THE ARAB COMPASS IS NOT A COMPASS BUT A CHART

TWO CHARTS DRAWN IN NORTH AFRICA?
1413-14 AL-TANJI AND c1350 MAGHREB CHART

ABSTRACT

The text “Using a Portolan at Sea, did they?” indicates quite clearly the nonsense of considering that at any time a magnetic compass was used for either route sailing or the construction of a Portolan Chart. The latest paper available, “The Maghrib’s Medieval Mariners and Sea Maps; The Muqaddimah Primary Source”, explains precisely what a “Compass” is, and it is not magnetic. Then in this text, having followed the development of Portolan Charts from their Genoese foundations in Italy, and after via Majorca and onto Egypt these two charts, one drawn in Tunis, the other certainly Arabic, but unknown are investigated. The Tunis chart is a standard Portolan, but the Maghreb chart is probably an atlas page and these are to be examined apropos the Genoese and Majorcan continuity of chart design. The indication is that the setting out of the wind rose graticule is a perfect copy of the Petrus Vesconte 1318 Atlas page which illustrates the methodology of how to draw the graticule sans circle, and these charts are typically the follow on product of Genoese charts.

INTRODUCTION

The basic text regarding the two charts had been written and was ready for up-loading, when a new text, as follows, was posted online and upon reading it I obviously did not rewrite my text but merely included this new text as sections which completely parallel my text. Thus this text unashamedly just copies the text by Professor Tarek Kahlaoui of Rutgers University to enforce the fact that the magnetic compass was not an object for sailing in the Mediterranean Sea, neither was it the object used to construct a Portolan Chart. Then as the two charts could not be included in either ChGEN/1 or ChGME/1 texts as there was no logical continuity from that which I had shown existed in Genoese and Majorcan charts a separate text was
required. The 1413-14 Sea chart of Ahmad al-Tanjı is held in the Topkapi Palace Museum, Istanbul, reference Hazine 1823 from whom I obtained a scanned copy for examination. The skin is c55 x 88cms and the chart itself is c44.4 x 77cms.

The Maghreb chart which is dated by others to c1350 is held in the Veneranda Biblioteca Ambrosiana, Milan as MS Sala Prefetto II, 259. It is very small and is contained within the bounds of an A4 page with its overall size being 202 x 270mm and the actual chart frame being 170 x 240mm. The Biblioteca kindly provided these precise measurements as their catalogue entry is not accurate enough for an examination of the Chart.

There are several texts by Fuat Sezgin which discuss Arab Charts, including these we are now discussing. Monica Herrera-Casais, 2008, wrote a full text concerning the 1413-14 al-Tanjı chart which I will quote from as necessary. Dr Yasmin Nemlioglu Koca in her text gives a short resume concerning that chart, but does not discuss the Maghreb chart as included by M H-Casais. But as a finale the text by Professor Tarek Kahlaoui is used where He discusses the fact that the “Compass” is a chart and then the two charts of this text.

The chart is to all intents and purposes a standard Portolan chart with Arabic overtones. The neck is to the east and there is substantial decoration within the chart and on its surround. The eastern end is formed by a calendrical wheel combining the Solar System of Julian months with that of the 28 lunar mansions as chronological
The inscriptions and decoration

Al-Tamīlī’s chart is signed and dated on two cartouches that are inscribed in the two longitudinal scales. They divide each of the scales into two parts, but do not interfere with their functioning. The inscriptions are written on ornamental Maghrebi script similar to the kufic calligraphy, and differ from the regular handwriting (naskhi) used for the coastal place names. They face the outer borders of the chart, so that the dating (right above the frame of the wind rose) should be read with the chart oriented southwards (north at the top), and the signature with the chart oriented northwards (north at the top). There are:

صُنع بمدينة قرطبة عام سنة عشر وثمانمائة
This was made in the city of Cordoba in the year 816
(of the Hijra = 1413-14 a.C.).

