

## **The Graduate School of Historical Studies**

**Research Proposal for the Degree of  
"Doctor of Philosophy"**

**On the Subject:**

**Private Shipping in Renaissance Venice (1480-1540)**

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# Private Shipping in Renaissance Venice (1480-1540)

## **1. Definition of the Subject**

For many centuries Venice was a bustling centre of seafaring and maritime trade. Ship-owners, many of them belonging to the wealthiest families in Venice, have maintained a complex network of international sea routes.<sup>1</sup> Starting from the 1330s, Venice also ran a new kind of service—the system of merchant galleys, built and owned by the state and licensed to Venetian patricians for a single voyage.<sup>2</sup> During the following two centuries both sailing forms coexisted, supporting and in some respects competing with each other. While the itinerary of merchant galleys, carrying valuable light wares, was strictly regulated by state legislation, privately owned ships enjoyed greater freedom and were mainly subject to private contracts between shippers and ship-owners.<sup>3</sup> However, although modern research tends to focus on the contribution of merchant galleys to the republic's economy, private merchantmen were no less responsible for the mercantile success (or failure) of Venice.<sup>4</sup> Galleys were extremely expensive to maintain, and their voyages were numbered. Maritime trade was mainly carried out aboard private ships at any period.

The present study will deal with the world of large Venetian merchantmen between 1480 and 1540. This period includes the last decades of Venice's hegemonic role in the maritime trade with the Levant, followed by great transformations in the world map of commerce that influenced the main areas of Venice's trading interests, and are believed to have severely weakened Venice's maritime economy, at least for several decades. Two wars with the Ottomans (1499-1503 and 1537-1540) and the War of the League of Cambrai (1508-1516), are also believed to have contributed to Venice's difficulties in coping with the changes in the long-range maritime trade. The present examination of the role of private shipping in this period will be delimited to the Mediterranean Sea, mainly the eastern Mediterranean, where most of Venice's commercial shipping took place, with occasional digressions into the Atlantic Ocean.

In Venice, large round ships were a legal category, which explicitly referred to a beamy, high-sided sailing ship of at least 400 *botte* (about 240 tons), with two or three decks. These were, in principle, the only ones allowed to operate outside the Adriatic Sea. According to Frederic Lane, between 1448 and 1558 their number

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<sup>1</sup> Lane, 'Family Partnership', 36-7.

<sup>2</sup> Lane, 'Venetian Shipping', 22-3.

<sup>3</sup> Lane, 'Venetian Merchant Galleys', 195.

<sup>4</sup> Lane, 'Venetian Shipping', 24-7.

fluctuated to a maximum of 35, so as to preserve a total carrying capacity of approximately 16,000 tons, which was necessary for the provision of the city with grains and for the maintenance of its military potential.<sup>5</sup> These vessels were owned and operated by partnerships formed among merchant families. Although it would be wrong to disregard the role of Venetian ship-owners in this sphere, the aim of this study is to regard the ships themselves as the main protagonists. This will be done, among other means, by attempting to reconstruct the 'biography' of large round ships, from the moment one was launched until it was declared unseaworthy, and to do so against the background of political changes, military conflicts and economic turmoil at the time.<sup>6</sup>

By the end of the fifteenth century, shipping was carried out all year round, in times of peace as well as war.<sup>7</sup> This was made possible by significant technical improvements in shipbuilding, especially the progression from a ketch-rigged cog to the full-rigged carrack that had taken place during the second half of the fifteenth century.<sup>8</sup> According to Lane, sixteenth-century sailors would have but little to learn before taking charge of a ship in Nelson's days.<sup>9</sup> Voyages became faster and safer with the introduction of a better diversify of sails that improved manoeuvrability, and the improvement in the use of on-board artillery to increase security.<sup>10</sup> This, in turn, led to a reduction of insurance premiums, and of the size of the crew required for manning a ship.<sup>11</sup> The chronological framework of this study coincides with the appearance of this new type of large merchantman.

Private ships were not wholly exempt from state supervision. Venice attempted to safeguard its role as a main centre of shipbuilding by limiting the size of ships built in the Republic's overseas territories. Ships hoisting the Venetian flag had to be built according to specific measurements and specifications, and there were also regulations related to cargo categories and the carrying capacity of Venetian ships.

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<sup>5</sup> Ibid., 25-6; Lane, *Navires et Constructeurs*, 227: Table F.

<sup>6</sup> Scientific biographies of technological artifacts belong to a new genre in the history of science that focuses on objects (and even mathematical formulas or a molecular structure) rather than people. This approach, mostly influenced by the Actor-Network Theory, analyzes the means by which technological artifacts, social and political institutions, practices and actors are intertwined in a network of constitutive relationships. See Latour, *Re-Assembling the Social*.

