

Atti delle “Settimane di Studi” e altri Convegni  
50

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DELL’INTEGRAZIONE EUROPEA

MARITIME NETWORKS AS A FACTOR IN  
EUROPEAN INTEGRATION

Selezione di ricerche

Selection of essays

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I testi pubblicati in questa collana raccolgono i risultati di ricerche originali attivate dalla Fondazione Istituto Internazionale di Storia Economica “F. Datini”, sulla base di un progetto varato dai suoi organi scientifici. Gli autori vengono selezionati a seguito di una Call for papers che indica gli obiettivi scientifici del progetto; la selezione è effettuata sulla base di proposte circostanziate contenenti indicazioni sulle questioni storiografiche che si intende affrontare, l'area e il periodo storico preso in considerazione e la tipologia delle fonti da utilizzare. La Giunta del Comitato scientifico, eventualmente integrata da specialisti, analizza le proposte e seleziona quelle ritenute più valide e coerenti con il progetto generale di ricerca. La commissione può anche decidere, ove lo ritenga opportuno, di effettuare inviti diretti a studiosi che si siano distinti per la qualità della loro produzione scientifica sul tema.

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Angela Orlandi

*Between the Mediterranean and the North Sea:  
Networks of Men and Ports (14<sup>th</sup>-15<sup>th</sup> Centuries)*

Scholars have by now adopted the expression “network system” to define the connections between cities, institutions, economic operators and so forth. Especially in the case of the networks of men, these connections are strengthened by various elements, such as business relations, family relationships, expertise, friendship and trust, to name the most important.<sup>1</sup>

In the rich landscape of studies – beginning in the 1990’s – which have attempted to define the concept of network, we need cite here only the important contributions of Peter Stabel<sup>2</sup> and Wim Blockmans.<sup>3</sup> In his research on Flemish cities and ports, the former introduces new factors relative to demographic variables, besides political, economic and socio-culture considerations, while the latter, in addition to movements of populations, proposes the identification and measurement of the progress of ideas, innovations and products between the different locations along the network.

In any even more recent era, work has been done that attempts to assess the impact of connections between cities and road or port infrastructure on the development of urban networks.<sup>4</sup>

Within this framework, we feel that it bears repeating that the main generators of movement were economic operators. The essential task continues to be the reconstruction of their actions and their choices, such as those of merchants of a particular network who preferred a certain itinerary or route over another on the basis

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<sup>1</sup> Among the most recent studies that in particular provide detailed analysis of the possibility of applying social network analysis to the history of late medieval and early modern commerce, taking into account above all the networks built by single merchants, see *Commercial Networks and European Cities, 1400-1800*, A. CARACAUSI, C. JEGGLE eds., London 2014, and A. ORLANDI, *Le prestazioni di una holding tardo medievale rilette attraverso alcune teorie di management e la Social Network Analysis*, in *Innovare nella Storia Economica: Temi, Metodi, Fonti*, Prato 2016 (Fondazione Istituto Internazionale di Storia Economica “F. Datini”), pp. 117-148.

<sup>2</sup> P. STABEL, *Dwarfs among Giants. The Flemish Urban Network in the Late Middle Ages*, Leuven 1997.

<sup>3</sup> W. BLOCKMANS, *Des systèmes urbains: pourquoi?* in *Le réseau urbain en Belgique dans une perspective historique (1350-1850). Une approche statistique et dynamique. Actes du quinzième Colloque International de Spa des 4-6 septembre 1990*, Brussels 1992, pp. 111-124.

<sup>4</sup> J. PREISER-KAPPELLER, *Introduction*, in *Harbours and Maritime Networks as Complex Adaptive Systems*, Mainz 2015 (Römisch-Germanisches Zentralmuseum), pp. 1-24.



of available information, choices which in turn depended on the efficiency of their networks.<sup>5</sup>

In 2013 in a paper delivered in Lisbon, Wim Blockmans indeed began a reflection on the role played by port cities in the economic and culture integration of Europe.<sup>6</sup> Two years later, a conference dedicated to the Castilian network addressed the topic from a general perspective, which moving beyond local conditions looked to ports as the impetus behind economic and social take-off, a phenomenon also evident in other maritime or land regions. The reconstruction proposed by the organizers touched on many themes, taking its cue from the administrative framework, with particular attention paid to legislation. The study then moved on to examine transportation and communication and ended by inquiring into the commercial and human relationships that emerged from port traffic.<sup>7</sup> More recently, Blockmans, together with Mikhail Krom and Justyna Wubs-Mrozewicz, has proposed an equally pluralistic approach, but extended to the broader European context. That essay analyzes the connections between cities, emphasizing that their institutional evolution was translated into maritime traffic and mercantile exchanges along the coasts of Europe. They thereby recommend a further examination of the topic in terms of financial activities, juridical norms, languages, architectural models and navigational routes. In other words, these writers have attempted to define the development of relations between ports, coasts, commercial routes, market hierarchies and urban networks, linking these to the “circumnavigating economy” proposed by Braudel.<sup>8</sup>

As hubs of a dense network, ports guaranteed connections between regions and areas quite distant from one another or separated by barriers of various kinds. Indeed the theme of communication is the only area of study that apparently presents no obstacles to viewing the Mediterranean as a unity, as is evidenced even in the evocative and controversial study of Peregrine Horden and Nicholas Purcell.<sup>9</sup> If these two scholars, in contraposition to Fernand Braudel, maintain that the Mediterranean is “a corrupting sea” in that it is surrounded by different microcosms subject to easy division, they nonetheless use Braudel’s concept of connection to argue a kind of paradox: in the condition of immanent fragmentation, the simplicity

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<sup>5</sup> On these topics see A. ORLANDI, *Networks and Commercial Penetration Models in the Late Medieval Mediterranean: Revisiting the Datini*, in *Commercial Networks*, cit., pp. 81-106; EADEM, *A Man from Prato in the Maestrazgo. Tuccio di Gennaio, Wool Merchant*, in *Francesco di Marco Datini. The Man the Merchant*, ed. G. Nigro, Prato-Florence 2010 (Fondazione Istituto Internazionale di Storia Economica “F. Datini” – FUP), pp. 377-383; EADEM, *Le prestazioni di una bolding*, cit., pp. 117-148.

<sup>6</sup> W. BLOCKMANS, *L’unificazione européenne par les circuits portuaires*, in *La ville médiévale en débat*, A. AGUIAR ANDRADE, A. MILLÁN DA COSTA eds., Lisbon 2014 (Instituto de Estudios Medievais de la Universidade Nova de Lisboa), pp. 133-144.

<sup>7</sup> E. AZNAR VALLEJO, R.J. GONZÁLEZ ZALACAIN, *Prólogo, De mar a mar. Los puertos castellanos en la Baja Edad Media*, Santa Cruz de Tenerife 2015 (Servicio de Publicaciones Universidad de La Laguna), pp. 11-13.

<sup>8</sup> W. BLOCKMANS, M. KROM, J. WUBS-MROZEWICZ, *Maritime trade around Europe 1300-1600*, in *The Routledge Handbook of Maritime Trade Around Europe 1300-1600*, W. BLOCKMANS, M. KROM, J. WUBS-MROZEWICZ eds., New York 2017, pp. 3-4.

<sup>9</sup> P. HORDEN, N. PURCELL, *The corrupting sea. A study of Mediterranean history*, Oxford 2000.

of connections between ports and therefore of interior traffic confer the character of substantial unity upon the great sea.<sup>10</sup>

These reflections suggest that we need to reconsider the concept of borders. Administrative, political, social, religious, geographic and economic borders were continuously overcome by the movement of men with their cultures, of pilgrims with their religions, of artisans with their skills, and of merchants with their goods. This phenomenon occurred both by land and by sea. Thus the Mediterranean, the Atlantic and the North Sea were crossed by ships that moved from one shore to another, conveying transnational subjects thanks to whose constant comings and goings we have been able to create areas of contiguity, proximity and exchange.<sup>11</sup>

This essay forms part of this historiographic framework, focusing on the relations that were established between ports, understood as hubs of multiple commercial routes. Our study aims to assess the role of maritime connections in the process of economic integration and cultural influences between different bodies of water. In particular, our analysis will attempt to identify the forms and connections between the various ports of the western Mediterranean, where ships sailing under a great variety of flags arrived and departed, and the ports of Bruges, Southampton and London. This inquiry will be carried out by paying particular attention to the ports of Barcelona, Valencia and Palma de Mallorca, required stopping points for most ships headed toward the North Sea.

The documentation used for this study primarily consists of commercial correspondence and account books from the companies of Francesco Datini. In spite of their known shortcomings, these sources contain a wealth of information: although what we possess of these sources today is most likely incomplete, the documents which we are able to consult present a reliable picture of commercial flows and mercantile and port interactions, as well as of the mechanisms that underlay these.<sup>12</sup>

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<sup>10</sup> M. PETRUSEWICZ, *Il Mediterraneo dopo Braudel: è possibile una nuova storiografia?*, in *Il Mediterraneo un incontro di culture*, F. CACCIATORE, A. NIGER eds., Rome 2007; S. BONO, *Il "Mediterraneo" in un mondo globale*, in *Società globale e Africa musulmana*, ed. A. BALDINETTI, Soveria Mannelli 2004, pp. 35-50; S. BONO, *Il Mediterraneo della storia*, in "Mediterranea - ricerche storiche", XI, 2014, n. 31, pp. 243-258.

