# *Spain's Northern Shipping Industry in the Sixteenth Century*

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In the late Middle Ages and the sixteenth century, the most important axis of Spain's European trade linked the ports of the eastern Cantabrian coast with northwest Europe, particularly the Low Countries, and carried goods surpassed in value only by those of the Indies trade. Providing the transportation of Castilian goods northward and northern goods on the return were the ships registered in the Cantabrian ports. The transport component of the trade is worthy of our attention both for its instrinsic importance and for its relative neglect in modern historiography. Historians have been attracted more often by the medieval trade of the Crown of Aragon in the Mediterranean or by the shipping of Andalusia and its dramatic connection with the Americas, partly because of the richer and more accessible documentation available in both cases. Such an imbalance deserves redress, and this article represents an effort to provide the needed balance. It surveys the structure of Spain's northern commerce through a description of the geography of the trade, an analysis of the sizes and numbers of ships involved, a discussion of the crews and officers, and an account of the relations between shippers and merchants. It concludes with an analysis of the increasing problems the shippers faced as the sixteenth

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century drew to a close and the importance of the northern trade eroded.

Three main components of the northern trade can be identified. The principal long-distance commerce was between the Cantabrian ports and northern Europe, with one pole the eastern Cantabrian ports and the other Flanders. When political conditions permitted, there was an active trade with English and French ports. Castilian exports to northern Europe included food products, iron ingots, and iron manufactures, and, above all, raw wool from Spain's transhumant flocks of Merino sheep. The wool was produced by the flocks owned by members of the famous and powerful association known as the Mesta; insured by members of the Consulado of Burgos; transported by shipowners of the Cantabrian ports; and delivered to the Castilian merchants resident in Bruges for distribution in Flanders or elsewhere in northwest Europe. There were two other components of the Cantabrian shipping industry, although they are of only peripheral interest for this study. One was whaling and fishing. From the Middle Ages Cantabrian seamen had begun to venture out into the Atlantic in search of ocean fish and whales. In the sixteenth century they had established coastal stations in Newfoundland and were wintering there fairly frequently.[1] The same ships were often used on the Newfoundland and northern European runs. Additionally, there was a vital local trade among the ports of the northern coast, extending to ports on the Atlantic coast of France, mainly devoted to foodstuffs and naval stores. Many northern shippers were involved in the Indies and Mediterranean trades as well, but that, too, is beyond the scope of this study.

[1] Selma Huxley Barkham, "The Basques: Filling a Gap in Our History between Jacques Cartier and Champlain," *Canadian Geographical Journal*, 96 (1978): 8-19; Selma Huxley Barkham, "Guipuzcoan Shipping in 1571 with Particular Reference to the Decline of the Transatlantic Fishing Industry", in *Anglo-American Contributions to Basque Studies: Essays in Honor of Jon Bilbao*, eds. W. A. Douglas, R. W. Etulain, and W. H. Jacobsen, Jr. (Reno, 1977).

The primary concern here will be the maritime activities in the ports where the major part of the Cantabrian shipping to northern Europe was concentrated — from Santander eastward to Fuenterrabía on the French frontier. Beyond Santander westward to Galicia, there were a few ports that shared in the trade, but the shippers of that region participated only infrequently.[2] To examine the region from west to east, the Castilian ports of Santander, Laredo, Santoña, and Castro Urdiales, often called the "Cuatro Villas", were involved in the trade, but because they were separated by hills and mountains from the Castilian hinterland, the restrictions of land transport limited the goods from the inland regions that reached them. Because of topography and the roads of the period, the Basque ports further to the east were more closely linked with Castile. Bilbao and its outlying ports carried a good deal of the Castilian trade, while the more easterly ports — those from San Sebastián to Fuenterrabía — shipped Navarrese goods as well as Castilian. Trade routes and topography were not the only determining factors; the physical configurations of the ports themselves helped to account for the volume of trade they carried. For example, Bilbao was favorably situated, but sandbars and the twisted course of the River Nervión placed a rather low limit on the size of ships that could be accommodated there with comfort. An eighteenth-century description of the port complex at the mouth of the Nervión indicates in general terms the sixteenth-century situation.

> Portugalete ... is the port for Bilbao and is two leagues distant from it. Vessels of three hundred tons can enter as far as the Ría de Olaveaga, which is half a league from Bilbao and which is the most secure anchorage in Spain. Smaller vessels of some one hundred tons

[2] There was a paucity of ships and shipping in the western Cantabrian region in the late Middle Ages. WENDY R. CHILDS, *Anglo-Castilian Trade in the Later Middle Ages*, (Manchester, England, 1978), p. 154. The same was true in the sixteenth century.

> can go upriver as far as the docks of Bilbao itself, and, if they are of flat construction [shallow draft] like the Dutch [vessels], up to two hundred tons.[3]

Bilbao and Portugalete were the heart of the northern port region, but only in part because of geographical location. Many of the ship owners of the coast resided there and maintained close connections with the merchant community centred in Burgos. Over the roads of the period, the trajectory from Bilbao to Burgos was the shortest and easiest connection between the inland regions and the coast. Bilbao was also at the heart of the shipbuilding region because it was located near the sources of timber and iron in the hills of Vizcaya. Besides Bilbao and Portugalete, the other Basque ports capable of accommodating large ships were Guetaria, Orio, San Sebastián, Pasajes, and Fuenterrabía.[4].

The other pole of the northern trade was "Flandes", as sixteenth-century Spanish documents called it. In fact, the region was larger than Flanders alone. It had commercial centres at Bruges in Flanders and at Antwerp in Brabant; both cities had important communities of Spanish merchants. As the legal staple, Bruges was still important for the wool trade, and it was the seat of the Castilian and Vizcayan consulados. Antwerp, however, had replaced Bruges as the commercial and financial capital of the region.[5]

[3] Archive of the Nuseo Naval (hereafter MN), Mss., vol. 2233, document (hereafter doc.), folios (hereafter fols.) 4-6. In the sixteenth century, ships were normally of shallower draft, so the port then could accommodate those of greater tonnages.

