros, especially those of Portuguese origin, which describe the harbors in India and the South Seas. The first use of harbor charts in printed cartographical productions occurs in Waghenaeer’s Spieghel der Zeevaerdt (1584-85), a sea atlas for western Europe (see below).

This form of illustration is also unusual in the isolarlo as well, particularly when the harbor chart is combined with a sort of primitive coastal profile, as occasionally occurs in the Tentivo manuscripts. The only exception seems to be the isolarlo of Piri Reis, the Ottoman traveller and sea captain, the ‘Kitab-i Bahriyye’, which was composed ca. 1520-6 and was transcribed in many copies until well into the 17th century. Although it contains coastal charts, it does not contain detailed harbor charts. The text of the two works is also very different;
Tentivo's is much more technical. This work, despite its typology, is foreign to the tradition in which Tentivo worked, and it is unlikely that he could have been influenced by it.

As far as the general type of the isolario is concerned, the isolated island maps in an isolario can not really be used for navigational purposes, although in theory they provide a guide for coastal navigation, depending on the accuracy of the individual map. The difference between Tentivo's harbor and coastal charts and the comparable maps in an isolario is clear, if we compare the map of the gulf of Nauplion from Boschini's *L'Arcipelago* of 1658 (Fig. 1) with Tentivo's chart of the same area (Fig. 2).

![fig. 1: The gulf of Nauplion from M. Boschini's L'Arcipelago, 1658.](image1)

![fig. 2: The gulf of Nauplion by G. Tentivo.](image2)

The construction of the coast line is much more accurate than Boschini's and the details of sand bars, shoals and sounding on Tentivo's chart are much clearer. Tentivo's illustration is also much more closely linked to his text, with sailing instructions, which depend on the illustration. This difference in illustrations is confirmed by the text: while Boschini's text is philological, Tentivo's is instructional.

Thus, the Tentivo manuscript is a pilot book combining portolano usage with coastal and harbor charts, and in two cases
with a portolan chart of the Mediterranean. These charts are used to illustrate the text of the manuscript and to clarify the sailing instructions, not to ornament the text. The illustrative portion of the manuscript consists of numerous plans of harbors, usually one for each island. That is, these cartographical productions are charts of specific harbors, not maps of entire islands, with the exception of Milos and its close neighbours, and one or two other islands.

The use of harbor charts together with a pilot guide or portolan is relatively late. It was not until 1585 that the Dutch cartographer Waghenaer combined harbor and coastal charts and sailing directions in his *Spieghel der Zeevaerdt*, and that work did not contain charts for the Mediterranean. It was not until 1595 that Barentz produced the first printed charts of the western Mediterranean. 8 Although there is unillustrated portolan sailing information for the eastern Mediterranean in various rutters, the appearance of printed harbor guides of the ports in the eastern Mediterranean did not occur until the publication of Blaeu's *Licht der Zeevaert* (1618). Is it chance that the Tentivo portolano was constructed a short time after the appearance of Dutch harbor charts of the eastern Mediterranean, and at almost the same time that two Dutch map publishers, Jan Van Keulen and Jacob Robijn, produced harbor guides for the same area? 9

But if we compare Robijn's chart of the coast of Laconia with Tentivo's chart of the same area (Figs. 3 and 4), the superiority of the latter's work is clearly demonstrated. The detailed plans of coastal areas and harbors in the Tentivo manuscript appear to be among the earliest such plans of Greek coasts and harbors, particularly of the Morea. The only comparable printed work is Boschini's *Il Regno di Candia* (1651), which contains depictions of the ports of Crete, but of a topographical rather than navigational nature. 10 The combination of large number of coastal charts together with portolano information for the Aegean found in Tentivo's manuscript seems to be unique for this period.

Certainly printed pilot books such as the *English Pilot* mentioned above contain harbor charts together with
navigational information, but the *English Pilot*, for example, illustrates only a very few harbors in the eastern Mediterranean, while the Tentivo manuscript contains over 90 illustrations. Nevertheless, the typology of the two works is similar.