<sup>7</sup> Lane, *Navires et Constructeurs*, 45.

<sup>8</sup> Ibid., 37-8.

<sup>9</sup> Ibid., 33.

<sup>10</sup> Musgrave, 'The Economics of Uncertainty', 10.

<sup>11</sup> Technical developments reduced the expenses of manning a ship by 50-70 percent. According to Hocquet, a lateener required 1 mariner for each 5 tons, when a full-rigger demanded 1 mariner for each 17.5 tons. Lane argues that although technical changes in the mid-fourteenth century reduced the amount of crew required to a half, the presence of pirates led to a ratio of 1 sailor for each 6 to 8 tons until 1580: Hocquet, *Denaro, navi e mercanti*, 147; Lane, *Navires et Constructeurs*, 37, 245.

Venice also set a minimum number of crew members per unit of capacity, and sometimes also obliged ships to carry artillery and sail in convoy (*muda*).

These attempts by Venice to centralize its control over maritime affairs met with limited success. By the end of the fifteenth century, maintaining a restrictive policy towards shipping left the city temporarily exhausted.<sup>12</sup> Moreover, at the beginning of the sixteenth century, the opening of a new route to India reduced the importance of the Mediterranean as a highway to the East, as well as Venice's hegemonic position in this sphere. Simultaneously, the republic lost a few of its holdings in the Peloponnese to the Turks. While these dramatic changes brought the decline of the merchant galleys system, the carrying capacity of Venice's merchant fleet was maintained and even increased, by offering subsidies for shipbuilding and relaxing the restrictions imposed on certain goods.<sup>13</sup> The multiplication of large and medium round ships compensated for the gradual disappearance of state-owned galleys.<sup>14</sup> Besides, the return to a policy that allowed more leverage for 'free voyaging' during the crucial early decades of the sixteenth century enabled Venetian ship-owners and merchants to contend with other Western fleets active in the same region.

## **2. Current State of Research**

In the early twentieth century, what was then considered to be the decline of Venice and its merchant marine was ascribed to the great oceanic discoveries and the consequent abandonment of the system of merchant galleys.<sup>15</sup> While Albert H. Lybyer (1915) may deserve pride of place in postponing the decline of the Mediterranean spice trade to later years,<sup>16</sup> it was only the work of Frederic C. Lane, first published in 1934, which granted this thesis substantial support through a careful assessment of the Venetian merchant fleet and its capacity over the centuries. Consequently, it became clear that the replacement of Levantine traders by the Portuguese was no more than a passing phase. Between 1535 and 1570 Venetian shipping enjoyed a golden age.<sup>17</sup> Lane stressed that the effects of the Portuguese discoveries on Venetian trade have frequently been misrepresented due to the failure to distinguish between long ships (galleys) and round ships.<sup>18</sup> Historians confused the growth or decline in the size of

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<sup>12</sup> Lane, 'Venetian Shipping', 27-31.

<sup>13</sup> Ibid., 26-7, 35; Romano, 'La marine marchande', 33-4; Lane, 'The Merchant Marine', 144-7; Hocquet, 'L'armamento privato', 420.

<sup>14</sup> Tucci, 'Venetian Ship-Owners', 286.

<sup>15</sup> Wiel, *The Navy of Venice*, 328-32; Manfroni, *Storia della marina italiana*, 152.

<sup>16</sup> Lybyer, 'The Ottoman Turks and the Routes of Oriental Trade', 584, 588.

<sup>17</sup> Romano, 'La marine marchande', 46.

<sup>18</sup> Lane, 'Venetian Shipping', 22.

galley convoys with that of Venetian shipping as a whole. The decline of merchant galleys, Lane concluded, was out of proportion relative to any decline in Venetian commerce in the first half of the sixteenth century.<sup>19</sup> In 1941, Gino Luzzatto also asserted that the consistency of maritime transport was supported by all kinds of sailing ships, whose contribution to the Venetian economy was greater than that of the galleys.<sup>20</sup> These findings brought about a re-evaluation of Venetian economy during the decades preceding the loss of Cyprus (1571). A collective scholarly enterprise, conducted through a series of international colloquies during the 1950s and 60s, resulted in a better assessment of the capacity of the Venetian merchant marine and its economic potential.<sup>21</sup> In addition, the works of Lane, John E. Dotson, Ugo Tucci and Jean-Claude Hocquet on the evaluation of weights and measures led to a better analysis of Venice's maritime economy in the early modern period.<sup>22</sup>

Jean-Claude Hocquet demonstrated how the salt monopoly was used by Venice to sustain its merchant shipping, through a system of credit for the construction of large merchantmen.<sup>23</sup> Ship-owners repaid their loans to the state by importing salt on their round ships, and they could also use it as ballast, leaving much space for other goods. Hocquet also demonstrated how salt was loaded in the vicinity of commercial ports or along the routes leading to them. In addition, new salt pans were developed to fit with changes in the commercial routes.<sup>24</sup>