M. Herrera-Casais

من عمل الحسن الفقيه إلى الله أحمد بن سليمان الطليجي
by the humble servant of God,
Abū Ahmad ibn Sulaymān al-Tamīlī (= al-Tamīlī). 33

The chart is enlivened in a frame decorated with intertwined knots on the northern, eastern and southern sides. This design is widely documented in Islamic art and manuscript production, particularly in Korans from al-Andalus and the Maghreb. 34 The knotted frame seems to be peculiar to the Islamic sea charts, as attested in al-Munīb’s piece and the extant production of the al-Sharif family. A frame of this kind appears with angular knots in Piri Reis’s map of the Atlantic (1528–29), 35 and is modified into a chevron pattern in the 16th-century chart by Hajj Abu l-Haitham (B. Istambol?). 36 According to Rosselló, there are also some 15th-century Mediterranean examples with frame decoration. 37 In Gabriel de Valencia’s chart (1436) the frame consists precisely of distorted Arabesque letters, and in its four charts by Peri Reis (1456, 1464, 1466 and 1468) fragments of chevrons adorn the graphic scales. 38

Detail of the back of the Atlantic, including Venice.

Detail of miniature to Scandinavia (oriental southwards).

Text by Monica Herrera-Casais, 2008.
Now however it must be pointed out that several other researchers have given a different translation of the cartographer’s name, with Y. N. Koca stating, “Cartographer: On the southern side (sic) of the portolan near the compass the name
of the cartographer is mentioned as, “Ibrhim Ibn Seyh Ahmed ibn Suleyman El Katabi.”. But, M H-Casais makes the following statement as footnote 13; “The name is difficult to read. In the modern literature, since Karatay 1961, it is erroneously transliterated as Ibrahim b Ahmad b Sulayman al-Katabi al-Tunisi”; Ihsanoglu 2000, pp3-4; Soucek 1992, p264; Ucar 1987, p226 and Sezgin 1987 and 2000-07 give it correctly”.

THE 1413-14 CHART IN DETAIL ANALYSIS

By using the scale bars, there are four, appended to the central north and south panels it is possible to evaluate the wind rose graticule as drawn. It comprises two wind rose graticules, but they are drawn in a rather surprising and strange manner to introduce all of the square/rectangles found by the 35/30/20/7 proportional sections. Examine diagram ChAR/1/D06 which has the graticule emphasised and it becomes so very apparent that Al-Tanji fully understood the setting out promulgated by Petrus Vesconte within the pages of his 1318 atlas and which is fully discussed in texts ChWR/1 and ChWR/2. Therefore, Al-Tanji has merely used the 35/30/20/7 sections as 350/300/200/70 Miliaria with the North/South extra sections repeating the 200 Miliaria as if re-commencing a second set of wind rose graticules. The length of the chart is basically two wind roses sections with a chevron eastern end providing just enough space to accommodate the Black Sea.

In the northern area there is a standard eight compass/wind circle enclosed in a beautifully drawn set of circles and a chain design rectangle. The chart is actually
sparsely decorated but includes a circular vignette of Venice; Tunis has a Castle and Scandinavia two animals included. The main colours are for river mouth areas, islands and the major isles of the Mediterranean Sea and Aegean Sea, and are highly decorated as can be seen on the chart.

However study Diagram ChAR/1/D07 which has Corsica and Sardinia taken from the chart, somewhat enlarged so that their toponyms can be seen more clearly (perhaps) and we can immediately appreciate that Al-Tanji had more information to impart than is normal for these islands on a standard Portolan Chart. Corsica has 26 coastal toponyms and Sardinia 39 coastal toponyms. They are all (or appear to be) phonetic transliterations of the coastal ports. Unfortunately they are quite hard to read even enlarged and having asked an expert at the Al-Furqan Islamic Heritage Centre,
London, to assist me, I can only include the emails as Diagram ChAR/1/D08 for the information I obtained; unfortunately not a lot, but still very helpful!