This lack of printed harbor guides for Greek waters before the late 17th century may be thought odd, but if we consider the special characteristics of the Greek coasts and islands, and of the Aegean archipelago in particular, that is, an extraordinary number of shores and islands within a relatively small geographical area, certain things become clear. Local mariners had no need of charts to get them from one point to another within this small area: the long tradition of knowledge based on experience was passed from one sailor to another. When foreign merchant or military fleets sailed these waters, they hired local pilots. So presumably coastal and harbor guides of the Aegean ports were not necessary. This must account for the lack of detailed plans for the ports in the Aegean archipelago at a time, when plans of harbors as far flung as Goa and Macao were in existence.¹¹

But standardized harbor guides become necessary, when local pilots are no longer available or trustworthy. If we place the
Tentivo portolan within its historical context, we find that it was composed at the moment, when Venice began to regain her footing in the Aegean. In 1668 she had finally lost her last major stronghold in the Aegean with the capitulation of Candia to the Ottoman Porte. But in the 1680s the Venetian re-conquest of the Morea was beginning, and the re-occupation of Negroponte and Chios were yet to come. We may speculate that Tentivo wanted to secure a body of knowledge, which could then be passed on to Venetian pilots without the use of local intermediaries. Or his work may have been of a more personal and beneficial nature: in the introduction to his work, Tentivo gives as his reason for compiling the portolano the fact that the pilot books available to seamen are full of errors, and that sailors do not understand the problems caused by magnetic variation. He cites the example of a ship in the waters between Zakynthos and Cephalonia confusing Lefcada with the coast of Sicily.

But what about Gasparo Tentivo himself? The name Tentivo is not a Venetian name, and it is usual throughout the whole of Italy. It is possible that the family came from Istria. He was known to Tooley only as a cartographer, who had produced a map of the Gulf of Venice with the suggested date of [?1750]. In fact two maps by Tentivo are known in the collections of the British Map Library, one the map of the Gulf of Venice, BL Maps Mar. V. (64), and another a chart of the navigation from Capo Linguetto to Capo Otranto, BL Maps 46380. (1), both maps undated, but the latter attributed to the mid-18th century. Online searches in the Library of Congress map collections and the Karlsruhe union catalogue of German libraries reveal nothing by Tentivo in these libraries.

However, research in the Venetian State Archives and the Correr Museum Library has revealed that Gasparo Tentivo was the son of Antonio Tentivo, a ship’s captain in the service of Paolo Michiel, Capitan del Nave, or commander of the Syrian Convoy from 1679 to the autumn of 1683 (the Convoys protected the Venetian merchant ships, which carried trade

fig. 5: The “Fama Volante”, 1683, (see note 19).
between Venice and the East). In the Autumn and Winter of 1680-81 Michiel was given a special mission, to visit and report on all the ports of the Archipelago on behalf of the Venetian Senate. His letters written to the Senate during this mission are preserved in the Venetian State Archives, many of them in code. It is extremely likely that Gasparo Tentivo accompanied Michiel on this mission. It is extremely likely that Gasparo Tentivo accompanied Michiel on this mission.

For in mid-1681 Antonio Tentivo, father of Gasparo, died while in the service of Michiel, and an inventory of the goods in his possession at his death indicates not only that Tentivo was in the service of Michiel, and that Gasparo Tentivo was his son, but that the Tentivo family enjoyed a relatively high standard of living. But it is noteworthy that no maps or charts are listed among Antonio’s possessions. This document indicates that Gasparo Tentivo also served under Michiel, who, at the end of 1681, recommended Tentivo to the Venetian Senate for a captaincy. Michiel describes Gasparo Tentivo as possessing ‘un’ ottima disciplina, et habilita tutta necessario [for captaining a ship]. This captaincy was apparently granted in early 1683, since letters from Tentivo to Michiel thanking him for his efforts are dated from May of that year. These letters are dated from aboard the ship the ‘Fama’ which seems to have been the command ship of the Convoy.

At some time shortly after or perhaps even during his service in the ‘Fama’ (Fig. 5), Tentivo composed his pilot book. There are many references in the text to contemporary events, or places visited, while he was serving on board the Fama. Perhaps Tentivo was inspired to compile his pilot book, while he served with Michiel’s mission to the Levant. Michiel was relieved of convoy duty in late 1683, and was killed in 1684 at Zara in Dalmatia in one of the early actions of the war between the Venetians and the Turks, 1684-90.