<sup>11</sup> See also *Per vie di terra. Movimenti di uomini e di cose nelle società di antico regime*, ed. A. Torre, Milan, 2007, and the essay by G. Fiume, *A proposito di «A Companion to Mediterranean History»*, in "Quaderni Storici", LI, 153, 2016, n. 3, pp. 841-857.

<sup>12</sup> The following indicate the archival locations of the examined documentation: ARCHIVIO DI STATO DI PRATO (ASPO), *Datini*, 210, 211, 213, 216, 217, 223, 230, 234, 345, 357, 362, 377, 382, 383, 391, 397, 423, 431, 432, 433, 434, 435, 436, 437, 442, 504, 522, 523, 524, 525, 526, 527, 530, 545, 546, 550, 558, 565, 576, 577, 584, 590, 598, 599, 602, 603, 608, 613, 614, 615, 616, 633, 634, 635, 636, 637, 638, 639, 640, 641, 648, 651, 652, 654, 656, 657, 658, 659, 661, 662, 663, 664, 666, 668, 670, 673, 676, 684, 686, 687, 688, 692, 606, 710, 711, 712, 713, 724, 727, 733, 734, 735, 739, 742, 744, 747, 748, 749, 750, 751, 752, 753, 757, 777, 778, 781, 782, 794, 800, 801, 814, 815, 816, 817, 818, 820, 821, 822, 824, 825, 852, 853, 854, 855, 856, 857, 879, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 907, 914, 916, 917, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 941, 945, 965, 966, 967, 968, 969, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 982, 988, 992, 994, 995, 996, 997, 1000, 1003, 1009, 1018, 1026, 1029, 1042, 1044, 1046, 1047, 1048, 1049, 1050, 1053, 1054, 1055, 1056, 1057, 1058, 1059, 1060, 1061, 1070, 1072, 1074, 1075, 1076, 1077, 1078, 1080, 1081, 1082, 1083, 1084, 1111, 1114, 1115, 1116, 1117, 1124, 1128, 1129, 1133, 1135, 1149, 1158, 1159, 1160, 1171.

## INTO THE NETWORK OF MAJOR PORTS

Our sources cover the two decades from 1390 to 1411, allowing us to gain information on 1,229 journeys by ship to and from the Mediterranean that called at Bruges, London,<sup>13</sup> Southampton and other minor northern ports. Although we have reason to suspect that more journeys than these in fact took place, the quantitative data drawn from these sources show the importance of Bruges (887 journeys/ships) with the respect to English ports, which are mentioned 324 times, of which 186 regard Southampton.<sup>14</sup>

Map 1 illustrates the intensity of movement among the 36<sup>15</sup> Mediterranean and Atlantic landings that we have identified. It provides a synthetic overview which highlights the flows – and more specifically the frequency – of arrivals and departures between the various ports. Intermediate stopovers are not indicated, but only connections between two ports for each journey, understood as the principal points of arrival and departure.

The significant role played by the port of Genoa is evident (361 journeys with routes through Gibraltar), as is also the number of its connections with Bruges (223 journeys), which exceed those with England (138, of which 89 with Southampton).

With regard to Venice, at least 85 vessels sailed to or from Sluis, while only about 20 reached English ports. Pisa was linked to Flanders and Southampton by 52 and 26 journeys, respectively.

Naturally, many journeys between the ports of north-central Italy and Northern Europe included stopovers at one or more ports of Aragon-Catalonia; unfortunately our sources do not always provide these details. In the period under consideration, ships that began and/or ended their journeys in either Barcelona, Valencia or Palma de Mallorca to or from a Northern European port numbered 261.

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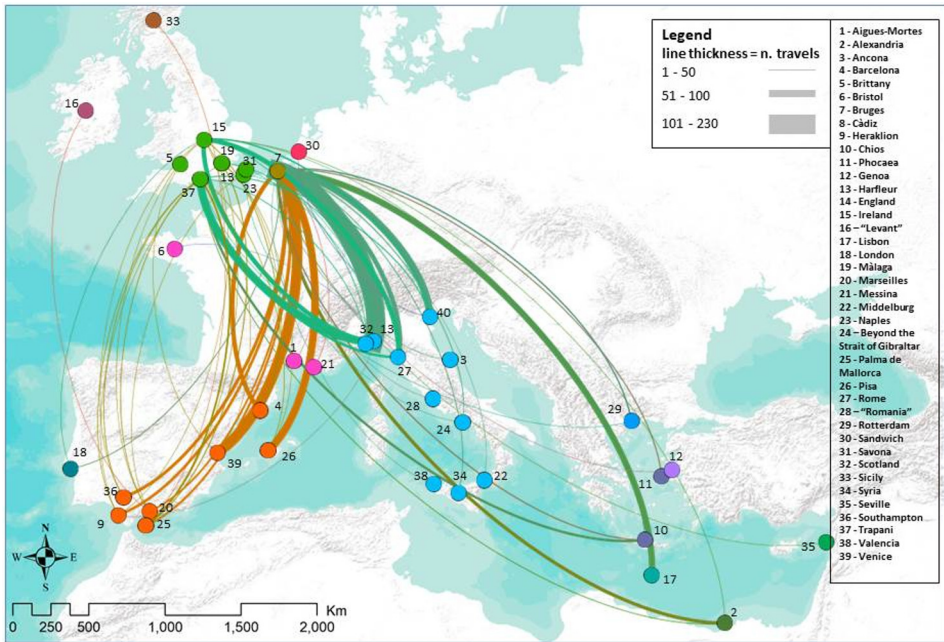
<sup>13</sup> We have attributed to London all ship movements to and from the “Thames Riviera”, an efficient expression that refers to the navigability of the Thames, whose qualities enabled mercantile connections between the city and the coast. M. KOWALESKI, *The Maritime Trade Networks of Late Medieval London*, in *The Routledge Handbook*, cit., pp. 383-410.

<sup>14</sup> According to our data, the average number of ships from the Mediterranean in the main English ports was about 15 per year. An older study based on fiscal sources affirms that at the end of the fourteenth century about 40 vessels entered the port of Southampton each year. These of course included the Hanseatic ships that are not indicated in our sources. A.A. RUDDOCK, *Italian Merchants and Shipping in Southampton, 1270-1600*, Southampton 1951. These data are confirmed by those examined by Enrico Basso in several duty records of the English city. Between June 1383 and June 1384, 36 ships entered the port, while 42 departed from it. A similar volume of traffic was recorded between 1387 and 1388. THE NATIONAL ARCHIVES (TNA), *King's Remembrancer: Particulars of Customs Accounts*, E122, 138/11, Port: Southampton, 7RII (22/06/1383 – 21/06/1384); (TNA), *King's Remembrancer: Particulars of Customs Accounts*, E122, 138/16, Port: Southampton, 18/06/XRII – Michaelmas 12RII (18/06/1387 – 29/9/1388). I wish to thank Prof. Enrico Basso for having referred me to these two records.

<sup>15</sup> The legend indicates 40 arrivals/departures. This is due to the need to include general routes such as England, the Levant, “beyond the Strait” and “Romania” (the area between Thessalonica and the Strait of the Dardanelles).

On these routes we also find connections with Málaga, which was still under Arab control, where ships loaded nuts and dried fruit destined for Northern European markets;<sup>16</sup> in our period, vessels called here at least 17 times.

Map. 1. Network of major ports of the Mediterranean and Northern Europe (1390-1411)<sup>17</sup>



A role of some importance in this system of connections was also played by other ports in modern-day Andalusia, a region which linked the Mediterranean and the Atlantic. Our sources report over 60 ships stopping at Cádiz and/or Seville on their way to Bruges and the English ports. The two Andalusian cities were not only used as transit ports: the wealth of products from their hinterland gave them com-

<sup>16</sup> Much has been written on the commerce of nuts and dried fruit from the Nasrid Kingdom of Granada in northern markets: here we only cite the recent work by Enrico Basso, which in addition to providing a complete historiographic overview presents quantitative data on arrivals in Bruges and Southampton: E. BASSO, *Fichi e frutta secca dal Mediterraneo ai mari del Nord (secoli XIII-XVI)*, in *Fichi. Storia, economia, tradizioni. Figs. History, Economy, Traditions*, A. CARASSALE, C. LITTARDI, I. NASO eds., Ventimiglia 2016 (Centro Studi per la Storia dell'Alimentazione e della Cultura Materiale "Anna Maria Nada Patrone"-CeSa), pp. 75-96.

<sup>17</sup> This map and the others that follow were made using the ArcGis 10.3 and Gephi 0.9.2 (Network Analyst open source) programs. I would like to thank my friend and colleague Federico Martellozzo for helping me prepare the maps.

mercial importance in their own right, making them destinations for acquiring cargo and starting points for mercantile journeys.<sup>18</sup>

The Mediterranean east of Sicily formed part of this network with the ports of Candia, Chios, Phocaea, Rhodes, Alexandria and Cyprus, which, together with those of “Romania” ensured the export of numerous products. Relations with these ports were frequent, with over 100 cases mentioned in our documentation.