LO COMPASSO DE NAVIGARE- CORSEGA. THE COPY IS DATED 1296AD.

Toponyms within the text starting at Bonifacio and proceeding clockwise; Bonifacio; Capo de Feno; Scolli Monaci; Capo de Porto Elleze; Capo de Mulo; Isola Sanguenara; Aisso; Capo Rosso; Capo de li Monte (de sagre); Capo Meczano del Monte; Girilato; Capo de Turco; Capo de Levelara; Sancta Maria de Calvi; Ponta all’isola de Leri; Golfo de san Florenzo; Porto se clama Mortella; Porto
de Capo Corso; Isola Zenara; La lena de Aliere; Porto Vellio; Isola Pecorare; Sanct Amanza; Lo Castello de Bonifacio; Capo Speron de Grillo, Bocca de Bozinare.

Thus there is in Lo Compasso de Navigare 27 toponyms for Corsica which could have been included on the standard Portola Chart if the scale was sufficient, but it is not until the Atlas of Vesconte Maggiolo, 1511, that we read a plethora of toponyms for Corsica both coastal and inland, but more inland than normal.

CHART COMPARISONS TO THE 1413-14 AL-TANJI CHART DRAWN IN TUNIS

In the text by M H-Casais, footnote 24 is as follows;

“Sezgin, 2000-07, vol 13, p13ff superimposes the cartographic layout of the Maghreb Chart on Al-Tanji’s (fig1) by computer means. He also compares the chart by Giovanni da Carignano (early 14th century) and Al-Tanji (fig4), and suggests a common origin for both.”

I deal with the Maghreb Chart in a later section, but the comparison to the Carignano chart amazes me. It only exists in a poor quality black and white photograph as the original was destroyed in WW II. But I have clearly shown that from Petrus Vesconte at the beginning of the 1300’s to Vesconte Maggiolo at the beginning of the 1500’s the Genoese Charts (ChGEN/1) are all based upon an original and the minor variations are due to the cartographer/student relationship and copying the Pattern/Template for the basic Portolan Chart.

Thus I decided to carry out a comparison to the anonymous Riccardiana MS 3827 chart which my previous comparative studies had led me to believe is possibly by Petrus Vesconte. (see diagrams ChCS/1/D21 and D22 which are here-in as Diagrams ChAR/1/D09 and ChAR/1/D10).

The two charts MS3827 and the 1413-14 chart are illustrated as an overlay on...
diagrams ChAR/1/D11 and ChAR/1/D12, where it can be clearly seen that not only are the scale bars matching but the wind rose graticule is so very similar. The land mass around the Mediterranean Sea has an obvious similarity and therefore we must consider if Al-Tanjí actually copied a chart, whereby I would expect good accuracy or obtained a Pattern/Template with which to construct his own original chart.

The next comparison is to the Dulceti 1339/50 chart and here we see the actual coastline being very close to a copy, but, with later information there-on enabling a better Mediterranean Sea profile in some areas. Diagrams ChAR/1/D13 and ChAR/1/D14.
I have decided to include the photograph copy of the Al-Tanji chart from Fuat Sezgin’s book merely because he states there-on “made in Tunis in 1409”. I know of no other researcher who has given this date and as it is clearly 1413-14 from the translation of the Muslim Calendar, and I am at a loss to comment at all. Diagram ChAR/1/D15.

THE MAGHREB CHART c1350 HELD IN THE BIBLIOTECA AMBROSIANA, MILAN
This is the oldest surviving Arab Sea chart, Diagram ChAR/1/D16, even though its actual dating is through the toponyms and not via a given date. It is also perhaps one of the oldest “Atlas” pages after the several “Atlases” by Petrus Vesconte, 1313-1318. But when and where it was drawn and is it a direct copy of an extant atlas page with Arab Script appended or is it even a western chart page which was given over to an Arab scribe to annotate. (see the text by Professor Tarek Kahlaoui for his comments on this).