[4] Ibid.

[5] J. A. Van Houtte, "The Rise and Decline of the Market of Bruges," *Economic History Review*, 2nd series, 19 (1966): 29-47; Joseph Marechal, "La colonie espagnole de Bruges du XIVe au XVIe siècle," *Revue du Nord*, 35 (1953): 5-40; Joseph Marechal, "Le départ de Bruges des marchands étrangers" (XVe et XVIe siècles), *Annales de la Société d'Emulation de Bruges*, 58 (1951); 26-74) Hermann van der Wee, *The Growth of the Antwerp Market and the European Economy, Fourteenth-Sixteenth Centuries*, 3 vols. (The Hague, 1963); J. A. Goris, *Étude sur les colonies*

The ships and the seamen of the Cantabrian coast maintained the connections between the two poles. The northern shippers used a different mix of ship types from those of the Mediterranean and the Indies run. The galley, historically a Mediterranean type, was ill-suited for the rough Atlantic waters. Although Italians trading with northwest Europe in the late Middle Ages used the galley, and although the Spanish navy made attempts to use galleys against the Dutch rebels in the early seventeenth century, no northern Spanish shippers used them. Nor was the caravel used very often in the north, even though it appeared frequently in Andalusian ports in the sixteenth century. Galleons and hulks *(urcas)* did appear on occasion as components of the northern commercial fleet, but *urcas* usually were built elsewhere, and galleons usually were built for war or the Indies run.[6] The vessels constructed specifically for and customarily used on the Cantabrian coast were of four types: *naos, navíos, zabras,* and *chalupas.* The first two types were long-distance sailing ships; *naos* were typically larger and *navíos* smaller. *Zabras* and *chalupas* were small coastal vessels, and, of the two, *zabras* were large enough to make the run to Flanders. I have collected a set of inventories of ships present in northern ports at various times in the sixteenth century (Table 1). One particularly complete inventory, prepared in January and February 1571 by the royal agent Cristóbal de Barros, provides details about the numbers and types of ships in the ports from Santander to

*meridionales (Portugais, Espagnoles, Italiens) à Anvers de 1488 à 1567* (Louvain, 1923).

[6] Carla Rahn Phillips, *Six Galleons for the king of Spain: Imperial Defense in the Early Seventeenth Century* (Baltimore and London, 1986). Gervasio de Artiñaña y de Galdácano, *La arquitectura naval española (en madera): Bosquejo de sus condiciones, rasgos de su evalución* (Madrid, 1920), pp. 97-100. "Southern Europeans called northern full-rigged ships bretons, and also hulks." Richard W. Unger, *The Ship in the Medieval Economy, 600-1600* (London and Montreal, 1980), p. 95. On galleons used as cargo vessels, see ibid., pp. 258-59. On Spanish war galleys used in northwest Europe, see Randal Gray, "Spinola's Galleys in the Narrow Seas, 1599-1603," *Mariner's Mirror,* 64/1 (1978): 71-83.

Table 1
INVENTORIES OF SHIPS IN PORT, 1522-1589

| Place | 1522[a] (San Vincente) | 1540[b] (Cuatro Villas) | 1554[c] (New ships) | 1558[d] (Summer) | 1558[e] (December) |
|---|---|---|---|---|---|
| Fuenterrabía | | | | | |
| Rentería | | | | | |
| Pasajes | | | 3 naos | 6 naos | |
| San Sebastián | | | 6 naos | 3 naos (under construction) | 14 naos |
| Guetaria | | | | | |
| Orio | | | | | |
| Zumaya | | | | | |
| Deva | | | 4 naos | | |
| Motrico | | | | | 3 naos |
| Ondarroa | | | 3 naos | | |
| Lequeitio | | | | | |
| Bermeo | | | 3 naos | 5 naos (under construction) | |
| Bilbao | | | 10 naos | | 2 naos, 1 galleon |
| Portugalete | | | | | |
| Castro Urdiales | | 2 galleons | | 1 galeaza | 1 nao |
| Laredo | | 3 caravels, 1 chalupa | 2 naos | 3 urcas | 1 nao |
| Santoña | | | | 1 nao | 1 nao |
| Santander | | 4 galleons, 2 zabras, 20 pinazas | | | |
| San Vicente de la Barquera | 18 naos, 9 pinazas | | | | |

Table 1 (*continued*)

| Place | 1569[f] (January) | 1571[g] (July | 1572[h] | 1572[i] (June) |
|---|---|---|---|---|
| Fuenterrabía | | 3 zabras | 13 naos, 5 navíos, 8 zabras | |
| Rentería | | | 5 naos, 1 navío, 2 zabras | |
| Pasajes | | 4 galleons, 7 navíos | | 10 naos |
| San Sebastián | | | 10 naos, 7 navíos, 2 zabras | 6 naos |
| Guetaria | | 1 galleon | | |
| Orio | | | 5 naos, 1 navío | 2 naos, 1 navío |
| Zumaya | | 1 nao, 2 navíos, 2 zabras | 2 naos, 1 navío, 4 zabras | |
| Deva | | | 9 naos, 8 navíos, 1 galleon, 1 galeaza | 4 naos, 1 navío |
| Motrico | | | 4 naos, 4 navíos | 2 naos, 1 navíos |
| Ondarroa | | | 3 naos, 1 zabra | 1 naos |
| Legueitio | | | 7 naos, 1 galleon, 3 zabras | 1 nao, 1 nao |
| Bermeo | | | 1 nao, 1 zabra | |
| Bilbao | | | 9 naos, 9 navíos, 1 galleon, 2 urcas, 1 galeaza, 1 zabra | 5 naos, 1 navío |
| Portugalete | 14 naos, 12 navíos | | 12 naos, 24 navíos, 1 galleon, 3 zabras | 1 nao, 1 navío |
| Castro Urdiales | 1 nao, 4 navíos | | | |
| Laredo | 1 nao, 16 navíos | | | 2 zabras |
| Santoña | | | | |
| Santander | | | | 2 naos |
| San Vicente de la Barquera | | | | 27 chalupas |