Vessels which sailed along these routes were usually of considerable tonnage: ships, carracks and cogs. Aside from galleys, Genoa and Venice boasted the largest vessels: we find, for example, the carrack of Giovanni Oltramarino of Liguria, built in Harfleur in Normandy and with a capacity of 1,600 casks, or over 1,100 tons.<sup>19</sup> Genoese ships rarely had a capacity of less than 1,000 casks: Francesco d’Asti and Luchino Salvatico had cogs of 1,200 casks, while in 1401 Stefano Grisolfi had a “new ship” built of 1,500 casks.<sup>20</sup>

Among the various vessels that sailed under the flag of St. Mark, we find three of 700 casks that voyaged between Valencia and Bruges under the orders of Michele Durazzini, Daniello da Mulino and Santuccio di Benedetto, while Novello Lercaro’s cog often linked Southampton and Savona.

The fleets of Catalonia,<sup>21</sup> Castile and Biscay sailed along Northern European routes with ships of low to medium tonnage. The Catalan vessel captained by Piero Arembao that journeyed from Valencia to Bruges in December 1394 had a capacity of 400 casks, while the Castilian ships of Arnao Berlinghieri and Filippo Quaratesi trading between Bruges, Valencia and Barcelona held between 350 and 400; likewise, the Biscayan vessels of Guglielmo Peris di Baiona, Gian Arriguzzo (named Santa Maria Maddalena) and Gianni Meglies could contain 300. Biscayan ships often specialized in the transport of certain goods, such as herring: in December 1398, Grazia Vacca of Bilbao brought some of this fish from Bruges to Palma de Mallorca in his “little boat.”<sup>22</sup>

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<sup>18</sup> It is interesting to note that the Bay of Cádiz included a series of landings which made up a port system: the navigation of these closely linked ports revealed situations of cooperation and economic integration. R.J. GONZÁLEZ ZALCAIN, *De puerto a puerto: Las relaciones entre los puertos de la Bahía de Cádiz (siglos XV-XVI)*, in *De mar a mar*, cit., pp. 147-177.

<sup>19</sup> ASPO, *Datini*, 853, Giovanni Orlandini and Piero Benizi and partners to Francesco Datini and partners, Bruges-Barcelona, 16.05.1399. On the equivalents of casks with current measures of ship tonnage, see F. MELIS, *Werner Sombart e i problemi della navigazione nel Medioevo*, in *I trasporti e le comunicazioni nel Medioevo*, ed. L. FRANGIONI, Prato-Florence 1985 (Istituto Internazionale di Storia Economica “F. Datini” – Le Monnier), pp. 3-68. More recent studies, although referring to later periods, have been made by J.L. RUBIO SERRANO, *Las unidades de medida españolas en los siglos XVI y XVII*, in “Revista de Historia Naval”, 6.20, 1988, pp. 77-93; F. VIEIRA DE CASTRO, *Os navios dos séculos XVI e XVII: linhas gerais de evolução, unidades de medida e arqueio*, in *Navios, Marinheiros e Arte de Navegar 1500-1688*, ed. F. CONTENTE DOMINGUES, Lisbon 2012 (Academia de Marinha) pp. 17-45.

<sup>20</sup> ASPO, *Datini*, 648, Giovanni Orlandini and Piero Benizi and partners to Francesco Datini and partners, Bruges-Florence, 02.02.1401.

<sup>21</sup> On the Catalan fleet and the capacity of its ships, see F. MELIS, *L’area catalano-aragonesa nel sistema economico del Mediterraneo occidentale*, in F. MELIS, *I mercanti italiani nell’Europa Medievale e Rinascimentale*, ed. L. FRANGIONI, Prato-Florence 1990 (Istituto Internazionale di Storia Economica “F. Datini” – Le Monnier), pp. 215-231.

<sup>22</sup> ASPO, *Datini*, 853, Giovanni Orlandini and Pier Benizi and partners to Francesco Datini and partners, Bruges-Barcelona, 06.12.1398.

From the Mediterranean these ships brought cotton from Alexandria and Cyprus; sugar; hazelnuts from Naples; wine from Calabria, Greece, Alicante and Andalusia; cooking oil from Mallorca; spices of all kinds; and “semenze”<sup>23</sup> and fruit from the agricultural regions around Valencia and Málaga. Florentine letters to Bruges and London never failed to indicate the prices of anise and cumin from Valencia, of rice, of “berlinghieri” saffron, of “orto”,<sup>24</sup> of Berber dates, of every sort of almond, of dried figs and of Muscat of Alexandria.<sup>25</sup> These prices were accurate, as these were products that were “consumed in great quantities,” in the words of the Ardinghelli merchants of London.<sup>26</sup>

Noteworthy were also cargoes of materials destined for textile manufactures, such as alum from Phocaea and Chios,<sup>27</sup> soap from Seville and Valencia and oil from Andalusia used to grease wool. The high quality of Northern European woolen cloth is confirmed by the imports of kermes, a precious animal substance used as red dye: from London, our merchants reported the delivery of this product by galleys and other ships to Bruges and Southampton, in all its varieties – Provençal, Valencian, Sevillan and Berber. Indeed a price calculation for eight bales of Berber kermes sent to the Alberti of London allows us to reconstruct the means and costs of transportation of this regularly traded product. Once it reached Southampton, kermes – like other merchandise – was loaded onto a small boat, brought into port and placed in carts for the overland journey to London.<sup>28</sup>

<sup>23</sup> The term “semenze” (“seeds”) usually refers to anise, cumin and almonds. Sometimes rice was included as well under this heading.

<sup>24</sup> ASPO, *Datini*, 885, Giovanni Orlandini and partners to Francesco Datini and partners, London-Barcelona, 26.03.1404. At that time, these were the prices of some spices and “semenze” in London: pepper 12½d. per pound, “beledi” ginger 18d. per pound, “colombino” ginger 16d. per pound, nuts (probably nutmeg) 22d. per pound; “galiga” and cloves 36d. per pound, mace 40d. per pound, fine cinnamon 12d. per pound, common cinnamon 9d. per pound, Valencian anise 27s. per hundredweight; cumin 40s. per hundredweight; rice 8s. per hundredweight; almonds 15s. per hundredweight; “berlinghieri” saffron 10s. per pound, “orto” 8½ s. per pound. In Bruges on the same day, prices were as follows: ginger and “beledi” ginger 12-13 groats; “colombino” ginger 11 groats; “michino” 10 groats; cloves 30 groats; “paradise kermes” dye 14 groats. Prices of other products did not differ considerably. Given that the exchange rate between Bruges and London was £25 and 1/3 per écu and that the écu of the Flemish city was equivalent to 24 groats, the price in Bruges, in English currency, of “colombino” ginger was equal to 11.605d., a value lower than that of London, which, as we have seen, was 16d. ASPO, *Datini*, 855, Giovanni Orlandini and partners to Francesco Datini and Simone Bellandi and partners, Bruges-Barcelona, 26.03.1404.

<sup>25</sup> In Bruges in January 1406, “sportino” was sold at 31 groats. ASPO, *Datini*, 855, Giovanni Orlandini and partners to Francesco Datini and Simone Bellandi and partners, Bruges-Barcelona, 16.01.1406.

<sup>26</sup> ASPO, *Datini*, 885, Francesco Ardinghelli and Gherardo Davizi and partners to Francesco Datini and partners, London-Barcelona, 07.09.1407.

<sup>27</sup> Among the most recent studies on eastern alum we wish to cite E. BASSO, *Prima di Tolfa: i mercanti genovesi e l'allume orientale*, in “Mélanges de École Française de Rome-Moyen Âge”, 126, 2014, n. 1, pp. 2-17.

<sup>28</sup> This was a sale of Berber kermes made by the Alberti company in London on behalf of its Valencian sister company and of the Datini company in the same city. The 562 pounds of dyestuff (net weight after deducting the first and second cloth wrappings of some bales) were sold to a “London commoner” who paid £188.16s.8d. From this amount was deducted £20.18s. for fiscal and general dues for transport to London; of this sum, £2.16s.7d. was for Alberti’s commission. Among

Ships sailing from the Atlantic to the Mediterranean brought Flemish and Brabantian fabrics, such as those from Wervicq, Courtray, Herentals, Mechlin and Lier. Naturally their cargo holds contained English wool,<sup>29</sup> as well as quantities of red and black cloth from Essex, “bianchetti” from Guilford,<sup>30</sup> scarlet cloth from London,<sup>31</sup> twill fabric clothing,<sup>32</sup> and fabrics from Winchester, the Cotswolds, Bristol, Scotland and Ireland.<sup>33</sup> As we might expect, there was no lack of products that were naturally brought from the north to the south: herring, squirrel fur coats, madder,<sup>34</sup> tinplate, pieces of tin,<sup>35</sup> copper,<sup>36</sup> brass barber basins,<sup>37</sup> and many other items.

Our sources are less eloquent regarding the movements of ships that connected Bruges with the Hanseatic regions. One example of this trade, though, is referred to in a letter of September 1394, in which the Mannini placed an order in Valencia for large quantities of almonds and rice which would be purchased from “German” merchants, whose arrival on more than 250 ships was expected.<sup>38</sup> This was information that travelled along the hubs of the networks and which inevitably affected prices on Flemish and Spanish markets.<sup>39</sup>

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the numerous expenses we note the price of 5s. to cover the cost of the boat that travelled 12 miles to bring the kermes to the port of Southampton; 10d. to transfer it from the boat to a cart; 1s.4d. paid to the weigher, together with a “tip” of 6s.8d. so that “he would weigh it properly.” The journey from Southampton to London cost 16s., to which must be added 4s. for accommodation and for the carter. Deducting expenses for the various fiscal dues, sale of the dyestuff produced earnings of £167.18s.8d. ASPO, *Datini*, 994, Calcidonio and Niccolao Alberti and partners to Francesco Datini and partners, London-Valencia, 04.03.1398.