But, it is obviously not a copy of a Petrus Vesconte extant atlas, except in one very important respect; the Windrose graticule is a precise Petrus Vesconte design. The chart is drawn from a basic 56N to 30N latitude and from 9W to 10E longitude and is framed by a double line except where, in the west, Iberia protrudes over the drawn rectangular edging frame which informs us of the drawing sequence. The frame is a basic 170 x 240mm on a page which is 202 x 270mm, and thus it fits easily onto an A4 sheet of paper. The two scale bars in the NE and SE corners are 250 Miliaria
each (5 x 50), but it can adequately be shown that they have been curtailed by the wind rose angular lines and are thus slightly reduced in length so as not to overlap those lines as can be clearly seen on Diagram ChAR/1/D17.

THE DRAWN SCALE OF THE MAGHREB CHART  

Diagram ChAR/1/D18

When the scale bars as drawn are used to measure the Windrose graticule the figures are not the standard 920 miliaria per quadrant but are slightly larger at 980 miliaria per quadrant. Thus I conclude that the scale bars have been drawn in the corners after the Windrose has been set out with all lines drawn. The scale bars were thus drawn to fit the available space, and given the size of the Chart the difference probably was not recognised. But each scale bar commences very close to the North
and South borders and in fact they are only 10 miliaria north or south of that border. Hence as the scale bar is drawn in the 270 miliaria section of the graticule it would have been a perfect setting out of $10 + 250 + 10$ miliaria, a symmetrical layout.

But the proof of that statement is in the setting out of the chart itself, in that using the corrected scale bar the latitudes are all 75 miliaria which is of course wrong as the first chart draughtsman used the 75 figure which was Roman Miles for the latitude and did not realise the error when it should have been 90 miliaria, the equivalent of 75 Roman Miles.

That fact is shown clearly when the latitudes along the 9W longitude are drawn and the measurements are made at 36N longitudinally, which should be a proportion
of 5:4 giving 90/72 miliaria, and, not the 75/72 miliaria we scale on the chart.

But look at the setting out of the whole chart apropos the wind rose graticule which is 920 + 920 miliaria from north to south. From the Iberian Peninsula the 36N to 43N latitudes can be precisely positioned and in so doing it shows that the latitudinal lines were set out from the southern bordure, a perfect 75 miliaria spacing and thus the 48N latitude would be 17 degrees above the southern bordure, that is 1275 miliaria, and the wind rose lines are 270 + 300 + 350 + 350 = 1270 miliaria and thus the 52N latitude is at 1575 miliaria to the graticular line at 1570 miliaria.

Given we are dealing with an A4 Atlas page which extends from 31N to 55.5N that is a mismatch of just 5 Miliaria and would not be considered important, and just ignored, even if it was noted!

CHART COMPARISONS TO THE MAGHREB ATLAS PAGE

The first comparison is with the 1413-14 al-Tanji Portolan Chart and is shown via two simple overlay plots. The first, Diagram ChAR/1/D19 has equalised scale bars and indicates that there is a correspondence in the area around the Pillars of Hercules, but elsewhere as has been shown on other comparisons of Portolan charts discrepancies occur. The second comparison as Diagram ChAR/1/D20 is scaled merely to align the Iberian Peninsula on each chart because the Maghreb Chart at A4 size is not adequate for a proper comparison to the al-Tanji chart which is some 55 x 90cm skin size and 44.5 x 77 cm chart size. That gives the possibility of placing 6 Maghreb charts inside the al-Tanji chart area. This comparison does however produce a visually more acceptable comparison and indicates similar source material, but that is all.
However when the Maghreb Chart is compared to the 1330 and 1339 Dulceti charts, bearing in mind the size issue, we see perhaps the origins of the Maghreb chart, not a direct copy but a copy from the Pattern/Template Dulceti had with him in Majorca having carried it from Genoa. The diagrams ChAR/1/D21 and ChAR/1/D22 illustrate the findings.