Marine insurance was also a well-researched topic during the second half of the twentieth century. Florence Edler de Roover, Giuseppe Stefani, Karin Nehlsen-von Stryk and Alberto Tenenti were among those who highlighted its importance for maritime commerce, and demonstrated its evolution throughout the centuries. Marine premium insurance appeared in the mid-fourteenth century as a solution to merchants' need for security and to the need to spread the risks of maritime enterprise.<sup>25</sup> Based on insurance claims on shipwrecks between 1592 and 1609, Tenenti emphasized the importance of coastal trade in that period: Nearly half the ships that left Venice during these years were intended for ports along the Adriatic Sea. In addition, Tenenti

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<sup>19</sup> Lane, 'The Merchant Marine', 145-6.

<sup>20</sup> Luzzatto, 'Navigazione di linea', 53-7; Idem, *Storia economica*, 47-56.

<sup>21</sup> The international symposiums of maritime history were attended by scholars of various disciplines. Among the prominent works related to Venice's maritime economy: Heers, 'Le rôle des capitaux internationaux', 273-94; Lane, 'La marine marchande', 7-32; Romano, 'La marine marchande', 33-68.

<sup>22</sup> Dotson, 'Cotton and Lead', 52-62; Hocquet, 'Tonnages', 349-60; Idem, 'Squeri e unita', 313-54; Lane, 'Tonnage', 345-70; Idem, 'Stowage Factors', 293-4; Tucci, 'Un problema', 201-46.

<sup>23</sup> Hocquet, *Denaro, navi e mercanti*, 141-62.

<sup>24</sup> Hocquet, 'L'armamento privato', 400-3.

<sup>25</sup> De Roover, 'Early Examples', 172-200.

inferred that the increase in insurance claims during late sixteenth century indirectly reflects on the expansion of maritime activities in Venice, though not necessarily in favour of the San Marco flag.<sup>26</sup>

Michel Balard exposed the deterioration in seamen's conditions as a result of the nautical revolution of the late Middle-Ages and the changes in the types of ships used for commerce. By examining contracts between captains and seamen, he demonstrated how sailor's social status aboard galleys was manifested in their diet, wages, and the space designated for them.<sup>27</sup> Ugo Tucci's detailed study of the accounts of a merchant galley sailing to Flanders, based on the galley's notary books, also noticed the social differentiation among the travelling company. With respect to the material conditions aboard privately owned ships, Tucci noted that sailors working on private ships enjoyed relatively better conditions than those employed on state-owned galleys, since their status was anchored in ancient customs dating back to medieval times.<sup>28</sup> It is, however, doubtful that their social conditions were not affected by the evolution in shipping that took place during the fifteenth and sixteenth centuries. In recent years, the study of life aboard ships won increasing attention. Sources were re-examined using different approaches to describe the culture of the *gente di mare*, mainly on-board galleys. Lucia Greco vividly described the travelling company on-board such vessels, based on the 1470s manuscript of the priest-notary Giovanni Manzini: seizure of merchandize, disputes over property, smuggling, stealing, confiscations and death at sea were all an integral part of every voyage.<sup>29</sup> Two more recent publications—a collection of mariner prayers edited by Alberto Manodori, and the book of Michael of Rhodes, edited by David McGee, Pamela Long, and Alan Stahl—shed additional light on mariner life in the service of Venice.<sup>30</sup> Especially noteworthy is the diary of Alessandro Magno, a nobleman who had documented his travels in Venetian ships during the 1550s. This largely unexplored diary contains valuable information on the life aboard privately-owned ships.<sup>31</sup>

Greeks, Dalmatians, Istrians, Albanians and Montenegrins were involved for many centuries in Venetian maritime trade. Georgios Leontaritis gauged the growth and activity of Greek merchant shipping from 1453 until 1850;<sup>32</sup> Ugo Tucci

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<sup>26</sup> Tenenti, *Naufraques, corsaires*, 24.

<sup>27</sup> Balard, 'Biscotto, vino e topi', 243-54.

<sup>28</sup> Tucci, 'L'alimentazione', 602, 606; Lane, 'Wages', 15-43; Tenenti, *Cristoforo da Canal*, 77, 101-2.

<sup>29</sup> Greco, 'Galeotti, ufficiali e mercanti', 165-85.

<sup>30</sup> Manodori, *La preghiera del marinaio.*; Rhodes, *The Book of Michael of Rhodes*.

<sup>31</sup> Magno, *Voyages (1557-1565)*.