Table 1 (*continued*)

| Place | 1574[j] | 1577[k] | 1588[l] | 1589[m] (Pasajes) |
|---|---|---|---|---|
| Fuenterrabía | | | 1 zabra | |
| Rentería | | 6 navíos | 1 nao | |
| Pasajes | | | | 12 naos |
| San Sebastián | | 16 navíos | 6 naos | |
| Guetaria | | | | |
| Orio | 1 nao, 6 navíos | | | |
| Zumaya | | 2 navíos | 1 nao | |
| Deva | | | 5 naos, 1 navío, 2 pataxes | |
| Motrico | | | | |
| Ondarroa | 1 nao | | | |
| Lequeitio | 1 nao, 7-8 navíos | | | |
| Bermeo | 7-8 navíos | | | |
| Bilbao | | 5 navíos | | |
| Portugalete | 4 naos, 10 navíos, 2 galeazas | 4 navíos | 2 navíos | |
| Castro Urdiales | 8-10 navios | | | |
| Laredo | 10-12 zabras | | | |
| Santoña | | | | |
| Santander | | 4 navíos | | |
| San Vincente de la Barquera | 50-60 chalupas | | | |

Source: [a] AGI, *Patronato, leg. 259, ramo 3*; [b] AGS, *Estado, leg. 48, fol. 208*; ibid., leg. 443; [c] AGS, *Guerra antigua, leg. 11, fol. 78*; ibid., *leg.* 206; [d] Ibid., leg. 67, fol. 203; [e] Ibid., leg. 67, fol. 238; [f] Museo Naval, Madrid, *Colección Navarrete*, vol. 22, part 1, number 33, pp. 224-25; [g] AGS, *Guerra antigua, leg. 75, fols.* 35, 39, 95; [h] AGI, *Patronato, leg. 259, ramo 42*; [i] AGS, *Guerra antigua, leg. 76, fol. 1*; [j] MN, *Coleccion Navarrete*, vol. 22, part 1, number 31, pp. 223-24; [k] Biblioteca Nacional, Madrid, Mss. 2811, fols. 164-70; [l] AGS, *Contaduría del sueldo, leg.* 280, fol. 672; [m] Ibid., leg. 280, fols. 700-700v.

Fuenterrabía. There were sixty-four *naos*, varying in size from 60 to 670 tons and averaging 298 tons. Ninety-seven *navíos* were listed, varying in size from 13 to 300 tons and averaging 57.5 tons. The fifty-seven *zabras* varied in size from 15 to 110 tons and averaged 32.5 tons. The even smaller *chalupas* were not enumerated in the documents.[7]

The northbound fleets typically included several varieties of vessels. Wool to Flanders was shipped customarily in two annual convoys. That in the fall of 1571 was accompanied by a royal armada, and the composition of the merchant contingent will give an indication of the vessels used. Of the thirty vessels making up the armada, ten were chartered by the crown: seven *naos*, ranging in size from 215 to 750 tons; two *zabras* of 24 and 50 tons; and one *pinaza*. The merchant vessels accompanying the royal fleet included eleven *naos* from 120 to 650 tons and averaging 300 tons, one *urca* of 130 tons, fifteen *navíos* from 35 to 90 tons and averaging 65 tons, and three *zabras* from 40 to 70 tons and averaging 53 tons.[8]

[7] Archivo General de Simancas (hereafter AGS), *Guerra antigua, leg. 75*, fol. 55 By the sixteenth century, the measurement of tonnages was no longer based on the capacity of the ships measured in wine casks (tuns). Rather, tonnage was determined by a formula containing three variables: length *(largo)*, height *(puntal)*, and width *(manga)*. AGS, *Contaduría mayor de cuentas, primera época, leg.* 1131. There were two tonnage measurements in use in Spain in the period: *toneles machos* and *toneladas*. "The *toneles machos* are larger than the *toneladas*, and there is a difference of 20 percent [which means] that a *nao* of 400 *toneles* will be of 480 *toneladas* ... Spanish ships when thay go in trade are counted by *toneles machos* and when they go in the armada they are measured ... in *toneladas*". AGS, *Estado, leg.* 441. Similar information is found in AGS, *Estado, leg.* 496, fol. 61. In the eighteenth and nineteenth centuries the measurements were done in a similar manner, but with some refinements. MN, Mss., vol. 439, doc. 1, fols. 1-3. For a discussion of tonnages, see Frederic C. Lane, "Tonnages, Medieval and Modern," *Economic History Review*, 2nd series, 17/2 (1964): 213-33. See also, Pierre Chaunu, "La tonelada espagnole au XVI et XVII siècle," in *Le navire et l'economie maritime du XV au XVIII siècle* (Travaux du Colloque d'Histoire Maritime, 1956) (Paris, 1957), pp. 75-80. Pierre Chaunu, *Séville et l'Amérique, XVIe-XVIIe siècle* (Paris, 1977), pp. 240-49; Huguette and Pierre Chaunu, *Séville et l'Atlantique (1504-1650)*, 8 vols. (Paris, 1955-1959): 1:292-322.