There is to be no conclusion paragraph at this point in the text as it is worth considering the text of Professor Tarek Kahlaoui first. This is an abstract from several pages there-in.


Yet Ibn Khaldoun’s notes on Admiralty and other maritime activities in his Muqaddimah (section 32, the ranks of Royal and Governmental authority and Titles that go with those ranks), we read an entry on “Admiralty” (Qiyadat al-Asatil). When examined carefully indicate a nuance view correlating with evidence in the 14th and 15th centuries which point to a surviving presence of maritime Islamic Sea captains, mariners and maritime map-making in the Mediterranean in the post-Almohad period (1121-1269CE).

When talking about the islands located at the African Atlantic Oceans Coasts in the first Climata (of al-Idrisi), Ibn Khaldoun seizes the opportunity to say what he
knows about navigation.

“These islands can be reached only by chance, and not intentionally by navigation. Navigation on the sea depends on the winds. It depends on knowledge of the directions the winds blow from and where they lead, and on following a straight course from the places that lie along the path of a particular wind. When the wind changes and it is known where a straight course along will lead, the sails are set for it and the ship thus sails according to nautical norms evolved by the mariners (nuwatiyya) and sailors (mallahin) who are in charge (ru’asa’ al-sufun) of sea voyages”.

He knows very well that such navigational techniques are very much the tradition of the Mediterranean’s mariners including Maghribi mariners. This is also the case of the maritime charts, which he probably saw first-hand during his travels in the Mediterranean.

“The countries situated on the two shores of the Mediterranean are noted on a chart (sahifah) which indicates the true facts regarding them and gives their positions along the coast in the proper order. The various winds and their paths are likewise put down on the chart. This chart is called the “compass” fit. It is on this (compass) that (sailors) rely on their voyages. Nothing of the sort exists for the surrounding sea. Therefore, ships do not enter it, because, were they to lose sight of shore, they could hardly be able to find their way back to it.”

That section abstracted from the text is merely to illustrate the fact that Ibn Khaldoun was cognisant of the Mediterranean and its navigation and had been onboard Catalan ships as, if you read the whole text, had other Islamic Sailors and scholars. One writes of the supremacy of those sailors from Catalonia.

The next section is not an abstract but a direct copy of sections of the text regarding the two charts I have discussed, but the text also discusses others, which I have omitted.

1 | MAGHRIBI MARITIME MAPMAKING IN THE 14TH AND 15TH CENTURIES

Ibn Khaldoun’s terminology is one of the ways to extract his context as he saw things in his lifetime. He reports that in the Maghrib the admiral “in customary usage, the person in charge of the admiralty is called Almiland, with an emphatic

l. (The word) is derived from the language of the European Christians. It is the technical term for the office in their language.” Coming from the Catalan almírant, and Castilian almírante, it is one of the examples of the shared “lingua franca” used by mariners, Muslims and Christians, in the Mediterranean. Ibn Khaldoun’s notes on navigation shows the Arabic terminology on the subject. The mariners are described mainly with three terms “nuwatiyya”, “mallahin”, and “bahriyyin”. The sea captains are named “ru’asa’ al-sufun”. The same goes for
his terminology on the sea chart. Aside from the clear influence of Al-Idrisi and prior sources, the Muqaddimah clearly incorporates information based on the direct knowledge of Ibn Khaldoun during his temporal context. In his trips along the Maghrib and to Egypt he would have used maritime routes and put him in direct contact with mariners.

Meanwhile, during this period, the middle of the fourteenth century and beginning of the fifteenth century, Muslims began to produce their own sea maps, most of which of Andalusian origins up to the sixteenth century as is shown in the following table.