<sup>32</sup> Leontaritis, 'Eliniki Emporiki Naftilia', 13-56.

highlighted the contribution of Greeks to Venice's maritime labour force;<sup>33</sup> Gerassimos Pagratis stressed the intense traffic in Corfu's port under Venetian rule in the first half of the sixteenth century, demonstrating that Corfiots not only sailed to the surrounding Greek region, but have traded as far as eastern Mediterranean.<sup>34</sup> Finally, Lovorka Čoralić described the life of Croatian ship-captains and ship-owners within the Croatian immigrant community in Venice.<sup>35</sup>

Technical studies related to shipbuilding can be traced back to the nineteenth century. In 1840, Auguste Jal published his *Archéologie Navale*, which described the features of various ship types. Although Jal often misinterpreted the ships' correct measurements, causing much confusion for later studies, he highlighted the features of the nautical technological revolution that took place during the Renaissance, and his contribution is well acknowledged up to the present day.<sup>36</sup> Archaeological research on shipbuilding is often innovative, yet does not make its way into the mainstream history of Venetian shipping: Such are the studies of Landström (1968), Kreutz (1976) and Bonino (1978), which focus on types of rigging, handling sails and manoeuvring techniques under sail.<sup>37</sup> In addition, the works carried out in the Institute of Nautical Archaeology in Texas since the 80s, which mainly deal with North-European fleets, cover various aspects of ship construction and operation, such as the development of bilge pumps, sanitary facilities aboard ships, and various techniques used to careen a ship, which are also relevant to Mediterranean shipping.<sup>38</sup> Despite their focus on the Middle Ages, most useful are also Tullio Vidoni's reconstruction of the operational aspects of a medieval ship on its way to the Levant, based on the diary of Roberto Sanseverino,<sup>39</sup> and the work of Lillian M. Ray, who used medieval iconographic sources in order to reconstruct the diverse rudders, sails, rigging and anchors that were used in different types of ships visiting the Venetian lagoon at that period.<sup>40</sup>

The re-established importance of private ships in the history of the Venetian merchant fleet did not diminish the flow of studies on merchant galleys during these

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<sup>33</sup> Tucci, 'I Greci nella vita marittima', 243-55.

<sup>34</sup> Pagratis, 'Ships and Shipbuilding', 240-2.

<sup>35</sup> Čoralić, 'Traces of Croatian Ship-Captains', 143-82.

<sup>36</sup> Jal's *Glossaire nautique* from 1848 was first revised in 1970, and continued since then under his name. See further discussion in Jal's ships: Jal, *Archéologie navale*, II.; Carr Laughton, 'Roccafotis', 267-78; Dotson, 'Jal's Nef X', 161-70.

<sup>37</sup> Landström, *The Ship.*; Kreutz, 'Ships, Shipping', 79-109; Bonino, 'Lateen-rigged', 9-28.

<sup>38</sup> Oertling, *Bilge Pumps.*; Simmons, *Vulgar Tubes.*; Goelet, *Careening and Bottom maintenance*. Hocquet seems to be the only historian to consider the effects of erosion on a ship investment in the Venetian context: Hocquet, *Denaro, navi e mercanti*, 142-3.

<sup>39</sup> Unfortunately his doctoral dissertation remains unpublished: Vidoni, *Roberto da Sanseverino*.

<sup>40</sup> Ray, *The Art and Archaeology*.

years.<sup>41</sup> Two recent works are that of Doris Stöckly, published in 1995, and that of Claire Judde de Larivière, published in 2009—both considered cutting edge in this field.<sup>42</sup> Arguably the most comprehensive work to encompass current knowledge on Venetian shipping, with greater emphasis on private ships, is the volume dedicated to the sea (*Il Mare*) in the series *Storia di Venezia*, covering topics such as maritime magistracies and legislation, ship-owning, and investment in shipping, maritime insurance, shipbuilding, navigation, life aboard ships, and more.<sup>43</sup> However, to date, only two monographs dedicated to Venice's private shipping are based on extensive archival research: Lane's *Venetian ships and shipbuilders of the Renaissance*, updated in the French addition of 1965, which, however, also deals with galleys and the organization of the arsenal; and the second volume of Hocquet's *Le sel et la fortune de Venise* (1978-9), which deals with the contribution of maritime transport of bulky materials to Venice's economy.

Since estimating the role and contribution of privately-owned ships to the Venetian economy has to rely on a wide spectrum of sources, their history can be considered largely unexplored. The present work will try to fill this lacuna, by shedding more light on the operation of Venetian private ships, during a period of crisis, followed by an unstable recovery of Venice's maritime economy.