[8] Archivo de la Real Chancilleria de Valladolid, *Sección de Pleitos Civiles, Masas*, legs. 260-61; *Colección de documentso inéditos para la historia de España*, ed. Martín

The relatively small size of the ships is striking and can be explained only by the preferences of the commercial operators. Throughout the sixteenth century, the northern merchants and shippers on the one side and the crown and its officials on the other carried on an argument over ship sizes that was never resolved. The commercial shippers of the northern coast were constrained by geography and topography, because the northern ports in Spain and the ports in the Low Countries could comfortably accommodate only vessels of three hundred tons and below, and the shippers often preferred even smaller ones of one hundred to two hundred tons. Around midcentury the Consulado of Burgos made a detailed case for favouring smaller ships, and in the 1570s the Consulado of Bilbao put forward a similar set of arguments. They attacked the preference for larger ships on grounds of their own needs. In their opinion, smaller ships were cheaper to operate and insure. They could be loaded and unloaded more quickly. Goods in several small ships could be carried more cheaply and at less risk than in one large ship. Smaller ships drew less water and could get over sandbars more easily. This was especially important on the approaches to Bilbao, Bruges, and Antwerp. They could get closer to their destinations. Small ships could, for example, anchor in the Flemish port of Sluys, the outer port of Bruges, rather than having to unload on to lighters in the more distant Zeeland ports. Fewer sailors were needed when smaller ships were used, because small vessels could make more trips in the course of a year. In contrast, larger ships performed less well in practically every commercial situation, and if larger ships were lost, the costs were far greater to crew, owners, shippers, and insurers.[9]

Fernánde de Navarrete *et. al.*, 112 vols. (Madrid, 1842-1895): 36:5-8; Cesáreo Fernández Duro, *La armada española*, 9 vols. (Madrid, 1895-1903): 2:266-68.

[9] AGS *Diversos de Castilla, leg.* 40, fol. 56. Cristóbal de Barros to the king, in Museo Naval Madrid, *Colección de documentos y manuscriptos [sic]*, compilados por [Martín] Fernández de Navarrete (reprinted Nendeln, Liechtenstein, 1971), vol. 22,

In contrast to the position of the merchants and shippers, the crown needed large commercial vessels so that it could draft them into service during wartime, and during Philip II's reign it preferred ships of six hundred tons and above. To encourage the use of larger ships, the crown at times caused them to be given priority in the loading of goods for export. The earliest mention of this that I have found was issued by the government of Queen Juana in 1511, stating that, of the ships in a given port when loading was carried out, the larger ships would receive the loads, and that small ships could be loaded only if no large ship was available. Masters of large ships could even have previously loaded cargoes from small ships transferred to their own vessels. Merchants or their factors could be fined if they failed to comply with the regulation.[10] This rule always must have been unpopular, because we can find objections to it well into the seventeenth century. Exceptions were granted periodically. In 1532, because of the expensive port works undertaken by San Sebastian — building a new mole at a cost of 5,200 ducats — the government of Charles V permitted a six-year exemption of "la pragmática de cargos de menor a mayor" for the city.[11]

In an attempt to have its requirements met, the crown offered subsidies for the construction of larger ships. In the mid-1560s Philip II charged Cristóbal de Barros with several specific tasks to encourage the construction of larger ships. He was to administer a fund of ten million *maravedís* to be loaned to ship builders, free of interest, at a rate of two ducats per ton

part. 1, pp. 190-92. The insistence on the use of smaller ships made economic sense and was shared by other western Europeans. See UNGER, *The Ship in the Medieval Economy*, pp. 203-204, 265. These arguments over size applied in the sixteenth century and then only to the Cantabrian coast. Merchant vessels for the Indies in the same period tended to be larger. In the early seventeenth century there was a relative decline in the size of the average Spanish vessel, followed by a relative increase in the second half of the seventeenth century. ARTIÑAÑA, *Architectura naval española*, pp. 73, 104-107.

[10] MN. ,ss., vol. 444, doc. 15, fols. 542-44v.

[11] Ibid., ,ss., vol. 2136, doc. 15, fols. 71-72v.

for ships over three hundred tons, on condition that the loans be repaid when the ships were sold. In addition, such ships were free of *alcabalas* (sales taxes).[12] Nevertheless, smaller ships continued to be built, and the debate over ship sizes reached a peak in the 1570s. By then Barros had been administering the royal construction loans for over a decade and he had an expert knowledge of the realities of the business of shipping. As crown agent, whose primary reponsibility was to supply large fighting ships, Barros set out to counter the arguments of the shippers. First, he said that 600-ton vessels were the key to naval strength and argued that one 600-ton ship was much superior to two of 300 tons. The English and the French had large ships, and for Philip II to build equivalent ones entirely at crown expense would be far more costly. Barros even doubted the arguments that goods were more effectively carried in smaller ships. Because smaller ships had lower sides and fewer decks, he said, they protected the goods "from the water of the sea and sky" less well than larger ships. Barros said that a 600-ton ship took only ten more days to load than one of 300 tons and could be unloaded in about the same time. More time was often lost in arguments between the merchants and the shipmasters. Barros did not endorse the argument about the sandbars, saying that the Flemings had far more shallow banks in their neighbourhood and still built large vessels.[13]

Despite the efforts of the crown and its agents, the debate was never resolved in the sixteenth century. We can see this easily in the ships assembled for the Great Armada of 1588, only

[12] AGS, *Guerra antigua, leg.* 71, fols. 112-13, 122-23; Estanislao Jaime de Labayru y Goicoechea, *Compendio de la historia de Bizcaya*, Vol. 4 of *Historia general del Señorío de Bizcaya* (Bilbao, 1900, reprinted 1971), pp. 210, 368. Until 1563 the amount of this loan was 10,000 *maravedís* per each 100 tons for ships larger than 600 tons. After that date the same rate was applied to vessels in the 300 to 600 ton range. Barros, in Navarrete, *Colección*, 22:194. By 1582 the rate was 6 ducats per ton, or 22,500 *maravedís* per each 100 tons. Archivo General de Indias (hereafter AGI), *Patronato, leg.* 260, no.1, *ramo* 8.