<table>
<thead>
<tr>
<th>Maps and Atlases</th>
<th>Date</th>
<th>Maker’s origin</th>
</tr>
</thead>
<tbody>
<tr>
<td>The “Maghreb Chart” (sea map in atlas?)</td>
<td>Second half of the 14th century?</td>
<td>Andalusian?</td>
</tr>
<tr>
<td>The al-Ṭanjji’s sea map</td>
<td>1414 C.E.</td>
<td>Andalusian</td>
</tr>
<tr>
<td>The al-Mursi’s sea map</td>
<td>1461 C.E.</td>
<td>Andalusian</td>
</tr>
<tr>
<td>The Ḥāj Abū al-Hasan’s sea map</td>
<td>Early Sixteenth century?</td>
<td>Andalusian or Maghrabi?</td>
</tr>
<tr>
<td>‘Alī al-Sharfi’s sea atlas</td>
<td>1551 C.E.</td>
<td>Andalusian</td>
</tr>
<tr>
<td>‘Alī Maçar Reis’ sea atlas</td>
<td>Circa 1567 C.E.</td>
<td>Ottoman</td>
</tr>
<tr>
<td>‘Alī al-Sharfi’s sea atlas</td>
<td>1571 C.E.</td>
<td>Andalusian</td>
</tr>
<tr>
<td>‘Alī Al-Sharfi’s sea map</td>
<td>1579 C.E.</td>
<td>Andalusian</td>
</tr>
<tr>
<td>Mehmed Reis’ regional sea map</td>
<td>1591 C.E.</td>
<td>Ottoman</td>
</tr>
<tr>
<td>Muḥammad Al-Sharfi’s sea map</td>
<td>1601 C.E.</td>
<td>Andalusian</td>
</tr>
<tr>
<td>“Atlas-i Humayun” sea atlas</td>
<td>End 16th or 17th century?</td>
<td>Ottoman</td>
</tr>
<tr>
<td>“Deniz Atlas-i” sea atlas</td>
<td>End 16th or 17th century?</td>
<td>Ottoman</td>
</tr>
</tbody>
</table>

Islamic maritime maps and sea atlases of the Mediterranean made until the 16th c.

Still this is a cartographic genre that was clearly much less present in the Islamic World when compared to the European centers as is shown in the surviving maritime maps. There are about 180 European maps that could be assigned to the fourteenth and fifteenth centuries alone.32

The earliest surviving example of “Islamic portolan charts” is still ambiguous. The so-called “Maghreb Chart”, its Maghribi script pointing clearly to a Maghribi origin, is not only undated but also it depicts only the western basin of the Mediterranean (from the Atlantic coasts to the northeastern and southwestern Italian and Tunisian coasts).33 The argument of the possible use of mariners as sources especially in the description of the Iberian Atlantic coasts Kitāb al- Basṭ by Ibn Saʿīd al-Maghribī (d. 1276 or 1284 C.E.) has been used as a prelude to suggest the existence of a thirteenth century Arabic maritime cartography.34 Moreover there is a possible earlier dating of the map.35 Yet the dating on basis of absent or present toponyms has been seriously questioned in general in the discussion over the precedence of Italian or Catalan maritime maps.36

The map is drawn on paper rather than on vellum, which puts it essentially outside mainstream maritime maps for they are “almost always drawn in ink on vellum.”37 Another equally important codicological detail is the size of the “Maghreb Chart”, being 23.5 by 16 centimeters also sets it apart from mainstream maritime
The “Maghreb Chart” should be categorized within another corpus. Its depiction of a fragment of the Mediterranean rather than the whole Mediterranean puts it more likely within the category of atlases rather than single maps. The size of the “Maghreb Chart” seems closer to the size of the maritime atlases depicting in many cases almost the same area depicted in the “Maghreb Chart” in similar formats. Also, just like several Italian maritime atlases, the “Maghreb Chart” is highly austere and do not include anything except the coastal outlines and the toponyms in addition to the wind rose, the rhumb lines centers, and the scale. Among these examples the maritime atlas known as “Walckenaer-Pinelli” dated to 1384 C.E. depicting almost the same area as the “Maghreb Chart” in the same format that is from left/south to right/north. This is why it is possible to suggest that it was mostly part of an incomplete maritime atlas that would have been composed of three folios representing the western basin, the central Mediterranean, and the Levant. There are similar examples of such a sequence but obviously of a larger size, such as Jacchobus Ciroldis’ 1426 C.E. maritime atlas.