### **3. Research Questions and Basic Premises**

3.1 What was the legal status of ships sailing under Venetian flag, what were the regulations relevant for large ships and to what extent were they enforced and/or respected? Various restrictions were imposed by Venice on large ships, such as those prohibiting the unloading of imported cargoes (or certain categories of goods) in any Adriatic port except Venice; the requirement by Venetian merchants to load all goods designated for Venice on Venetian ships;<sup>44</sup> the obligation to sail in convoy; the requisite to arm the ship with canons and fighters; and the restriction (imposed between 1435 and 1514) to carry spices only if accompanied by galleys.<sup>45</sup> Further regulations regarded the number of crew members required to serve on merchant vessels. Scholars have attempted to clarify the extent of state intervention in the

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<sup>41</sup> Prominent publications on Venetian galleys: Rawlinson, 'The Flanders Galleys', 145-68; Luzzatto, 'Navigazione di linea', 1-36; Sottas, *Les messageries maritimes.*; Tenenti and Vivanti, 'Le film', 83-6/maps; Lane, 'Venetian Merchant Galleys', 193-226; Guilmartin, *Gunpowder and Galleys.*; Beeching, *Galley at Lepanto.*; Gardiner and Morrison, *Age of the Galley.*; Guilmartin, *Galleons and Galleys.*

<sup>42</sup> Stöckly, *Le Système de l'incanto.*; Jude de la Rivière, *Naviguer, commercer.*

<sup>43</sup> Selected articles from this volume are included in the bibliography.

<sup>44</sup> Hocquet, 'L'armamento privato', 397, 400; Romano, 'La marine marchande', 49-50.

<sup>45</sup> Lane, 'Venetian Shipping', 23.

operation of private shipping.<sup>46</sup> However, no systematic reconstruction or analysis of these regulations, considered in their specific historical context (especially for the period under investigation) is available, and it is also unclear to what extent they were heeded by ship-owners and operators.<sup>47</sup> For example, recent studies have shown that the obligation to transport all maritime trade through Venice was implemented only partly and selectively. It would be necessary to enquire in what ways Venice was trying to control the operation of its merchant vessels beyond the seas during these decades, and to what extent did it succeed in these efforts.

3.2 Who were the owners and operators of Venetian private ships? Historians have often referred to the withdrawal of patricians from direct involvement in shipping and international trade during the early modern period.<sup>48</sup> It is claimed that whereas at an earlier period investments in land were a form of insurance, secondary to maritime activities, they later began to absorb trade profits.<sup>49</sup> It has also been argued that despite frequent and decisive state subsidies and loans for ship-building, nobles were already dropping out from trade during the first half of the sixteenth century.<sup>50</sup> Yet the extent of this phenomenon in the sixteenth century and the rhythm of its development have not been thoroughly examined. Likewise, it is not entirely clear to what extent and in what ways did other groups, such as the Venetian *cittadini* and Venetian subjects from the Republic's overseas colonies, participate in the shipping industry during those years.<sup>51</sup> Since the ownership of large vessels was normally divided between several partners, it would be necessary to examine the composition of such partnerships. With regard to the captains (*patroni*) of merchant vessels, it is intended to investigate to what extent did the traditional model of a captain who was also one of the owners (often a patrician) survive into the sixteenth century? Could general trends be detected with respect to the identity of ship-owners and ship-captains around that period?<sup>52</sup>

3.3 Is it possible to gauge the profitability of ship-owning? During the period covered by this study, the construction of a large ship could require an investment of between

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<sup>46</sup> Lane, 'Venetian Merchant Galleys', 194-5, 196 cit. 4, 199, 201; Luzzatto, *Storia economica di Venezia*, 48; Hocquet, 'L'armamento privato', 397.

<sup>47</sup> On the difference between written and formal law, see Zordan, 'Le leggi del mare', 627.

<sup>48</sup> Tucci, 'The Psychology of the Venetian Merchant', 348, 356; Idem, 'Venetian Ship-Owners', 284.

<sup>49</sup> *Ibid.*, 350.

<sup>50</sup> See legislation on granting of loans for round ships in the period covered: Tucci, 'Venetian Ship-Owners', 283-4; Woolf, 'Venice and the Terraferma', 188-9.

<sup>51</sup> *Ibid.*, 283-5; Hocquet, 'L'armamento privato', 430.

<sup>52</sup> Based on a list of ship-captains in charge of large ships of over 300 tons (500 *botte*) in 1558, Hocquet has demonstrated that half the list consists of nobles while the rest were non-nobles or of unknown origin: Hocquet, 'La gente di mare', 482.

16,000 and 35,000 ducats.<sup>53</sup> Besides the initial expenditure, ship-owners had to face a long list of on-going expenses: insurance premiums, port taxes, maintenance, repairs, payment of salaries and creditor's interests. These costs, as well as the risks involved in operating ships, urged merchants to unite their capital and establish partnerships.<sup>54</sup> While other studies treated the procedures of private investment in ships, and the extent of state intervention in ship-building by granting entrepreneurs loans for building large ships,<sup>55</sup> other questions remain unanswered. How often did a ship change hands? How consistent was its route and business? Can specific shipping activities be considered as more remunerative than others? And what were the characteristics of trade that enabled it to cope with predicaments and disasters?