<sup>29</sup> ASPO, *Datini*, 885, Francesco Ardinghelli and Gherardo Davizi and partners to Francesco Datini and partners, London-Barcelona, 07.09.1407.

<sup>30</sup> “Bianchetti” are pieces of unbleached cloth. ASPO, *Datini*, 885, Giovanni Orlandini and partners to Francesco Datini and partners, London-Barcelona, 03.05.1404. Essex cloth cost 12s. per dozen pieces, while high-quality “bianchetti” sold at 7-7¼ d. per ell.

<sup>31</sup> ASPO, *Datini*, 1072, Calcidonio and Niccolao Alberti and partners to Francesco Datini and Cristofano Carocci and partners, London-Mallorca, 05.05.1399.

<sup>32</sup> ASPO, *Datini*, 1072, Calcidonio and Niccolao Alberti and partners to Francesco Datini and Cristofano Carocci and partners, London-Mallorca, 05.05.1399.

<sup>33</sup> F. GUIDI BRUSCOLI, *I rapporti con il Nord Europa*, in *Francesco di Marco Datini*, cit., pp. 417-428, 421.

<sup>34</sup> On the types of madder, see *Ibid.*, p. 421.

<sup>35</sup> ASPO, *Datini*, 885, Giovanni Orlandini to Francesco Datini and partners, London-Barcelona. 03.05.1404. The cost of tin was 18½ - 19s. per hundredweight.

<sup>36</sup> Catalans in Bruges sent to Valencia above all copper in pieces because shipping it in sheet form required more costly processing. In November 1406, it went for between 22 and 24 sous on the Flemish market. ASPO, *Datini*, 980, Giovanni Orlandini and partners to Francesco di Marco and partners, Bruges-Valencia, 15.11.1406.

<sup>37</sup> In November 1406 in Bruges, they sold for between 32 and 34 sous per hundredweight. ASPO, *Datini*, 980, Giovanni Orlandini and partners to Francesco di Marco and partners, Bruges-Valencia, 15.11.1406.

<sup>38</sup> ASPO, *Datini*, 753, Luigi and Salvestro Mannini and partners to Francesco Datini and Andrea di Bonanno and partners, Bruges-Genoa, 07.09.1394; ASPO, *Datini*, 753, Luigi and Salvestro Mannini and partners to Francesco Datini and Andrea di Bonanno and partners, Bruges-Genoa, 26.09.1394.

<sup>39</sup> ASPO, *Datini*, 753, Luigi and Salvestro Mannini and partners to Francesco Datini and Andrea di Bonanno and partners, Bruges-Genoa, 01.01.1396; ASPO, *Datini*, 853, Diamante and Altobianco

This network, which was made up of long-distance routes and which we have defined as a “network of major ports,” is no doubt of great interest, even if our familiarity with many of its features may cause us to take it for granted. In any case, analysis of the navigational charts provides us with less expected and less known evidence. We learn from them that the movements of ships, men and goods were closely connected to the system of information which passed through the mercantile networks and which informed final decisions about ports and routes. They further tell us about phenomena of cultural influence due to recurring contacts between people, which could shape the knowledge and even the aesthetic and culinary tastes of those involved.<sup>40</sup>

From the general picture that we have been able to form, it seems that attention was mostly paid to questions regarding the contractual and maritime details of each voyage. The flow of information within the network provides evidence of the power held by merchants to condition the provision of tertiary services: in 1395, for example, Nofri di Bonaccorso reported to his Florentine correspondents that a maritime insurance market was taking root in Palma de Mallorca. In that port, insurance premiums and companies were unlike their counterparts in Florence: in cases when time was of essence, it made sense to take out a policy in Palma, so as not to incur risk by leaving merchandise idle in warehouses.<sup>41</sup> From this piece of information, merchants also learned that insurers on the island had begun accepting Florentine-style contracts.

Many letters confirm the great attention paid to the choice of type and quality of ships as well as of the routes to travel. In 1395, upon hearing of a shipwreck of a vessel that had left Flanders headed to Catalonia, Guido Caccini, in Valencia, was not particularly worried: he was certain that the ship in question did not contain his own or his clients' goods. In Sluis, everyone knew that the unfortunate boat was a small one and that it “was in the hands of incompetents.”<sup>42</sup>

A letter sent in the autumn of 1405 reveals that four Florentine companies in Bruges reserved the cargo holds of two Catalan ships for a minimum load of 1,200

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Alberti and partners to Francesco Datini and Luca del Sera and partners, Bruges-Barcelona, 16.07.1398.

<sup>40</sup> Some examples are the use of a foreign language; the use of oil for cooking, which Florentines helped to spread through Flanders and England; the close relationship that Tuscan merchants in Bruges formed with

Flemish painters; and, more generally, the cultural influences exerted by economic operators, whose commercial dealings contributed to the diffusion of Florentine tastes and fashion. On these points, see: E. AERTS, *Italian Presence in the Late Medieval Bruges Money Market*, Leuven 2010 (Katholieke Universiteit Leuven), pp. 11-20; A. ORLANDI, *L'olivo e l'olio tra Mediterraneo e Mare del Nord (secoli XIV-XV)*, in *Ars Olearia. Dall'oliveto al mercato nel medioevo. Ars Olearia. From olive grove to market in the Medieval Age*, ed. I. NASO, Guarene (CN) 2018 (Centro Studi per la Storia dell'Alimentazione e della Cultura Materiale “Anna Maria Nada Patrone”-CeSa), pp. 107-122; EADEM, *Trascender las fronteras. El papel de los mercaderes florentinos en el intercambio económico y cultural (siglos XIV-XVI)*, in *Las fronteras en la Edad Media hispánica (siglos XIII-XVI). Revisión historiográfica de un concepto polisémico*, Seville, 24-28 October 2017, forthcoming.

<sup>41</sup> ASPO, *Datini*, 666, Nofri di Bonaccorso to Francesco di Marco and Stoldo di Lorenzo, Mallorca-Florence, 19.02.1395.

<sup>42</sup> ASPO, *Datini*, 1077, Guido Caccini and partners to Ambrogio di Lorenzo Rocchi, Valencia-Mallorca, 07.12.1395.



bags of wool and cloth as well as additional space for another 800 bags. The ship intended to stop at Barcelona before continuing to Porto Pisano, where it would either unload the goods or sail on to Piombino or Talamone.<sup>43</sup>

Indeed this last example shows how the examined sources allow us to verify whether and in what way the network of major ports interacted with minor ones. Consideration of this question reveals facts of great interest. These cases involved connections between ports which were relatively close to each other and more or less important in terms of number of landings. These connections often set a dynamic network of men and goods in motion: it is clear that such traffic was never based on chance but was rather the result of operational choices made on a case-by-case basis by shippers and above all by merchants.

#### INTERCHANGEABILITY AND COMPLEMENTARITY OF MAJOR AND MINOR PORTS

We will now take a brief look at the Tyrrhenian coast of Tuscany, where, as the above example indicates, several smaller landings, such as the canal of Motrone and the ports of Piombino and Talamone, played complementary roles with respect to Porto Pisano (Map 2).

As Melis observed, even without its own fleet Florence was a maritime power which made skillful use of the ships of others, obliging them to use landings that suited its own interests. Unable to gain access to Porto Pisano, Florentines in Bruges required ships to sail to these minor ports.<sup>44</sup> This is precisely what occurred in May 1405 when the ship of Gherardo di Dono,<sup>45</sup> loaded with English cloth and wool and conveying the Orlandini and other Tuscan merchants based in the Flemish capital, had to dock at Piombino. The journey had been carefully planned: after unloading its cargo, the Catalan carrack was to take on 37 bales of paper and seven of cloth that would be sent from Florence to be transported to Barcelona.<sup>46</sup> Naturally such operations, especially frequent during the war between Florence and Pisa (1404-06), were a boon to the growth of Piombino, which had become independent in 1396; this traffic stimulated the improvement of its facilities for the reception of goods as well as its internal transport systems. Similar cases involved the hiring of Genoese, Venetian and Biscayan ships that agreed to anchor in other inconven-

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<sup>43</sup> ASPO, *Datini*, 855, Giovanni Orlandini and partners to Francesco Datini, Andrea Pazzi and partners, Francesco Mannelli and partners, Bruges-Barcelona, 08.11.1405.

<sup>44</sup> On the role of Tuscan merchant-bankers in the Flemish city, see especially E. AERTS, *Italian presence*, cit.; F. GUIDI BRUSCOLI, *I rapporti con il Nord Europa*, cit., pp. 417-421; F. GUIDI BRUSCOLI, *Mercanti-banchieri fiorentini tra Londra e Bruges nel XV secolo*, in *Mercatura è arte*, L. TANZINI, S. TOGNETTI eds., Viella, Rome 2012, pp. 11-44.