Overall the “Maghreb Chart” seems to imitate the genre of Italian maritime atlases rather than being itself an Arabic example of mainstream maritime atlases. It is part of a genre of Maghrabi maritime atlases that will flourish later in the 16th century with al-Šarifi family suggesting closer connections with the manuscript production traditions and thus to the regular codicology of the traditional non-navigational Islamic geographic tradition. This makes the “Maghreb Chart” part of the pre-navigational cartography as of the navigational cartography, and thus not the first known “Islamic maritime map” even if we were to consider the earliest suggestions for its dating. Such a small size could have had an effect on the number of toponyms. There is no example suggesting the reduction of the number of toponyms to fit the size of the map, yet as noted before: “areas of special name density sometimes provide an exception of this rule, when large writing or small scale necessitated a number of omissions. Peninsulas and sharp turns in the coast, like in the southern extremities of Italy and Greece are instances of this.” Such an exception seems to fit the case of the “Maghreb Chart” not only for its exceptionally small size when compared to mainstream maritime atlases but also because it does not belong in general to such a mainstream tradition. Its prominent title, “the first Islamic maritime map,” should go instead to al-Ṭanji’s map.

This is a map that has the standard characteristics of any maritime map (on vellum measuring 54 by 88 centimeters) and has been thought to be made, until recently, by a certain “al-Ḵāṭibi.” The colophon of the map, not transcribed until this moment, is divided into two parts located on the upper (north) and lower (south) scale bars:

| Upper scale bar inscription | Made in the city of Tunis
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>صنع بمدينة تونس سنة عشرة عشرة مائة</td>
<td>في القرن الثامن عشر</td>
</tr>
<tr>
<td>in the year 816 (1413–14 C.E.)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Lower scale bar inscription</th>
</tr>
</thead>
<tbody>
<tr>
<td>To God Ahmad b. Sulayman al-Ṭanji</td>
</tr>
<tr>
<td>From the making of the slave imp</td>
</tr>
</tbody>
</table>

Inscriptions on al-Ṭanji’s map.

Thus instead of “al-Ḵāṭibi” the inscription should read “al-Ṭanji,” that is from Ṭanja (Tangiers), a harbor that was in the Andalusian influence zone even though it is located on the northern Moroccan tip between the Mediterranean and the Atlantic Ocean. The first rectification of this mistake in the catalogue of the Topkapi Sarayi (TKS) and the Correre Museum was received in silence due to the lack of comments accompanying the identification of the map. The mistake seems to have originated since the beginning of the cataloguing of the
maps in the Topkapi Sarayi’s collection.\textsuperscript{44} I have given public lectures rectifying the mistake since 2006,\textsuperscript{45} but the first publication indicat- ing very clearly the rectification was by Herrera-Casais in 2008.\textsuperscript{46}

Al-Ṭanji’s map, though never discussed at length, is the best example showing us the cartographic transmission from an almost exclusively European tradition that is maritime mapping to a newly evolving Islamic tradition. The car- tographic outline is made by a skilled hand recalling the craft of the contemporary European mapmakers. This might be a strong indication of a cartographer who is not a beginner in drawing maps but who would have been also responsible for producing other, now lost, maps. His cartographic style with the limited use of colors and the wide empty spaces is certainly austere. Even though the “plan” of the map is well ordered with the symmetrical positions of rhumb lines centers, wind roses, and scale bars, he refrained from ornamenting his map extensively. The major spots emphasizing ornamentation are located around the colorful compass rose (in green, red, and black) at the upper (north) part, and the major islands or peninsulas in the Mediterranean and the Black Sea, such as Sicily and the Delta of the Nile (green with golden stripes and a variety of green and red). Yet, they seem to direct the eye towards a quadrangular central space helping framing the map, and thus its reading. Drawing the attention to the coastline, and its toponyms, rather than the geographic details of the mainland, as many contemporary Catalan maps do, suggests the accommodation of the mapmaker to his most probable reader, the viewer coming from the sea, or the mariner.