3.4 What technical considerations were involved in ship operation? The life expectancy of ships during the early modern times was about 10 years, or up to 13 for those that 'with the help of God or human merit' managed to avoid all dangers, to quote Hocquet.<sup>56</sup> Deterioration is a major problem of vessels to this day. In the age of wooden ships, the case was even worse, as from the moment of launching, vessels were continuously eaten by shipworm (*Tredo navalis*). Consequently, the invested capital also devaluated. Hocquet has calculated that, taking the need for renovation and replacements of materials into consideration, there was an annual devaluation of 8-15% on the capital.<sup>57</sup> While a ship was en route it required constant attention to matters of maintenance, cargo balance and arrangement, loading and unloading, utilization of winds and finding adequate berth in ports. How did technical constraints integrated in the business of running a large ship, and how they were confronted?

3.5 What were the characteristics of life on-board? What was the extent of continuity in this occupation? Did sailors frequently skip between ships? According to formal requirements during the fifteenth and sixteenth centuries, a large merchant ship enrolled one person for every 6 tons (10 *botti*).<sup>58</sup> The travelling company was socially, religiously and ethnically heterogeneous, and consisted of sailors, officers, soldiers, artisans, nobles, merchants and others. Information regarding the daily life on-board private ships is scarce, and relevant sources are dispersed and sporadic.<sup>59</sup> This study

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<sup>53</sup> Hocquet, 'L'armamento privato', 428; Lane, *Navires et constructeurs*, 226.

<sup>54</sup> *Ibid.*, 428; Lane, 'Venetian Shipping', 37.

<sup>55</sup> Lane, *Navires et constructeurs*, 113-4; *Idem*, 'Family Partnership', 47-8; *Idem*, 'Wages', 26-30; de Roover, 'Marine Insurance', 191; Congdon, 'Private Venetian Ships', 63.

<sup>56</sup> Hocquet, *Denaro, navi e mercanti*, 142; see also appendix V in Lane's: *Ibid.*, 259-60.

<sup>57</sup> *Ibid.*, 147.

<sup>58</sup> Hocquet, 'gente di mare', 495; Lane, *Navires et constructeurs*, 37.

<sup>59</sup> For conditions on-board private ships, see Tucci, 'L'alimentazione', 601-4.

will attempt to complement this information through judicial records and early modern travelogues, with the aim of learning what were the social frameworks, forms of interaction, and patterns of routine life aboard ships in Renaissance Venice.

#### **4. Research Postulates and Tentative Answers**

Writing ships biographies might at first sound a little awkward. For a start, a ship is an object, and not a person. However following the life-cycle of a ship is similar in many respects to writing about the life of a person. In writing the narrative of an object, one must take into consideration the assembly of things that affected it. Hence, the research questions presented above can be regarded as referring to the various elements that shaped the narrative of Venetian private ships in Renaissance times.

The first postulate concerns the legal framework under which the ships operated. Finding out what were the laws and restrictions that governed ships carrying the San Marco flag is fundamental for the presentation of their actual 'life'. The laws that were enacted during these 60 years have to be systematically reconstructed according to a timeline.<sup>60</sup> In addition, a revision of legislative compilations and indexes (mostly dating from earlier and later periods), as well as a survey of cases that were brought to litigation in the various Venetian courts, will clarify to what extent these laws were imposed on round ships. It would be too hazardous to postulate anything in this respect at this early stage.

The identity of ship-owners and ship-captains: The creation of a database of privately owned ships will allow a better assessment of the social composition of the group of venetian ship-owners involved in this business during the first decades of the sixteenth century. Data retrieved from *V Savii alla Mercanzia*, *Officio del Sale* and other state offices has already been utilized for discovering the identity of ship-owners. However, according to Hocquet, the identity of the people involved in shipping is still to be further investigated.<sup>61</sup> As a working hypothesis, it can be proposed that the withdrawal of patricians from this sector was not a major characteristic of Venetian shipping during this period.<sup>62</sup>

With respect to the profitability of ship-owning: A comparative approach is required in order to gauge the impact of the Portuguese discoveries and the challenges

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<sup>60</sup> Ruggiero Romano attempted to organize into chronological lists the legislation on loans for shipbuilding in Venice and elsewhere, and the naturalization of foreign ships mainly in the second half of the sixteenth century: Romano, 'La marine marchande', 57, 61-2; see also Karpov's work on maritime legislation: Karpov, *La navigazione veneziana*, 188-91.

<sup>61</sup> *Ibid.*, 58-60, 63-8; Hocquet, 'L'armamento privato', 430.