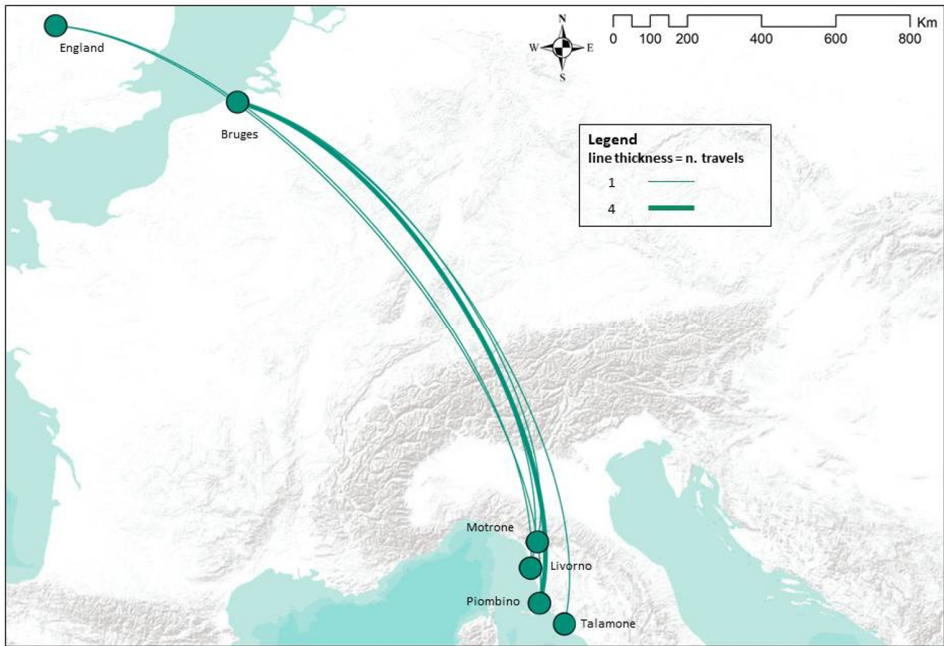
<sup>45</sup> Gherardo di Dono was a Catalan who possessed a ship with a capacity of 1,200 casks. F. MELIS, *L'area catalano-aragonesa nel sistema economico del Mediterraneo occidentale*, in F. MELIS, *I mercanti italiani* cit., p. 223.

<sup>46</sup> ASPO, *Datini*, 673, Ibo di Tommaso and Giovanni Cirioni to Francesco Datini, Piombino-Florence, 12.05.1405; ASPO, *Datini*, 907, Mariotto Ferrantini and Amoretto di Lorenzo and partners to Francesco Datini and Simone Bellandi and partners, Piombino-Barcelona, 25.05.1405; ASPO, *Datini*, 1000, Ibo di Tommaso and Giovanni Cirioni di Piombino to Francesco Datini and Luca del Sera and partners, Piombino-Valencia, 26.05.1405.

ient ports, such as Motrone, north of Viareggio, or Talamone, even farther south than Piombino, whose modest port was protected by a castle which overlooked the coast from a cliff.

The operations of these ports do not show signs of internal collaboration but rather reveal situations of essentially passive complementarity, completely subject to the political context and to the resulting decisions of merchants.<sup>47</sup>

Map 2. The ports of Tuscany (1390-1411)

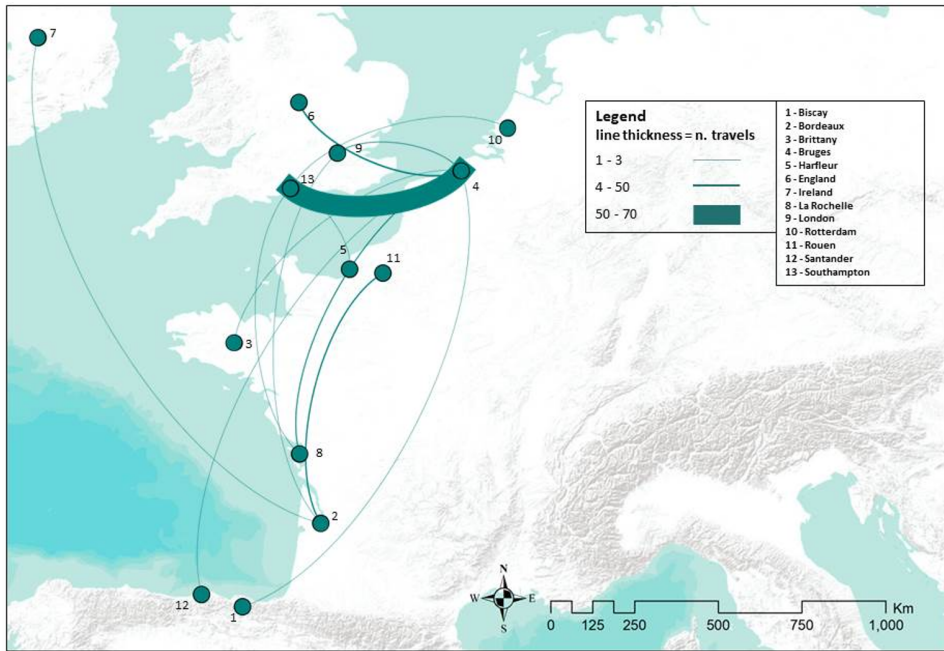


Regarding the ports of Northern Europe referred to in our documents, it seems that these relations of complementarity were quite similar to those of the ports of the Tuscan coast (Map 3).<sup>48</sup>

<sup>47</sup> As early as April 1397, the long-standing conflict between Pisa and Florence caused the Mannini in London to give orders to the effect that if the ship *Polo Italiano*, which had been hired for Pisa, reached Palma de Mallorca without finding confirmation of an expected agreement between the two Tuscan cities, it was to continue its journey toward Venice. ASPO, *Datini*, 1072, Alamanno and Antonio Mannini and brothers to Francesco Datini and partners, London-Mallorca, 08.04.1397.

<sup>48</sup> Above all Map 3 shows that most ships coming from the south almost always stopped at the ports of Bruges and Southampton (in 70 cases). Journeys to the Atlantic coast of northern Spain were punctuated by ports of the *Marisma e costera de España*, where we find Bilbao and Santander. The significance of those landings, especially during the Hundred Years' War, derived from the sea and from their relations with the most important Atlantic and Mediterranean ports; indeed they became necessary stopping points for short-distance commercial navigation between Spain and Northern Europe, as well as a maritime route for pilgrims headed to Santiago de Compostela. Farther north, La

Map 3. The northern ports (1390-1411)



The choice of one port over another seems to have been based on considerations that were predominantly political: one need only think of Middelburg, well connected to Antwerp and playing an increasingly greater role in trade with England, as a potential alternative to the port of Sluis.<sup>49</sup> In 1409, when Genoa rebelled against French protection, Ligurian merchants were victims of retaliation throughout France and in Bruges as well. Yet as soon as local authorities understood the

Rochelle recorded the arrivals of ships (four journeys) from Bruges to load wine and iron. In the first decade of the fifteenth century, we encounter there Piero Nottone, Michele Aldobrandini, Damiano da Montalto and Federico Agardo; the last of these, at the command of a ship (1,200-cask capacity) built in Holland, was shipwrecked twice on his return to Sluis. Farther north again, in front of the coast of Brittany, was located the landing of Belle Île, which was often used by ships to shelter from storms. Moving still farther north we note Rotterdam, still a small fishing village, which hosted four Genoese ships that had weathered a storm. J.A. SOLÓRZANO TELECHEA, *La influencia del mar en la conformación de los puertos de La Marisma and costera de España en la Baja Edad Media*, in *De mar a mar*, cit., pp. 59-92, 62; M. TRANCHANT, *The Maritime Trade and Society of La Rochelle in the late Middle Ages*, in *The Routledge Handbook*, cit., pp. 352-365. ASPO, *Datini*, 856, Giovanni Orlandini and partners to Francesco Datini and partners, Bruges-Barcelona, 26.02.1410; ASPO, *Datini*, 856, Giovanni Orlandini and partners to Francesco Datini and partners, Bruges-Barcelona, 27.11.1410; ASPO, *Datini*, 664, Giovanni Orlandini and Neri Vettori and partners to Francesco Datini and partners, London-Florence, 24.09.1401, c. 1r.

<sup>49</sup> As early as 1401 our correspondents reported that the galleys were not able to unload their cargo because of “the shallow waters.” ASPO, *Datini*, 980, Giovanni Orlandi and partners to Francesco Datini and partners, Bruges-Valencia, 11.07.1401.

risk that would be run if the Genoese moved their operations to the Zeelandic port, they quickly changed their tune.<sup>50</sup>

Other important factors in this regard were problems brought about by the Hundred Years' War. Ships of the English and French navies patrolled the English Channel daily, attacking and plundering merchant vessels of medium and small dimensions which crossed that stretch of water. Only large Genoese carracks, which often sailed in convoy and were well armed,<sup>51</sup> were able to elude the aggression of those fleets. At times, however, not even these defensive measures sufficed to protect their cargo. Merchants therefore decided to unload their more valuable goods at Harfleur, thereby reducing the risk of the passage.<sup>52</sup>

On occasions when the unpredictability of a maritime voyage was great, merchants would weigh the option of transferring goods from Bruges to Catalonia overland, in spite of the higher costs.<sup>53</sup> In one case, merchants considered sending a valuable supply of cloth to Valencia by land, when news reached them of the strong presence of pirates in those seas.<sup>54</sup>

Elements of interchangeability and complementarity for essentially political reasons are also apparent with regard to several ports on the coasts of Aragon-Catalonia as well. Indeed during the period under consideration, we have evidence and comments regarding several interdicts against Italian merchants and fleets re-

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<sup>50</sup> In a letter sent to Valencia, Orlandini described the episode this way: "On the 30th of September, all the Genoese here were arrested and their goods confiscated because of the news that had arrived from Genoa." In a later letter, he made clear the consequences in case they failed to secure their release: "It will cause great damage to the country, because the Genoese are the ones who work the most." ASPO, *Datini*, 980, Giovanni Orlandini and partners to Francesco Datini and partners, Bruges-Valencia, 08.10.1409; ASPO, *Datini*, 980, Giovanni Orlandini and partners to Francesco Datini and partners, Bruges-Valencia, 28.11.1409; ASPO, *Datini*, 980, Giovanni Orlandini and partners to Francesco Datini and partners, Bruges-Valencia, 23.12.1409.