Ornamentation, then, seems to play a functional role as much as an ornamental role. This dominantly austere style points, in fact, to a style frequent in Italian maritime maps. Yet this is, in fact, another example, pertaining geograph- ically to Iberian cartography, further putting in question the determinist relationship espoused in some circles of the scholarship between the austere style and the Italian context versus the more colorful and artistic approach of the Catalan maps.\textsuperscript{47}

The attachment of al-Ṭanji’s map to the European corpus of maritime maps is also probably attested by the con- struction of the grid or the “plan” of the map that is the web rhumb lines and wind roses. There is a highly noticeable correspondence between the “plan” of al-Ṭanji’s map and that of an earlier map, Perrinus Vesconte’s 1327 C.E. maritime map.\textsuperscript{48} It coincides exactly with the same geographic positions with the central rhumb lines centers in both maps located exactly on the same spot in the Calabrian gulf. Even though such a coincidence would not mean necessarily the use of Vesonte’s 1327 C.E. map by al-Ṭanji as his model owing to the large chronological span separating them, and the clear difference in the toponyms, one or more immediate intermediary maps may have linked al-Ṭanji to Vesconte’s maps. The wind rose suggests, according to Herrera- Casais, an influence of Spanish nautical cartography. Otherwise she points to affinities with Italian sources, notably a Venetian chart, in the representation of the hydrography and the use of “similar color codes for the geographical identification, and apparently political ascription, of the main Mediterranean islands.”\textsuperscript{49}

Al-Ṭanji’s map shares some major aspects of the Italian-style austerity such as the absence of banners, city views, and topographic representations deep in the continent (there is an emphasis on the representations of the rivers’ deltas on the Mediterranean and the Black Sea). Yet it suggests some characteristics of the Catalan-style maps such as the coloring of islands (with Majorca in gold) and decorative elements (geometric elements colored in green, black, red, and gold emanating from the box where a nicely done compass rose is drawn). Al- Mursi’s map, however, shows much clearer signs of the Catalan-style maps. The islands are brightly colored in blue, red, green, and gold. The Danube River is prominently featured in green in the upper half of the map with three large islands and a string of brightly col- ored fortresses along its banks. The presence of mountains deep in the continent is prominently suggested especially the Atlas chain, which is made just like in the Catalan maps. Several flags, banner, with city views similar in essence to the contemporary Catalan examples, though poorly executed as mentioned above.

Clearly there is ample evidence that the decline of Almohads did not bring with it an end of the Islamic maritime presence in the Mediterranean. Ibn Khaldoun’s Muqaddimah not only marks the times of the Marinids
as the beginning of the political decline in the Maghrib but points out very clearly that by his time, that is in the 14th and 15th centuries, the art of navigation was still vibrant in the Maghrib. The continuation of the admiralty rank is just one example of a continuing tradition. The increasing number of surviving sea charts made by Muslims since the 14th century and the reoccurring indications since Al-Muqaddasi but especially with Al-Bakri and Al-Idrisi constitute strong evidence of a long tradition of Maghribi maritime manuals and guides that started long before the 14th century.

Having trawled through what is an amazingly good discussion on the Arabic Portolan Charts, I can only suggest the whole paper is studied and perhaps the ideas incorporated in the original text will help change perceptions on just what is being talked about. Then the number of researchers who have written about the “Magnetic Compass” being used not only to navigate successfully when there is close to 16 degrees of deviation in this period across the Mediterranean but also “somehow” as one critic of a draft text told me they managed to plot out the Mediterranean Sea and form a Portolan Chart will come to their senses.

Michael J Ferrar, August 2019