<sup>62</sup> Romano was also not convinced that Italian nobles retired from shipping and trade before the second half of the sixteenth century: Romano, 'La marine marchande', 43.

that Venice had to face in the sphere of maritime trade. The chronological framework of this study enables such a comparison, at least in theory. But it is here postulated that more 'routine' factors might have had greater influence on the final results of a shipping enterprise, even during these decades of great changes: when a vessel was at sea, it operated according to a carefully-planned route, in order to take full advantage of every day the ship was in operation.<sup>63</sup> Many considerations determined the cycle of its business: supply and demand, the level of freight rates, costs of manpower, the availability of credit, insurance premiums and more. Reducing the scale of observation will allow demonstrating how these elements altered a ship's commercial potential. The judicial acts of the *Giudici di petizion*, who dealt with business disputes, will hopefully shed new light of these matters.

As for technical restraints and climatic hazards: these were no less responsible for determining a ship's course, particularly in the age of sail. The preoccupation of the *Collegio* with issues of refitting suggests that, although a ship could potentially be used on high seas for some 10 years, it is evident that after just two years of navigation it was in very bad condition and needed repair. However, ship-owners seem to have tended to postpone maintenance to wintertime by prolonging the interval between haulings. Ship biographies will further demonstrate how such considerations were integrated into their business activities.

With respect to the life aboard ships: Ships were also largely responsible for shaping people's lives, especially those who lived and worked on them. Limited space, harsh conditions, and unavoidable, continuous face-to-face contact constituted a unique social framework unparalleled by any other. Serving on a ship left sailors with little autonomy. Research in sociology presented life on-board modern merchant ships as a 'total institution', where work and residence are formally administrated. In fact, Ervin Goffman, who set the term 'total institutions' in the early 1960s, used the example of merchant ships as one variant of his definition.<sup>64</sup> Although his work has meanwhile been criticized, updated and in some spheres replaced, no alternative has yet been suggested with regard to the social conditions aboard merchant ships. Moreover, it is here postulated that in the age of sail, the nexus between climatic conditions and technology compelled greater extent of social control aboard ships. This study will further examine whether this sociological theory can be used to analyze human interactions on board merchant ships in the pre-industrial world,

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<sup>63</sup> Congdon, 'Private Venetian Ships', 63.

<sup>64</sup> Goffman, *Asylums: Essays on the Social Situation*. 4.

where social and economic institutions were quite different from those in our times. The relatively poorly explored documents from the *Giudici del forestier*, which include labour disputes between Venetian captains and foreign sailors, and documents from the *scuola* (fraternity) of *S. Nicolo dei Marinai*, integrated with information found in traveller's accounts, will hopefully provide evidence for the testing of this postulate.

Finally, in tracing case studies of well-defined smaller units, some new conclusions on larger questions might also emerge.<sup>65</sup> A general outline of the Venetian private merchant fleet was presented by Lane: A prolonged depression between 1488 and 1502, followed by a period of growth in shipbuilding, mainly after 1535, which reached its peak in the 1560s; then, a definite fall in ship construction occurred in the 1570s, following the War of Cyprus and the Great Plague.<sup>66</sup> Since Lane, no other researcher has attempted to approach the subject again. However, the techniques used by Lane to gauge the overall scale of the merchant fleet have brought him to an answer which is only partial or at least incomplete, as he himself suggested.<sup>67</sup> Lane's preoccupation with the ups and downs in the shipbuilding industry may have over-emphasized the role of shipyards in determining the number of ships afloat. Without reducing the importance of studies based on ship lists, a bottom-up approach might be able to present a more complete picture.

## **5. Sources**

5.1 Narrative Sources—diaries, travelogues and travel diaries, merchant correspondence and ship-logs: Diaries, contemporary chronicles, as well as merchant correspondence and ship logs (*Quaderni di bordo*), can illuminate aspects of everyday life on-board ships and challenges confronted at sea. Such sources are characterized by a more intimate and immediate style and are often closer to reality than laws and formal decisions.<sup>68</sup> The preliminary basis of this study is a database of ships that operated in the framework on the 37 years (1496-1533) covered by the diaries of Marino Sanudo and those of Girolamo Priuli, (1494-1512).<sup>69</sup> Other published sources with relevance to the present study are the commercial letters of the Venetian

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<sup>65</sup> See the works of Tucci and Arbel who analyze various components in the narrative of a ship: Tucci, 'Una nave veneziana', 711-26; Arbel, 'The Case of the Ship Girarda', 391-408.

<sup>66</sup> Lane, 'Venetian Shipping', 27-31, 37-8; Idem, *Navires et Constructeurs*, 255-6; Idem, *Venice*, 384-5.

<sup>67</sup> Lane, *Venetian Ships*, 239-40, 259-61; Idem, *Navires et Constructeurs*, 226-7, 253-6.