<sup>51</sup> ASPO, *Datini*, 980, Giovanni Orlandini and partners to Francesco Datini and partners, Bruges-Valencia, 12.06.1410.

<sup>52</sup> This is what was done in June 1405 by Bernabò D'Antù, Stefano Colombotto and Demorre di Campione, who, "out of fear of the English navy, [unloaded] all small-sized goods of great value in Harfleur, while they will bring the more voluminous merchandise here; yet fear of the English fleet is so great that they may decide not to come." Later, when the conflict prevented the Ligurian ships from landing in England, they had to sail to Sluis, which clearly had an effect on the Flemish market: "The arrival of these ships will bring down the value of the spices, since it is believed that not much will be delivered to England, as most of the Genoese are coming here. When the ships arrive we will let you know the price of each item, because the price of many goods will change." ASPO, *Datini*, 980, Giovanni Orlandini and partners to Francesco Datini and Luca del Sera and partners, Bruges-Valencia, 30.06.1405; ASPO, *Datini*, 980, Giovanni Orlandini and partners to Francesco Datini and partners, Bruges-Valencia, 21.03.1407.

<sup>53</sup> These were the words used by the Orlandini in Bruges to relate the news to the Datini company in Valencia: "You would do well not to send anything by sea, because the Channel is full of armed English and French ships, which are causing damage to everyone. The Channel cannot be entered or exited: the only vessels that can cross it are large ships that sail together in groups of two or three. In the absence of an agreement between the French and the English, it is therefore better to ship the goods overland." ASPO, *Datini*, 980, Giovanni Orlandini and partners to Francesco Datini and Luca del Sera and partners, Bruges-Valencia, 21.05.1403.

<sup>54</sup> ASPO, *Datini*, 980, Giovanni Orlandini and partners to Francesco Datini and partners, Bruges-Valencia, 23.01.1400.

searched by Maria Teresa Ferrer i Mallol, beginning with their first manifestations in the thirteenth century.<sup>55</sup> These were the result of protectionist policies, often temporary, which might significantly hinder the commercial activities of the banned traders. This happened at least twice to the Venetian fleet, first between 1395 and 1399 when it was prevented from entering the Valencian port,<sup>56</sup> and again between 1400 and 1402 when it was not allowed to land at Porto Pi, the main port of Palma.<sup>57</sup> In the first case the Venetians moved their operations to the port of Alicante, thereby increasing its status. With regard to the second ban, the alternative to Palma de Mallorca was simpler and more direct: the fleet turned to Ibiza.<sup>58</sup> The “salt island” thus replaced Mallorca for Venetian trade and related activities. Our sources indicate at least 28 connections between the Pityusic island and the ports of Northern Europe during the latter three-year period.

In these years, indeed, maritime and commercial networks based on Ibiza replaced, or at least challenged, those of Mallorca<sup>59</sup> – and in some cases even those of Valencia and Barcelona – in the great game of long-distance trade. As a result, Ibiza’s port underwent transformations that would allow it to play a more dynamic commercial role, even if these changes were not definitive.

#### THE POLYCENTRIC SYSTEM OF MINOR PORTS IN ARAGON-CATALONIA

Much more significant seems to be the function of the great number of minor landings – whether large or small, well known or obscure – along the coasts of Aragon-Catalonia. To examine their respective roles, we have compiled a database which contains the movements of the port systems whose main points of reference were the Balearic Islands, Sant Feliu de Guíxols (north of Barcelona) and Málaga. To the internal circulation of this system have been added data relative to relations with the ports of Northern Europe.

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<sup>55</sup> M.T. FERRER I MALLOL, *Els italians a terres catalanes (segles XII-XV)*, in “Anuario de Estudios Medievales”, 10, 1980, pp. 393-466.

<sup>56</sup> A. ORLANDI, *Mercanzie e denaro: la corrispondenza datiniana tra Valenza e Maiorca (1395-1398)*, Valencia 2008 (Universitat de València), p. 58; M.T. FERRER I MALLOL, *Els italians*, cit., pp. 461-465.

<sup>57</sup> The director of the Datini company in Barcelona gave the news to his colleague in Mallorca in these words: “It will soon happen that Venetian galleys and ships in general will not be able to land there or at any other place under the Crown of Aragon, except Ibiza. It might be a good idea to send one of our representatives to Ibiza, who can make arrangements for our goods arriving on the island.” ASPO, *Datini*, 1053, Francesco Datini and partners to Francesco Datini and Cristofano Carrocci and partners, Barcelona-Mallorca, 07.04.1400.

<sup>58</sup> On Ibiza, see the works of J.C. HOCQUET: *Ibiza, carrefour du commerce maritime et témoin d’une conjoncture méditerranéenne (1250-1650 env.)*, in *Studi in memoria di Federico Melis*, Napoli 1978, pp. 491-526; IDEM, *Navires et transport international du sel en Méditerranée à la fin du Moyen Age*, in *Storia del commercio del sale tra Mediterraneo e Atlantico*, ed. S. PIRA, Proceedings of international conference Cagliari-Quartu Sant’Elena 28-30 April 1996, Cagliari 1997, pp. 17-42; A. ORLANDI, *Ibiza entre el Mediterráneo, el Atlántico y el Mar del Norte (siglos XIV y XV)*, in “eHumanista”, 38, 2018, pp. 48-64.

<sup>59</sup> For the role of Mallorca in international trade, see A. ORLANDI, *Palma di Maiorca e la rete dei porti balearici (secoli XIV – XV)*, in *Spazi economici e circuiti commerciali nel Mediterraneo del Trecento. Atti del Convegno Internazionale di Studi*, Amalfi, 4-5 June 2016, B. FIGLIUOLO, G. PETRALIA, P.F. SIMBULA eds., Amalfi 2017 (Centro di Cultura e Storia Amalfitana), pp. 305-319.

The database totals 1,800 journeys, which are represented in Maps 4 and 5: this method of exposition seems to us the best way of grasping what we have called the polycentric system of the ports of Aragon-Catalonia, a series of landings, both large and small, which managed to build relations of operational collaboration. In the period under consideration, these ports evidently demonstrate an intriguing process of integration that in practice overcame many physical and virtual borders, in spite of political differences and often tense coexistence among ethnic and cultural groups. Geography accounts for this integration: these ports were united by belonging to a network of intensive long-distance traffic as well as by the pressure of economic interests, both of which stimulated mechanisms of cooperation rather than conflict.

Map 4 in particular illustrates the basic features of the routes and the intensity of commercial flows; it shows the predominant roles of Mallorca, Valencia and Barcelona in trade with Northern Europe.<sup>60</sup>

A closer look at the data reveals that commercial flows between Palma (and other ports of the island) and the coast of Barcelona – the ports, that is, of Barcelona, Palamós, Sant Feliu de Guíxols, Sitges and Tarragona – account for 1,090 movements, while flows between the former and the Valencian coast – the ports of Valencia, Alicante, Cartagena, Dénia, Gandia, Peniscola and Moraira – together with Málaga numbered 300 journeys.<sup>61</sup>

Even more notable within the context of this study is the picture provided by Map 5: the enlarged view with respect to the previous map highlights the frame-

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<sup>60</sup> While R. De Roover held that Catalonia had a commercial deficit with Flanders, Melis had a different view, affirming that the former had a favorable trade balance. According to the Florentine historian, transfers from Bruges to Barcelona amounted to double those in the opposite direction. For 1438, during, that is, a later period, Francesco Guidi Bruscoli reports that transfers to Bruges were 80% greater than those to the Catalan city. R. DE ROOVER, *The Bruges Money Market around 1400*, Brussels 1968 (Paisis der Academien), pp. 42-47; F. MELIS, *L'area catalano-aragonesa*, cit., p. 354; F. GUIDI BRUSCOLI, *I rapporti*, cit., p. 428. On Barcelonan commerce with the North Sea more generally, see also D. PIFARRÉ TORRES, *El comerç internacional de Barcelona i el Mar del Nord (Bruges) al final del segle XIV*, Barcelona 2002.