[13] Barros, in Navarrete, *Colección*, 22:192-205.

partially composed of large vessels, despite nearly a century of royal encouragement for larger ships and despite the loan programme begun in the 1560s (Table 2). Thus the "enterprise of England", for which the crown expended so much effort, still had to make do with small ships in its Guipuzcoan and Vizcayan components. This can be explained only by the preferences of the Castilian merchants and Cantabrian seamen. They knew the realities of their trade and the circumstances of their ports, and therefore they kept building and buying smaller ships, despite the inducements of the crown. Neither royal pressure nor royal subsidies could overcome the convictions of

Table 2
COMPOSITION OF GREAT ARMADA OF 1588

| Fleet Component | Ships | Largest | smallest | average (in toneladas) |
|---|---|---|---|---|
| Squadron of Portuguese galleons | 10 galleons | 1050 | 352 | 740.5 |
| | 2 zabras | 166 | 166 | 166 |
| Armada of Vizcaya | 10 naos | 1160 | 350 | 625.2 |
| | 4 pataxes | 96 | 70 | 78.8 |
| Armada of Castillian galleons | 10 galleons | 750 | 250 | 541 |
| | 4 naos | 882 | 652 | 789 |
| | 2 pataxes | — | — | — |
| Armada of Andalusian ships | 1 galleon | 810 | — | 810 |
| | 1 urca | 900 | — | 900 |
| | 8 naos | 1150 | 569 | 822.8 |
| | 1 patax | — | — | — |
| Armada of Guipuzcoan ships | 9 naos | 1200 | 291 | 718 |
| | 1 urca | 500 | — | 500 |
| | 2 pataxes | — | — | — |
| | 2 pinazas | — | — | — |
| Armada of Levantine ships | 10 naos | 1294 | 666 | 770.5 |
| Armada of urcas | 23 urcas | 750 | 160 | 446.6 |
| Pataxes and zabras | 16 pataxes | — | — | — |
| | 7 zabras | — | — | — |
| Galeasas of Naples | 4 galeasas | — | — | — |
| Galleys of Portugal | 4 galleys | — | — | — |

Source: Enrique Herrera Orio, S.J., "La Armada Invencible; Documentos procedentes del Archivo General de Simancas", *Archivo Histórico Español*, 2 (1929): 384-404.

the merchants and shippers that smaller ships better served their economic interests.

The men who built and operated ships on the northern coast have left an extraordinarily rich documentary trail in Spanish archives, enough material to permit a prosopographical study of them. I am already able to offer some generalizations. The tendency was for ship owners to be closely connected with the sea; they were not usually landbound investors. They made their homes in the ports — Bilbao and Portugalete particularly. Few inland owners figure in the documents, and these were often citizens of nearby Basque towns. Many of the listings I have found indicate both master and owner for each ship, and frequently the owners captained their own ships. The more successful among them owned more than one vessel. They tended to specialize in one aspect of the trade, but I have found several among them who had wide interests: the northern trade, Atlantic fishing, Mediterranean and Indies ventures. In the wool trade, as we have seen, the ship owners chartered their vessels to inland merchants, mainly to members of the Consulado of Burgos.[14] The wool trade aside, for the commerce in other goods — foodstuffs and iron ingots and manufactured iron products — my impression is that they may well have acted as merchants on their own behalf, but this assertion must remain tentative until other records are examined.

Detailed information about the masters and sailors resident in the Cantabrian ports in the 1570s and even indications of their individual personalities and qualifications are available from the archival documents. In the ports from Fuenterrabía to Santander there were over two thousand sailors and soldiers, in addition to the specialized pilots and masters. Fuenterrabía's most important seaman was Sancho de Arquira, fifty years old, a captain with long experience who could be trusted with any

[14] Manuel Basas Fernández, *El Consulado de Burgos en el siglo XVI* (Madrid, 1963), pp. 156-65.

command. He had amassed considerable wealth and enjoyed an annual income of eight hundred ducats. He owned three ships; two of them were engaged (at the time of the surveys) in corsairing activities, and he had taken the third to Seville to be sold there. Fuenterrabía was also the home of Gerónimo de Gijón, at forty-five a sound mariner and potential fighter, and Tomás de Landagurrica, forty years old and also a sound mariner but gentle and not suited for independent command. The principal mariner in Pasajes was the captain Joanot de Villaviciosa, sixty-two, experienced in command as well as navigation. His brother, Joanecho de Villaviciosa, was younger at forty-four and was a sound mariner, but he was judged to be fit only for subordinate roles. Two other brothers, Juan and Martín de Navejas, were good sailors and pilots in their thirties. Miguel de Oquendo was the most important captain in San Sebastián. With more than 500,000 ducats, he was rich and famous at forty-five. He had voyaged to Newfoundland and owned the best ship on the coast. There were at least four other well-qualified masters in San Sebastián. The port of Orio had several masters with experience on the Newfoundland run. In Zumaya, Deva, and the remaining ports of Guipúzcoa, nearly thirty masters and pilots were available. Many of the Deva masters had learned their skills on voyages to Newfoundland. Among them Andrés de Alzola, forty-five, was a good captain, soldier, and mariner, but he had lawsuits pending against him and was deemed to be unsuited for independent command. In Portugalete there were seven sound captains. Two of them were admirably suited to command: Juan de Ugarte, who was sixty, rich, and a ship owner; and Sancho de Archiniega, also sixty, who had commanded an armada to Florida and who was described as an outstanding person for command. Bilbao was home to Martín de Bertendona, forty-five, who may not have been a pilot but was spirited and had great determination. Martín de Sartucha (or Sartuchi) was an outstanding navigator but lacked the authority to com-

mand. Laredo had five ship masters available, but beyond Laredo to the west as far as Galicia, there were no suitable masters.[15]