<sup>68</sup> On the value of such sources, see Lane, 'The Merchant Marine', 147; Cortelazzo, 'La cultura mercantile e marinaresca', 687-8.

<sup>69</sup> Priuli, *I diarii (1494-1512)*.

merchant Michele da Lezze (1497-1514);<sup>70</sup> the 53 letters written by Vincenzo Priuli, captain of the galleys of Flanders who was detained for two years in Southampton (1521-23);<sup>71</sup> the reports of a special ambassador to the sultan of Egypt between 1489 and 1490;<sup>72</sup> and the *Annales* published under the name of Domenico Malipiero (currently attributed to Pietro Dolfino) (1457-1500).<sup>73</sup> Some additional published sources, which are dated before or after the period under study, may contain valuable information and add a comparative dimension to the analysis. Such are the chronicles of Antonio Morosini (1404-33);<sup>74</sup> the diary of the Florentine Luca di Maso degli Albizzi, head of the Florentine galleys in 1429-30;<sup>75</sup> the log book of Giovanni Manzini, a priest-notary and chancellor on board Venetian ships and galleys between 1471-84;<sup>76</sup> the letters of the merchant Andrea Berengo, 1553-6; the diary of Alessandro Magno, who copied parts of his ship's log book between 1557-65;<sup>77</sup> and the log book of the ship *Giustiniana* in its voyage to Cyprus in 1567.<sup>78</sup> The database will be cross-checked with descriptions of pilgrims and other travellers on board Venetian ships around the same period. Traveller's diaries are also a valuable source of information on life on-board, as well as on navigational routes. A good portion of these diaries have already been collected and examined in my MA thesis.<sup>79</sup>

5.2 Archival Sources – official documents of state institutions in charge of maritime affairs (among other issues): Probably the most substantial source would be the day-by-day registers of the resolutions of the *Collegio* (a sort of council of Ministers of the Republic) in the period under study. The registers of the Senate decrees related to maritime affairs (*Senato Mar*) will be systematically examined for references to large ships. The few extant records from these years of the *Cinque Savi alla mercanzia*, a magistracy established in 1505 to regulate the activities of Venice's international trade, will also be useful. Judicial records, including those of the Court of the *Giudici del forestier*, responsible, among other matters, for cases related to maritime law and the working conditions of seamen, and those of the *Giudici di petition* and the *Consoli dei mercanti*, who handled cases related to partnerships and other business affairs,

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<sup>70</sup> A.S.V., Miscellanea Gregolin.; see also Braudel and Tenenti, 'Michiel da Lezze', 38-73.

<sup>71</sup> Priuli, *Lettere di Vincenzo Priuli*.

<sup>72</sup> Rossi, *Ambasciata straordinaria*.

<sup>73</sup> His chronicles were lately attributed to Piero Dolfino; see Neerfeld, *Historia per la forma*, 75-94.

<sup>74</sup> His chronicles were recently published in four volumes: Morosini, *The Morosini Codex*.

<sup>75</sup> Mallet, 'Diary of Luca di Maso'.

<sup>76</sup> Greco, *Quaderno di bordo*.; Idem, 'Sulle rotte delle galere'.

<sup>77</sup> Magno, *Voyages (1557 – 1565)*.

<sup>78</sup> *Viaggio per Cipro della Nave Giustiniana (1567)*.

<sup>79</sup> Gluzman, 'Between Venice and the Levant', 264-94.

will hopefully balance the normative sources, and reveal a more realistic picture of maritime life. Furthermore, based on information about certain disputes, some cases may well be traced in the records of the *Avvogaria di Comun* in civil matters, or to criminal court in sentences in this sphere. All these documents are kept in *Archivio di Stato* in Venice (A.S.V.).

5.3 Archival Sources—documents of non-official character, such as commercial letters, wills, contracts, other notarial acts and private family collections: The *Miscellanea Gregolin* includes a big collection of commercial letters that can range from a single document to several hundred letters or even a few ledgers.<sup>80</sup> The *Commissari* of the Procurators of San Marco is a collection of legacies' documentations, which often includes materials on maritime affairs. In addition, an attempt will be made to detect notaries that served the maritime milieu, so as to use their acts for our purpose. All these sources are kept in the *Archivio di Stato di Veneto* in Venice.

5.4 Iconographic sources—visual artefacts depicting maritime activities: Iconographic evidence is a valuable source for the study of shipbuilding, as Lillian M. Ray already demonstrated in regard to an earlier period.<sup>81</sup> However, such sources may also portray operational routines. Renaissance art books, museums and art-collections will be scanned to trace evidence for tricks of the trade.<sup>82</sup>

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<sup>80</sup> Tiepolo, *Guida Generale*, IV, 1133; Da Mosto, *Indice generale*, II, 262.

<sup>81</sup> Ray, *The Art and Archaeology*.

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