<sup>61</sup> A portion of the data comes from the database used for the essay by A. ORLANDI, *Palma di Maiorca*, cit., pp. 304-307. Naturally, those not relative to this analysis have been excluded, while the remaining data have been integrated with those deriving from the extension of the time period under consideration and from new research. Many studies deal with Mallorcan commerce from a general point of view. We mention here M. BARCELÓ CRESPI, *La Ciudad de Mallorca y su proyección en el contexto del Mediterráneo occidental (siglos XIII-XV)*, in *La ciudad medieval y su influencia territorial*, ed. B. ARIZAGA BOLÚMBURU, Logroño 2007, pp. 111-136; EADEM, *Los contactos atlántico-mediterráneos en la Baja Edad Media: el caso mallorquín*, in *La Península Ibérica entre el Mediterráneo y el Atlántico siglos XIII-XV*, Jornadas celebradas en Cádiz, 1-4 de abril de 2003, ed. M. GONZÁLEZ JIMÉNEZ, Seville-Cádiz 2006, pp. 471-480. Several essays treating Mallorcan maritime relations with specific areas can be found in *El Regne de Mallorca: cruïlla de gent i de cultures (segles XIII-XV)*, XXVI Jornades d'estudis històrics locals, Palma, del 14 al 16 de novembre de 2007, ed. M. BARCELÓ CRESPI, Palma 2008. Among more recent works on Mallorcan navigation we note those of Antonio Ortega Villoslada, which almost always cover periods prior to 1350; among these, we refer the reader to A. ORTEGA VILLOSLADA, *Navegación mediterránea por el Atlántico. El caso de Mallorca (1230-1349)*, in "Minius", 21, 2013, pp. 45-60; IDEM, *Del Mediterráneo al Atlántico: apertura/reapertura del Estrecho de Gibraltar en la Edad Media. Estado de la cuestión*, in "Bolletí de la Societat Arqueològica Luliana. Revista d'Estudis Històrics", CCXXVI, 2011, n. 865, pp. 101-124.

work of the 24 ports mentioned in our sources.<sup>62</sup> If we exclude Palma, Valencia and Barcelona, the remaining ports show intensive traffic, which is not only evident from the 136 journeys that we have reconstructed: all of these internal routes were characterized by a continuous movement of smaller boats, hinted at in our sources, which were everywhere ready to transfer people, mail and goods.

This particular network of minor ports carried out multiple functions which went well beyond the normal tasks of moving goods to and from the hinterland. They further carved out spaces in the panorama of long-distance trade through their involvement in an interesting process of replacement and integration with the other ports. From this point of view, they must be distinguished from that less important group of landings distributed along the coast, which are not indicated on our map: the latter functioned as points of reference for fishing operations, as places that could be used as stopping points for fresh water, and as centers that could be reached by small boats which satisfied the occasional needs of the agricultural populations of the hinterland.<sup>63</sup>

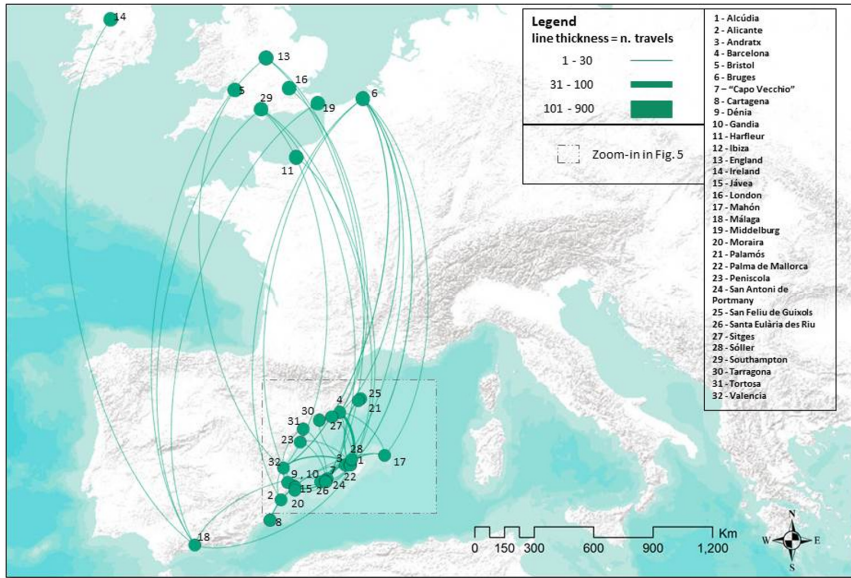
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<sup>62</sup> Excluding the three main ones (Barcelona, Palma di Mallorca and Valencia), these ports are Alicante, Alcúdia, Andratx, “Capo Vecchio” (Ibiza), Cartagena, Dénia, Gandia, Ibiza, Jávea, Mahón, Málaga, Moraira, Palamós, Peniscola, Sant Antoni de Portmany, Sant Feliu de Guíxols, Santa Eulària des Riu, Sitges, Sóller, Tarragona, Tortosa.

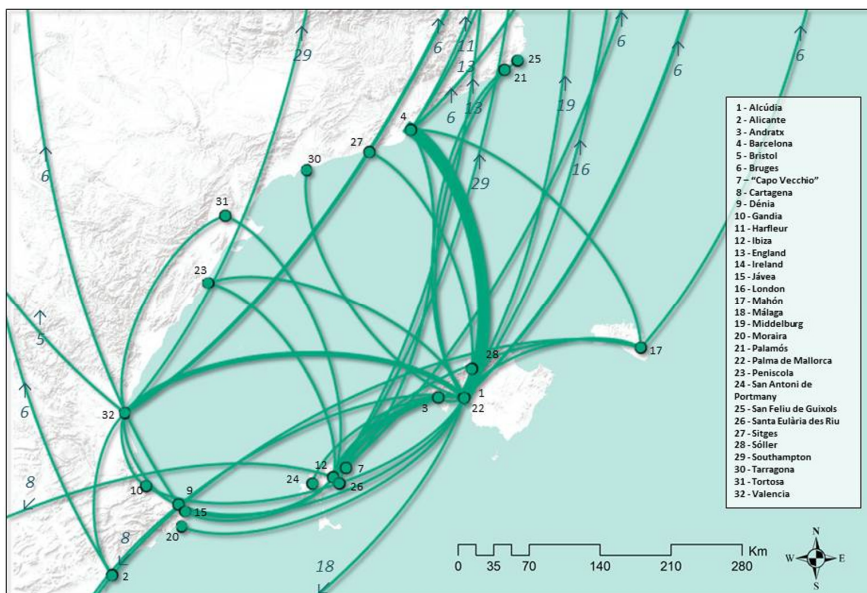
<sup>63</sup> Along the Valencian coast between Vinaròs and Cap de Cerver, between the fifteenth and sixteenth centuries, David Igual Luis has identified the existence of about 40 ports of different dimensions and importance that carried out connection services with Valencia or with other Iberian or international ports: D. IGUAL LUIS, *Non ha porto alcuno, ma sola spiaggia. La actividad marítima valenciana en el siglo XV*, in “Aragón en la Edad Media”, 2014, n. 25, pp. 101-134. See also, by the same author, *Valencia. Opportunities of a secondary node*, in *The Routledge Handbook*, cit., pp. 210-228 and *Red portuaria y control marítimo en el reino de Valencia (siglos XIII-XV)*, in *Les territoires de la Méditerranée (XI<sup>e</sup>-XV<sup>e</sup> siècle)*, Rennes 2013, pp. 51-71; *Más allá de Aragón. Historia e historiografía de los mercados medievales*, in *Una economía integrada. Comercio, instituciones y mercados en Aragón, 1300-1500*, C. LALIENA CORBERA Y M. LAFUENTE GÓMEZ eds., Saragossa 2012, pp. 69-95, 73-77; *Red portuaria y control marítimo en el reino de Valencia (siglos XIII-XV)*, in *Les territoires de la Méditerranée (XI<sup>e</sup>-XV<sup>e</sup> siècle)*, ed. A. NEF, Rennes 2013, pp. 51-71.

<sup>63</sup> A. ORLANDI, *Mercanzie e denaro*, cit., p. 58 and p. 408. On Valencian port and the port system based on it, see E. CRUSELLES, *El puerto de Valencia en el Mediterráneo medieval (siglos XIII-XV)*, in *Historia del puerto de Valencia*, ed. J. HERMOSILLA, Valencia 2007, pp. 63-125; R. FERRER NAVARRO, *Los puertos del reino de Valencia durante el siglo XIV*, “Saitabi”, 1975, n. 25, pp. 103-117. An examination of Catalan ports along the coast north and south of Barcelona is provided by M.T. FERRER I MALLOL in the essay *Navegació, ports i comerç a la mediterrània de la Baixa Edat Mitjana*, in *Comercio, redistribución y fondeaderos. La navegación a vela en el Mediterráneo*, Actas V Jornadas Internacionales de arqueología Subacuática, J. PÉREZ BALLESTER, G. PASCAL eds., (Gandia, 8 a 10 de noviembre de 2006), Valencia 2007, pp. 113-166. This writer notes about 50 landings of varying degrees of importance between Saint-Laurent-de-la-Salanque and Uldecona (both river ports).

Map 4. Ports on the coasts of Aragon-Catalonia in the system of routes toward Northern Europe (1390-1411)



Map 5. Ports on the coasts of Aragon-Catalonia in the system of routes toward Northern Europe (1390-1411) (detail)





Commercial traffic routes were determined by the operational choices of merchants, on one hand, and the actual movement of ships within the port network, on the other. Within this context, regular mercantile exchanges did not always involve the same ports: destinations changed on the basis of considerations that were more economic than political. Indeed with regard to the network of long-distance connections, such as that toward the North Sea, our sources show that in practice these routes were subject to significant changes, especially when they regarded the triangle consisting of the Barcelonan, Valencian and Balearic coasts.