The most surprising thing that came to light during my researches was the fact that at least another ten copies of Tentivo’s portolan text were in existence besides the Newberry copy. Kretschmer noted two copies in Venice: one at the Correr Museum (Portolan 26), and a second in the Querini Stampalia
GASPARO TENTIVO'S IL NAUTICO RICERCATO

(3. III Cod. XXII (33)). Then through the offices of the British Map Library I discovered a copy in the Library of the Maritime Museum at Greenwich. By chance Mr. Agamemnon Tselikas of the National Bank Cultural Foundation identified several of the illustrations from the Newberry copy as being similar to a manuscript in the National Library of Greece. And during my own research in Venice I found another three Tentivo manuscripts in the Correr Museum (Portolans 25, 27, 29), and a fourth copy in the library of the Naval Museum in Venice (T/15). Cicogna, in his annotations to Correr Tentivo portolan 26, refers to a copy in the possession of the Count Sardagna which must still be in private hands, as the description he gives does not tally with any of those copies which I have examined. There may also be a copy in the National Library of Torino.

The first question we have to confront is the chronology of the manuscripts. For the purposes of this working paper we will deal with the following manuscripts: The Newberry Library copy, the Naval Museum Venice copy, the Querini Stampalia copy, and three of the copies in the Correr Museum Library, Portolans 25, 26 and 27. In some instances the Greenwich copy will also be used.

Palaeographical examination of the hands of the relative scribes indicates the following:

1. The manuscripts are in various hands.
2. The Greenwich and Newberry copies are in the hand of the same scribe.
3. The Naval Museum copy and Correr 27 are in the same hand.
4. The Querini Stampalia copy is in two hands
5. One of the hands of the Querini Stampalia copy resembles the hand of Correr 26.

An examination of the watermarks on both text and map paper of the manuscripts indicates the following, although watermark evidence must be treated with care, since the date gives only a terminus post quem:

1. Correr 25 bears two watermarks, one of which can be identified with Nikolaev 278b, dated to 1688-9.
2. Correr 26 bears two watermarks, one of which (three crescents) can be identified with Heawood 867, dated to 1696 and located in Venice. The other has not yet been identified.

3. Correr 27 bears two watermarks, one similar to Nicolaev 298, dated to 1703.

4. The Naval Museum manuscript watermarks have not yet been identified.

5. The paper of the Querini Stampalia manuscript bears two watermarks, one of which also can be identified with Heawood 867, i.e. date 1696; the other is similar to either Nicolaev 345, dated 1718, or Nicolaev 382, dated 1724-5.

6. The paper of the Greenwhich and Newberry copies has not yet been examined.

The most superficial examination of the text indicates that the manuscripts fall into two general types, those with, and those without, personal references by Tentivo, in particular a passage from his description of the Gulf of Valona in which he
states that in 1683 he was himself in these waters in the ship Fama. Another major textual difference refers to a historical notice concerning the reconstruction of the fortress of Palamidi in Napoli di Romania (Nauplion) which was completed in 1714. It is clear from this notice that the manuscripts containing this information must have been transcribed after 1714, and that they are later than those which do not contain it. On this evidence the following is clear:

1. Correr 25, Correr 27, Naval Museum and Newberry copies contain the reference to Tentivo's presence in the Gulf of Valona in 1683.26
2. Newberry, Greenwhich, Querini and Correr 26 contain the reference to 1714, i.e. they were transcribed post 1714.
3. Correr 25, Correr 27, and the Naval Museum copy do not contain the reference to 1714. This would indicate that they predate Greenwhich, Newberry, Querini Stampalia and Correr 26.
4. Newberry and Greenwhich contain both references. This implies that they predate Correr 26 and Querini Stampalia.

A first philological examination of the same passage in these manuscripts, a description of the Gulf of Matapan, from Cape Matapan to Cape Malea, supports these findings.27

From a structural point of view the manuscripts can be divided into several distinct categories depending on the type and structure of the maps they contain. The chart of the bay of Nauplion (Napoli di Romagna) is indicative. In some of the manuscripts this chart is extended to include the entire east coast of the Morea, including Monemvasia (Fig. 6), while in others the east coast of the Morea is divided, with the southern part and Monemvasia forming a separate map (Fig. 7).