Masters, of course, needed ships to operate, and several methods of acquiring vessels were available to them, ranging from inheritance, through purchase of existing ships, to the construction of new ones. Family connections were important in the maritime business, and a ship owner could receive his vessel from a relative as a gift or bequest. A captain less favoured by family ties might have accumulated sufficient capital and credit in the service of others and become an owner in his own right. The archives have not yet divulged the financial intricacies of the purchase of ships by private owners. Shipbuilding contracts are extant, but they specify only that a certain type of vessel was to be built to specified dimensions and paid for at a determined rate per ton.[16]

From royal accounts, on the other hand, a great deal can be learned about the construction of ships on the northern coast. One set describes the twelve galleons (or *galizabras*) built in Bilbao in 1568 and 1569 for service in the Indies under the admiral Pedro Menéndez de Avilés. Juan Martínez de Recalde, a citizen of Bilbao and a royal official *(criado)*, received charge of the financial arrangements.[17] His global figures for the construction of the twelve galleons and a ship's boat for each are given in Table 3.

Once the vessel was built and acquired by its owner, the next task was to find a cargo. If wool for the Consulado of Burgos was his load, the master journeyed inland to Burgos to arrange shipping contracts once his vessel had been approved in port by an agent of the Consulado. The master at the same time

[15] Navarrete, *Colección*, 22:231-38.

[16] Selma Barkham kindly showed me copies of shipbuilding contracts she found in Basque notarial archives. For a Spanish treatise on shipbuilding, written in 1611, see Tomé Cano, *Arte para fabricar y aparejar naos*, ed. Enriwue Marco Dorta (La Laguna, 1964).

[17] AGI, *Contadurías generales, leg.* 459, *ramo* 1, *leg.* 462, no. 2, *ramo* 2.

Table 3
ACCOUNTS OF JUAN MARTÍNEZ DE RECALDE FOR THE CONSTRUCTION OF TWELVE GALLEONS, 1567-69

| Materials | mrs. |
|---|---|
| Planks and other wood | 4,027,840 |
| Masts | 10,704 |
| Canvas, sail thread | 687,527 |
| Sails | 36,000 |
| Rigging | 2,037,527 |
| Hemp | 173,829 |
| Anchors, iron hardware | 2,348,408 |
| Pulleys | 80,784 |
| Whale oil | 20,400 |
| Total | 9,423,019 |
| **Salaries** | **mrs.** |
| Carpenters | 1,997,904 |
| Caulkers | 437,572 |
| Makers of belaying pins and other parts | 147,721 |
| Sailors and specialists | 831,650 |
| Sailors and labourers | 77,503 |
| Messengers | 9,375 |
| **Transport** | **mrs.** |
| Delivery of materials by boats and carts | 552,813 |
| Oxen teams to launch completed vessels | 37,160 |
| Total | 13,484,717 |

Source: AGI, *Contadurías generales, leg.* 459, *ramos* 1-2; *leg.* 548, no. 9.

promised to return with goods on the voyage back from Flanders. All wool ships generally travelled together in two annual convoys, one ordinarily in March and the other in September, with fifteen to twenty vessels typically involved. The crown specified the arms for each ship, and the size of the ship determined the size of the crêw. Heavily loaded, the ships carried the wealth, as the Consulado officials once put it, of Burgos, Segovia, Castrojeriz, and Palenzuela. The ships transported the wool below decks in sacks with owners indicated by special painted marks very like cattle brands.[18] In 1539-40, when the crown

[18] *AGS, Gerra antigua, leg.* 71, fols. 112-13, 122-23; Basas Fernández, *Consulado*, pp. 239, 244, 297-98.

wished to send troops to Flanders and intended to requisite wool ships for that purpose, a solution was to carry the troops and their supplies on the decks. The wool freighting charges were to be paid by the Consulado. Thus the crown could get by more cheaply on carrying the troops and the merchants would have their wool delivered as planned.[19] I suspect that in 1539 this procedure was unusual, if not unprecedented, but later it seems to have become common. We find Pedro Menéndez de Avilés complaining about it in 1558 while he was preparing his armada. He feared that his men would be subject to illness because they had no protection from the sun's heat and no place to shelter themselves to dry their clothes in case of rain.[20]

As the ships were taking on their cargoes, crews had to be assembled and provisions loaded, The crews were often young and usually came from coastal and nearby towns. The first-class seamen were called *marineros*, and they were joined by lower ranking sailers called *grumetes* and by *pajes*, who were young deckhands learning the ways of the sea through apprenticeship. For merchant vessels carrying wool, contracts specified a certain number of sailors per each one hundred tons of the vessel's burden. For a royal armada in 1553 composed of chartered merchant vessels, there were, for each one hundred tons, 12.5 *marineros*, 4.125 *grumetes*, and 1.5 *pajes*. For example, a three-hundred-ton ship would be authorized to carry 37 or 38 *marineros*, 12 or 13 *grumetes*, and 4 or 5 *pajes*. This would be a fairly large number, and perhaps the crews were normally smaller. In the 1580s, royal contracts called for fourteen crew members for each one hundred tons.[21] The masters were paid for an authorized number of mariners, but they could easily sail with

[19] AGS, *Gerra antigua, leg.* 15, fol. 45; AGS *Estado, leg.* 48, fol. 203. Alvaro de Bazan also suggested the use of wool ships for armada duty in 1543. AGS, *Estado, leg.* 62, fol. 61.

[20] AGS, *Estado, leg.* 132, fol. 152.