As it was well connected to Valencia and Palma, Dénia sometimes functioned as a loading port for ships destined for Flanders. This was the case for rice, which was grown around the marshes of the Albufera and loaded onto vessels heading to the port of the Costa Blanca, where it was transferred to ships bound for Bruges.<sup>64</sup>

When ships in Porto Pí were not able to complete their loads to bring to Flanders, they would stop in Dénia to fill their holds with the “semenze” that came there from the many landings along the Valencian coast.<sup>65</sup> In at least one case when no vessels were leaving Palma for the north, it was decided to send alum to Dénia, where a ship was ready to depart for Bruges.<sup>66</sup>

We are, then, dealing with a port whose function was not limited to that of a loading dock for agricultural products and manufactures from its hinterland; rather, Dénia was a true hub within the entire port network. Replacing routine and important landings with others took place smoothly: this fact indeed provides us with the first piece of evidence for the efficient and collaborative interaction of these ports. When Luca del Sera in Valencia learned that four large and three small “Moor”<sup>67</sup> galleys were present near Alicante, he informed his colleague on Mallorca by means of one of the many ships present at port: planned deliveries of cargo to the southern coasts were immediately postponed and some goods were rebooked along safer routes and ports. Naturally ship captains made all the necessary adjustments, as happened the previous year to Berlinghieri Tomasi, who having just left the dock at Palma, suddenly headed back to the island to change his plans.<sup>68</sup>

Other similar examples could be provided: the best known is that of the ports of Peniscola and Tortosa, which regulated the wool trade around Maestrazgo,<sup>69</sup> involving numerous other landings along the coast.

Alternatives for each shipment and the choice of a port and a vessel depended on a merchant’s capacity for observation and hence on the efficiency of his network. When merchants learned by letter that “few ships” would be arriving in Pal-

<sup>64</sup> A. ORLANDI, *Mercanzie e denaro*, cit., p. 58 and p. 408.

<sup>65</sup> *Ibid.*, p. 242 and p. 260.

<sup>66</sup> *Ibid.*, p. 227.

<sup>67</sup> *Ibid.*, p. 480.

<sup>68</sup> *Ibid.*, p. 368.

<sup>69</sup> On the economic function of Peniscola and its port, see F. MELIS, *La lana della Spagna mediterranea e della Barberia occidentale nei secoli XIV-XV*, in F. MELIS, *I mercanti italiani*, cit., pp. 233-247; A. ORLANDI, *A Man from Prato*, cit., pp. 377-383 and C. RABASSA, *Funcions econòmiques del port de Peniscola durant la baixa Edat Mitjana*, in *La Mediterrània de la Corona d’Aragó, segles XIII-XVI e VII Centenari de la Sentència Arbitral de Torrellas, 1304-2004*, XVIII Congrès Internacional d’Història de la Corona d’Aragó, ed. R. NARBONA, Valencia 2005, 2, pp. 1269-1290.

ma from Pisa,<sup>70</sup> they took advantage of Giame Teriglio's presence in the nearby landing of Pollensa to send him a delivery of clubmoss and cloth to be loaded onto a Mallorcan vessel bound for the Tuscan city.<sup>71</sup>

Information networks kept operators continuously updated on every possibility of reducing transaction costs. It could sometimes happen that merchants were willing to accept a delay or change of port for reasons of safety or to allow other goods to be loaded.

Often operators took advantage of the obligatory return trips of ships, which offered space in their holds at discounted prices. This occurred once again in Mallorca, when Cristofano Carocci, wishing to benefit from a cheaper transportation rate, sent Berber kermes, "giannetti"<sup>72</sup> and oil<sup>73</sup> to Dénia, casks of oil to Peniscola,<sup>74</sup> and dyer's woad to Gandia.<sup>75</sup> From each of these ports, the goods would then reach Valencia on one of the many boats that sailed along the coast. Similarly, merchants in Valencia relied on Tortosa for shipments of calves bound for the Pisan market.<sup>76</sup>

In light of what we have seen, it is understandable that Ibiza too formed part of this virtuous network, which benefited its small landings, such as Sant Antoni de Portmany, to which many Berber products were shipped.<sup>77</sup>

Movements of ships, then, were influenced not only by such known factors as the rhythms of navigation or the choices of ship captains, but also by a demand for transport that aimed at the most favorable solutions by taking advantage of an efficient information system and of a range of shipping possibilities. It was these mechanisms that created the polycentric system that we have outlined, the network of minor ports that were well integrated into the system of routes with the north.

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<sup>70</sup> ASPO, *Datini*, 666, Nofri di Bonaccorso to Francesco Datini and Stoldo di Lorenzo and partners, Mallorca-Florence, 07.02.1394. The transcription of the document can be found in G. NIGRO, *Mercanti in Maiorca. Il carteggio datiniano dall'isola (1387-1396)*, II\*\* Documenti, Prato-Florence 2003, (Fondazione Istituto Internazionale di Storia Economica-"F. Datini" – FUP), p. 466.

<sup>71</sup> ASPO, *Datini*, 530, Ambrogio di Lorenzo Rocchi to Francesco Datini and Manno d'Albizo degli Agli, Mallorca-Pisa, 05.11.1395. The transcription of the letter can be found in G. NIGRO, *Mercanti in Maiorca*, cit., p. 795; ASPO, *Datini*, 530, Ambrogio di Lorenzo Rocchi to Francesco Datini and Manno d'Albizo degli Agli, Mallorca-Pisa, 13.11.1395. The transcription of the document can be found in G. NIGRO, *Mercanti in Maiorca*, cit., p. 801. Cristofano Carocci sent cloth to the port of Pollença overland.

<sup>72</sup> In all likelihood "giannetti" were skins of unidentified animals. In the documentation they usually appear together with skins of beech marten or deer.

<sup>73</sup> A. ORLANDI, *Mercanzie e denaro*, cit., p. 178; see also *Ibid.*, p. 148 and p. 185.

<sup>74</sup> *Ibid.*, p. 193.

<sup>75</sup> *Ibid.*, p. 397.

<sup>76</sup> *Ibid.*, p. 258.

<sup>77</sup> ASPO, *Datini*, 994, Giovanni di Gennaio to Francesco Datini and Luca del Sera and partners, Ibiza-Valencia, 05.12.1400; ASPO, *Datini*, 994, Tuccio di Gennaio to Francesco Datini and Luca del Sera and partners, Ibiza-Valencia, 14.05.1401; ASPO, *Datini*, 994, Tuccio di Gennaio to Francesco Datini and Luca del Sera and partners, Ibiza-Valencia, 07.11.1401; ASPO, *Datini*, 1072, Giovanni di Gennaio to Francesco Datini and Cristofano Carocci and partners, Ibiza-Mallorca, 10.05.1402. On this topic, see A. ORLANDI, *Ibiza entre el Mediterráneo*, cit., pp. 55-56.

## CONCLUSIONS

The great number of ships that moved among the many ports along the coasts of the Mediterranean, the Atlantic and the North Sea facilitated the introduction of features of complementarity and interchangeability. This integration guaranteed a system of routes that was not only efficient on a local level but was also useful for long-distance commerce.

The port system of Aragon-Catalonia constitutes a significant example of what we have seen. In this context of constant adjustment of routes and ship cargoes, necessitated by a variety of factors, this system shows how the mechanisms of complementarity between large and small ports were both efficient and routine. Operational collaboration between these ports was ensured by the regularity and frequency with which local fleets moved from one place to another. The tendency to replace one route with another resulted from the attention paid by operators to the movement of goods and to the need to distribute them efficiently. Landings at smaller and lesser known ports were necessary modifications with respect to traditional routes, which in the end guaranteed that goods reached their planned destination.

These dynamic networks had the further result of apparently expanding connections between areas of the hinterland and international commerce. Nuts and dried fruit from the vast and rich terrains south of Valencia were loaded together with the “semenze” produced by the same farmers of Arab origin onto the same vessels of small and medium dimensions: these in turn brought kermes, ostrich feathers, wax, Berber dates and products from southern Spain to loading ports for trade with Northern Europe. These small and medium-sized vessels moved through a network of routes, whose efficient complementarity between places of departure, intermediate stops and destination ports we are able to appreciate today.

The action of those ports – we are reminded of Alicante and Ibiza during the ban of Venetian merchants in Valencia and Palma – not only guaranteed the smooth functioning of international commerce but also sustained the mechanisms of economic integration among the various port centers and their respective hinterlands, given the ability of the former to receive men and goods from distant countries.

We are thus in agreement with those who maintain that institutional policies played an important role in this panorama, in particular their ability to make permeable the multiple material and immaterial borders that characterized those times.

Indeed such borders took the shape of weakly regulated markets, interference on the part of authorities, and conflicts between merchants and between ethnic groups, all of which rendered commerce quite complicated<sup>78</sup> but which were overcome in the end. The drive toward commerce and profit made these men flexible, able to take full advantage of economic and personal relationships to the end of simplifying problems and reducing obstacles. We have found cases in which some merchants shipped goods under the names of others if it was not possible to use their own, turning their colleagues into accomplices in abetting them to get around

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<sup>78</sup> A. ORLANDI, *The Catalonia Company*, cit., pp. 371-378.

a prohibition or avoid a fiscal due.<sup>79</sup> The mechanisms of solidarity and collaboration, which were perhaps unique and unrepeatably among those not belonging to the same “nation”, formed the basis for overcoming much diversity and many potentially conflictual interests. This logic seemed to favor gradual processes of integration: as it was applied to every aspect of economic activity, it ultimately influenced – as we have seen – those same basic mechanisms which were able to regulate that other kind of network, namely, that of the ports which we have aimed to reconstruct. The features of the latter network underwent continuous mutation because of the changeability of routes and of the ships that frequented those ports; it was marked by that continuous mobility which was indeed dictated by the choices and information that passed among merchants from port to port.

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<sup>79</sup> A. ORLANDI, *Mercanzie e denaro*, cit., pp. 36-37.