1. Malvasia forms a separate map in Correr 25, Correr 27, Naval Museum, Greenwhich, and Newberry copies.
2. Malvasia is shown on the same coastline as Napoli di Romania in Correr 26, Correr 27, Querini and Naval Museum copies.
3. The only two manuscripts which contain Malvasia on both these maps are Correr 27 and the Naval Museum copy.
A similar comparison can be made with the chart of Icaria and its so-called relationship to Samos. It is found as a separate map in Correr 25, Correr 27, the Naval Museum, Sardagna and Newberry copies. It appears to be found on the chart of Samos and Samopoula in Correr 26 and the Querini Stampalia copy, but the caption ‘Nicaria’ is attached to a point of land off the coast of Samos which is in fact a part of Asia Minor, and the caption is an error for ‘Natolia’. Thus the position of Natolia (Asia Minor) relative to Samos can be used for a possible indication of priorities. In Correr 25 it is labeled correctly. In Correr 27, Naval Museum, and Newberry Library copies it is unmarked. In Correr 26 and Querini Stampalia it is labeled incorrectly ‘Nicaria’.

Other examples of use for comparison include the orientation of Milos island and the Gulf of Matapan. We will not go into details of these comparisons, but on the basis of all these indications we can reach the following general conclusions:

Correr 25 is the earliest of this group of manuscripts, although it is not Tentivo’s original text. The watermark on this manuscript tends to confirm this theory. It is the only copy of the text to have an informal general title, in the hand of the scribe, which gives some indication that the scribe knew something about the history of the manuscript.

The Naval Museum manuscript and Correr Portolan 27 are closely related to each other; the hand is the same and they were probably issued from the same workshop. Although these two manuscripts do not share exactly the same map structure as Portolan 25, they resemble Portolan 25 in the size and placing of the maps, but they have been issued from a different workshop and they are more sophisticated than Correr 25. On structural and textual grounds it would seem likely that they follow Correr 25 chronologically, and predate Correr 26 and the Querini copy, but this is not necessarily born out by the watermark of Correr 27 (1703).

Portolan 26 from the Correr Museum and the Querini Stampalia copy were issued from the same workshop; the hands are partly the same, and the structure of these manuscripts is distinct from the previous portolans. They have large full page or
double page maps, and the bay of Nauplion is depicted with the entire east coast of the Morea to Cape Malea, including Monemvasia. However, the chronology is contradictory. Correr 26 contains some paper that can be dated to 1696, as does the Querini Stampalia manuscript, which would seem to indicate that they predate Correr 27, but this is not the case on textual grounds. In addition, the Querini manuscript also bears a watermark similar either to Nikolaev 345, dated 1718, or to Nikolaev 382, dated 1724-5, while Correr 26 has another watermark which has not yet been identified. It is possible that this workshop had a stock of 1696 paper which was used after 1700, and with other paper up to 1718 at the earliest.

The Newberry Library copy and the Maritime Museum Greenwich copy are by the same hand and have the same structure. Their title pages contain the same text and their decoration is similar. They were issued by the same workshop. The maps in these two manuscripts form a stage between the small maps of the Correr 25 group (including Naval Museum and Correr 27) and the large maps of the Querini-Correr 26 group. This conclusion is born out by textual evidence, but watermarks for these two manuscripts have not yet been identified.

The varieties of manuscript and their forms of decoration, which include coats of arms, would seem to make it clear that Tentivo's original manuscript found its way into a Venetian miniaturist's studio, where it was used to make copies for presentation or sale to important or learned persons. The Querini Stampalia copy bears the arms of the Savorgnanno family; the title page of the Greenwich copy bears an empty shield which could be filled in with the arms of the person to whom it would be presented. According to Cicogna's notes in Correr 26, the Sardagna copy had a similarly empty shield on its title page. Correr Portolan 29, an elaborate production on vellum, was made for presentation to Pompeo Rota in 1732.

The reference to the date 1732 in Correr 29 brings us back to another aspect of the question of chronology. Camillo Tonini has established the date of Tentivo's death; he quotes an entry in Pietro Gradenigo's *Commemorialia*, which states that Tentivo died
in 1702. According to the evidence of watermarks, this would indicate that most of the manuscripts were copied after his death.

By some process Tentivo’s original text reached a scribal workshop or workshops, and was transcribed a number of times by different scribes, in several cases for presentation to specific persons. Thus the Tentivo portolano was never printed, despite the accuracy of its information, because it formed a valuable source of income, which would have been lost if the work had ever been published.