[21] AGS, *Guerra antigua, leg.* 49, fols. 343-44, for 1553; AGI, *Patronato, leg.* 260, no.1, *ramo* 8, for 1582.

fewer men and pocket the difference in salaries. Salary figures crop up sporadically in the documents. In the decade of the 1550s *marineros* were paid at a rate of 800 to 940 *maravedís* per month, *grumetes* at 500 to 625, and *pajes* at 266 to 375. For comparison, masters received 2,500 *maravedís* per month, and pilots, 2,000 to 2,500.[22]

Once the officers and sailors were on board, their daily rations had to be provided. Royal documents specified the diet of the crews, diet which probably corresponded closely to that provided on the merchant vessels in the same period. Table 4 shows two weekly menus. A word of caution is in order. Our best evidence on the crews and their diet on board comes from the accounts of vessels chartered or requisited by the crown. Such documents may not necessarily reflect the usual conditions on merchant ships, or perhaps even on the royal ships, because graft or padded accounts, or both, may have distorted the accounts. A particularly valuable set of documents, the accounts of the *licenciado* Juan Pérez de Ercilla, give day-to-day details for the provisioning of the twelve galleons commissioned by Juan Martínez de Recalde mentioned previously. As the twelve ships neared completion, Pérez de Ercilla secured a long list of supplies from the ships' chandler María de Oyaçabal: twelve dozen plates, a quintal of tallow and a quintal of tallow candles, twelve lanterns, twenty-four pans, two quintals of tar, a quintal of oakum, and eighty pints of whale oil.[23] In one respect Pérez de Ercilla was fortunate, because he could secure all he needed locally. This was not always the case for provisioners, and at times they had to bring in supplies from distant places. During 1553, for example, when an armada to transport six thousand soldiers to Flanders was being outfitted, biscuit had to be brought by ship from Málaga to Bilbao.[24]

[22] AGS, *Estado, leg.* 511, fol. 163; AGS, *Gerra antigua, leg.* 46, fol. 191; AGS, *Contaduría mayor de cuentas, primera época, leg.* 780.

[23] AGI, *Contadurías, generales, leg.* 462, no. 2, *ramo* 2.

[24] AGS, *Contaduría mayor de cuentas, primera época, leg.* 1052.

Table 4
TWO SHIPBOARD DIETS

SUNDAY, TUESDAY, THURSDAY:
Biscuit (1.5 lb.)
Wine (2 pints) or Cider (4 pints)
Fresh meat (1 lb.) or bacon/smoked meat (0.5 lb.) or cheese (6 oz.)
Vegetable stew (at 1.5 pecks [3 celemines] per 100 men)
Vinegar to season

MONDAY, WEDNESDAY
Biscuit (1.5 lb.)
Wine (2 pints) or Cider (4 pints)
Cheese (6 oz.)
Vegetable stew
Vinegar to season

FRIDAY, SATURDAY
Biscuit (1.5 lb.)
Wine (2 pints) or Cider (4 pints)
Fish (1 fish per 4 men or 0.5 lb. sardines per man)
Vegetable stew
Vinegar to season

* * *

SUNDAY, MONDAY, TUESDAY, THURSDAY
Biscuit (1.5 lb.)
Wine (2 pints) or Cider (4 pints)
Fresh Beef (1 lb.) or Bacon (0.5 lb.)

WEDNESDAY, FRIDAY, SATURDAY
Biscuit (1.5 lb.)
Wine (2 pints) or Vinegar (4 pints)
Cod (0.5 lb.) or Sardines (6)
(And beans three or four days per week)

Sources: AGS, *Guerra antigua, leg.* 49, fol. 305; AGI, *Contadurías generales, leg.* 3019.

Pérez de Ercilla's transactions regarding biscuit reveal the complicated procedures he had to go through to provision the ships. Additionally, they indicate an interesting pattern of women in the Basque country acting as petty capitalists in the components of the supply business, as was the case of María de Oyaçabal and the other women mentioned below. First, Pérez de Ercilla secured 2,020 *fanegas* (a *fanega* equalled about 1.5 bushels) of unprocessed wheat from at least five different sup-

pliers in San Sebastián, three of them from Brittany, one from France and one from England. He then contracted with Clara del Cano and Catalina Aranheder, citizens of San Sebastián, to deliver (at a cost of 4,056 *maravedís*) the wheat from the docks of the city to the houses of Luisa and Mariantón de la Borda for warehousing (for which Pérez de Ercilla paid 3,056 *maravedís*). Next, he paid 50,500 *maravedís* to the muleteers Sebastián de Unbutodi and Juanes de Añorga to take the wheat four leagues to the mills in the nearby countryside, mill it and deliver it to four bakers in San Sebastián, who in turn charged 68,680 *maravedís* for making the 2,020 *fanegas* of milled wheat into 1,010 quintals of biscuit. Pérez de Ercilla also gave 3,400 *maravedís* to the eleven oventenders, "for care and quickness", and noted that such tips were customary. He gave another 3,400 *maravedís* to Bartolomé Cardel and Martín de Zariate, "fieles del peso", for weighing the biscuit, and then he warehoused it again in the Borda houses. Clara del Cano and Catalina de Aranheder received 4,008 *maravedís* to move the biscuit later to the wharf of San Sebastián. At some point in the process the biscuit was loaded into forty-three containers purchased from Pedro de Loiztaran, a local cooper.[25] Such piecemeal purchasing and provisioning was characteristic of sixteenth-century European naval supply, both royal and private.