In this way the Tentivo text became a form of gift and by extension an object of collection. It is known that maps were collected either as art objects, or as examples of scholarship, in Venice and other parts of Italy certainly as early as the middle of the 16th century, if not much earlier. Much work has been done latterly on this subject, and this is not the place to discuss the subject in detail. The Tentivo text in its various forms is yet another evidence of the fact that by the end of the 17th century, the map had become a collectible object. As Kees Zandvliet pointed out in the round table discussion ‘One Map, Four Viewpoints’, production and consumption are an important key to understanding maps. In the case of Tentivo, I would like to hypothesize that his text had become a collectible object, either suitable for presentation, or with appeal to a certain type of customer, similar to those customers who in the previous century had ordered the familiar atlas factices of Camocio and Lafreri. For these customers, limiting the availability of the Tentivo text was an important part of its attraction. In fact, this factor becomes essential, when an important gift is in question.

My future research will involve the two subjects mentioned by Kees Zandvliet. The first concerns the customer: who were the customers who would order such an expensive product. I am attempting to answer this question by trying to find substantial evidence that 17th century Venetian collectors were interested in collecting maps, and by attempting to identify the type of customer who would order something like the Tentivo manuscript. The next stage of my research concerns production: if possible, I would like to identify some of the workshops,
which produced manuscripts like that of Tentivo, and to

discover, if not the miniaturists involved in reproducing the

tentivo text, at least some indication of how these copyists

worked. The essential problem concerns the relationship

between ships' captains and the miniaturists' guild.

The Tentivo text and its copies makes it clear that it was

miniaturists, i.e. painters, not 'mapmakers', who were directing

the process of production and dissemination.\textsuperscript{31}

Leonora Navari

\textit{Historical Bibliographer}
NOTES

1. My thanks are due to the Gladys Krieble Delmas Foundation, which made it possible for me to carry out research in Venice in 1997.

2. A number of early portolanos printed in Venice may have been known to Tentivo. These include PIETRO COPPO, Il Portolano (In Venetia: per Augustino di Bindoni, 1528), the Portolano Nuovo (Venice, 1544), and the Consolato del Mare, which appeared in numerous editions from 1549 to 1713 and later, and BARTOLOMEO CRESCENTIO, Nautica Mediterranea (Roma, 1602).

3. For example, the text of the Consolato del Mare con il Portolano is unchanged in all the editions from 1637 to 1713.

4. The maps in Coppo's portolano are very crude and could not possibly be used for navigational purposes. The Consolato del Mare does not contain maps. Bartolomeo Crescentio's portolano contains a portolan chart.


6. Coastal profiles were included in pilot guides from the mid-15th century. See WALLIS and ROBINSON, loc. cit., 241-2.


9. Van Keulen and Jacob Robijn published what are probably the earliest printed charts of harbors in the Eastern Mediterranean. Van Keulen's harbor guide, covering the entire Mediterranean, was published in 1682; Robijn's harbor chart, dated 1694, deals only with harbors in the Aegean. It contains charts for Delos, Paros, Cérgo, Náxos, Sýros, Sérifos, Skyros, Kythnos, Thasos, Andros, Milos and the ports of Crete, as well as the coasts of the Morea.
10. Boschini's book is based on the manuscript work of Francesco Basilicata. A similar manuscript work, by Angelo Oddi, is in the possession of the Correr Museum. See Navigare e Descrivere. Isolari e portolani del Museo Correr di Venezia, 15.-18. secolo, a cura di Camillo Tonini e Piero Lucchini (Venezia: Marsilio, 2001), 66-71, for accounts of these works.

11. WALLIS and ROBINSON, loc. cit., 7-8 (note 6).


13. Tentivo's map of the Gulf of Venice is cited in CARLO COMBI, Saggio di Bibliografia Istriana (Capodistria: Tondelli, 1864), no. 76, where he is referred to as 'Tentativo'. It is possible that personal knowledge caused the author of this essay, cited in Saggio di cartografia della regione veneta, a cura di GIOVANNI MARINELLI (Venezia: R. Deputazione Veneta di Storia Patria, 1881), to include Tentivo in his bibliography of Istria.


15. A manuscript account of part of the mission 'Viaggio fatto in Terra Santa da Polo Michiel Capitano della Nave armata nell' Agosto 1681' is to be found in the library of the Correr Museum, Cod. Cicogna 1807. A printed description of this voyage is given in GIROLAMO CIACOMETTI, Nazaret gloriosa, relatione de viaggi di Leuante, fatti coll' eccell. Sig. Polo Michiel capitano delle navi... (In Venetia: per Domenico Lovisa, 1700).

16. A.S.V., Avogario di Commun, 180 C. This is an inventory of Antonio Tentivo's possessions made in July, 1681.


18. Correr Museum Library, Dandolo MS. PD 1069/343, 362 and 646. These letters are dated 28 May, 29 June, and 26 October respectively.

19. Camillo Tonini has discovered an illustration of the Fama, with a note that Gasparo Tentivo was still its captain in 1687, in the Correr Museum, Gabinetto Stampe e Disegni, inv. Cl III, n. 8011. The illustration depicts the entire fleet of the line 'Ordinanze delle Nave Venete direte dall' cc. S. Lorenzo Venier, 1687.' See CAMILLO TONINI, "... Accio resti facilitata la navigazione. I Portolani di Gaspare Tentivo," in Navigare e Descrivere, 72.

20. While in Chios, Michiel visited the Venetian consul there, Francesco Luppazolo, who had written his own isolario of the Aegean in 1638 (British Library, Dept. of Mss., MS. Lansdowne 792, folios 55-94). Is it possible that Tentivo could have known of this work and perhaps have been inspired to produce something of his own?

22. The National Library of Greece copy is distinctly later, possibly made in the late 18th century, and was presented to the Library by the Greek Community of Livorno.

23. Tonini (see note 19) also cites two manuscripts, unillustrated, in the Correr Library, which are based on Tentivo. The Torino copy is mentioned in Donazzolo (see note 12), 4, footnote.

24. Several different dates are found on the title pages of the various copies of Tentivo's manuscript: The Sardagna copy is dated 1672, the Newberry copy 1661. These are anachronistic, when compared with internal evidence. However, Correr 25 contains a title annotation: 'Opera inedita di Gasparo Tentivo intitolato II Nautico ricercato dal Mare Ionio et Arcipelago c.c. 1685 circa.'

25. Both Correr Portolan 29, and the National Library of Greece manuscript are late examples; the Sardagna copy seems to have disappeared, and I have not yet been able to examine, or even to ascertain, if the National Library of Torino copy is in existence.

26. It has not been possible as yet to examine the Greenwich copy on this point.

27. This philological examination has not been completed, but early indications seem to support the theory that all the manuscripts were not descended from a single source. There may be an intermediate source, which has not yet been discovered.

28. Tonini (see note 19), 72.


30. This discussion took place at the 18th International Conference on the History of Cartography, held in Athens, 11-16 July 1999. See also Kees Zandvliet, Mapping for Money: Maps, Plans and Topographical Paintings and their role in Dutch overseas expansion (Amsterdam: De Bataafsche Leeuw, 1998).

31. Piero Falchetta's article "Marinai, Mercanti, Cartografi, Pittori," Ateneo Veneto 182 (1995): 7-109 deals with some aspects of this process in the 16th century. There has been a suggestion that portolanos like that of Tentivo were not published, because of the confidential nature of the information which they contained, and in consequence the Venetian State
prohibited their publication. The difficulty with this hypothesis lies in the fact that there was no official school or department of cartography in Venice. Mapping seems to have been left to anyone who wanted to undertake it. In fact the entire question of the relationship of the Venetian State to cartography is complex. Land maps, and especially plans of towns and fortifications, seem to have been made by the army engineers, as we can see from some of the plans of fortifications published by Coronelli. The originals of these plans were made by army engineers. See Leonora G. Navari, “Vincenzo Coronelli and the iconography of the Venetian conquest of the Morea: a study in illustrative methods,” Annual of the British School at Athens 90 (1995): 517-9. Sea maps seem to have been left to the province of mariners. In about 1711 or 1712, the office of the Milizia da Mar was put in charge of all the schools of arts and metiers, and all artists, who received payment for their work, had to be registered with one of these schools, which included pintori, miniatori, desegnadori, cartoleri and so on. It is not clear whether mapmakers belonged to a specific school, or whether artists in all these schools could produce maps. We know that during the 16th century many artists connected with cartography were miniaturists or engravers. The names of Bordone, Porro, Nelli, and Vavassore, dit Vadagnino, come to mind. However, there seems to have been a connection between some of the schools of painters and the bombardiers; in 1713 the bombardier Domenico Lovisa was a member of the guild of ‘miniadori’ (see ASV, Arti 104). The first to propose the creation of a state school of cartography for Venice was Field Marshal Schuleenburg who directed the defences during the siege of Corfu by the Turks in 1716.