The provisioning for the armadas was usually for one and a half to two months, but this clearly was to cover all eventualities. The duration of the voyages was usually much shorter, and commercial vessels, in peacetime at least, put in along the way for reprovisioning if necessary. In 1570 a voyage from Laredo to Normandy took two weeks in the summer; the southbound return was accomplished in seven days.[26] In 1571 the Duke of Medinaceli's armada, a large convoy that encountered delays en route, took from 14 May to 10 June (26 days) to go from San-

[25] AGI, *Contadurías generales, leg.* 462, no. 2, *ramos* 1-2.
[26] AGS, *Patronato real, leg.* 57, fol. 56.

tander to the Flemish Coast.[27] Two to four weeks would be a reasonable duration to be planned on in good weather. Winter sailings could take longer, because the ships were often blown off course. In the winter of 1553 don Luis de Carvajal took an armada from the Cantabrian coast to Zeeland in less than a month, but it was a harrowing voyage. His fleet left Laredo at dawn on 14 November with twenty-six ships. They tried to turn back because of bad weather, but the wind blew them toward the coast of France before they could double back. Then they tried to go into Pasajes, but that harbour's small entrance eluded them. After sailing around near Santoña east of Santander for a few days, they took advantage of a wind for England, which they reached, "although," as Carvajal wrote, "ships never left Spain as lost as these". English pirates cut out two small ships and captured them, but the rest were able to pass safely through the Channel. On the coastal sand banks they lost three more vessels before they reached harbour in Zeeland.[28]

After the northward voyage, once ships carrying wool reached their destination, two choices were open to their masters. Aided by pilots, small ships could put in at Sluys, where the wool would be unloaded for ferrying to Bruges. Larger ships could anchor at Arnemuiden or other ports in Zeeland, and the wool then would be transferred to lighters for the trip to Bruges. The wool was received by members of the Castilian "nation" or Consulado in Bruges. Ships' masters contacted their own guild in Bruges, the Vizcayan "nation", and on the return from the Low Countries they would be expected to bring back manufactured goods, for sale in Spain.[29]

[27] WILLIAM D. PHILLIPS, JR., and CARLA RAHN PHILLIPS, "Spanish Wool and Dutch Rebels: The Middelburg Incident of 1574," *American Historical Review*, 82/2 (April 1977): 312-30, especially pp. 320-21.

[28] AGS *Guerra antigua, leg.* 49, fol. 317.

[29] MARECHAL, "Colonie espagnole de Bruges"; L. GILLIODTS-VAN SEVEREN, *Cartulaire de l'ancien consulat d'Espagne à Bruges (Prémiere partie, de 1280 à 1550)* (Bruges, 1901).

These, then, were the main features of the transportation of Spanish commercial goods between the Cantabrian coast and the ports of northern Europe. Although our discussion has been based on the situation in the sixteenth century, the trade had been established for a long time, and, if our records for the earlier period were more complete, we should probably find that things were not very different in the fourteenth and fifteenth centuries. By the end of the sixteenth century, nonetheless, the trade was totally disrupted, the volume of wool going to the north was smaller, and merchants and shippers were putting their money into other investments. We must now assess the reasons for those alterations.

As we proceed in that assessment, we shall see that many complicating factors were present: piracy, war, diplomatic reverses, and the decline of the northern forests. We shall examine those factors in their turn, but it must be emphasized that the changes were met with more than passive responses from Spanish investors. They consistently were aware of the main possibilities for profit, whereas the crown's concerns were primarily directed toward its duty to keep the European empire together and only secondarily toward maximizing economic opportunities. Spanish capitalists saw clearly the ways to invest profitably, and, by the last decades of the sixteenth century, they no longer perceived the northern trade as profitable and came to prefer alternative investments.

Severe difficulties arose from piracy and war. Even when Spain was not at war, piracy was a nearly constant activity for Atlantic mariners, Spanish as well as foreign. The actions of foreign corsairs became especially costly in the 1560s and after, but they were present earlier. In 1545 a crown inventory (Table 5) specified that corsairs had inflicted losses of some 130,000 ducats on northern shipping. Unfortunately, the document did not specify what period was covered, but probably it was not more than a few years, at most. During the same period, English

Table 5
LOSSES TO SPANISH SHIPPING CAUSED BY PIRATES, CA. 1545

| Nationality of Pirates | Losses in Ducats |
|---|---|
| English | 44,500 |
| English and Irish | 11,000 |
| English and Scottish | 4,500 |
| Scottish | 44,000 |
| French | 15,000 |
| French and Bretons | 7,791 |
| Unspecified | 3,200 |
| Total | 129,991 |

Source: AGS, *Guerra antigua, leg.* 19, nos. 17-18.

pirates had pursued five ships from Bilbao, and although they did not capture them, they did force the Spanish ships to go aground and sustain damage.[30] In 1546 the Prior and the consuls of the Burgos Consulado sent Gregorio de Castro to ask Charler V for aid, stating that French, Scottish, and English ships were causing such damage that they feared that the wool shippers would be forced to suspend sailing.[31]

Particularly vexing were the actions of the French Protestant corsairs of La Rochelle, backed by English privateers sailing under letters of marque issued by the Huguenot authorities.[32] As rebels against the French monarchy, as well as self-proclaimed enemies of Catholic Spain, they did not respond to diplomatic pressure. In wartime the stakes rose, as did the losses. In the 1570s, just after the beginning of the rebellion in the Low Countries, the rebels seized a number of Cantabrian ships and their cargoes in Zeeland. The magnitude of those losses

[30] AGS *Guerra antigua, leg.* 19, nos. 17-18.

[31] Letter of Prior and consuls of the Consulado of Burgos to the king, 4 May 1546, AGS, *Guerra antigua, leg.* 30, fol. 31. On piracy generally, see Teófilo López Nata, *La ciudad y castillo de Burgos* (Burgos, 1949) pp. 254-55; Valentín Vázquez de Prada, *Lettres marchandes d'Anvers*, 4 vols. (Paris, 1960) 1:54-66; Unger, *Ship in the Medieval Economy*, pp. 259-60.

[32] Manuel Fernández Alvarez, *Economía, sociedad, y corona: Ensayos históricos sobre el siglo xvi* (Madrid, 1963), p. 320; AGS, *Estado, leg.* 552, fol. 52.

brought forth serious repercussions for the insurers of the Burgos Consulado.[33] The Great Armada of 1588 also caused substantial losses among the commercial fleet of the northern coast.[34]

Ship owners and merchants also sustained indirect damages as a result of war. During periods of war with France, for example, the crown often prohibited trade with the enemy, but this created almost as many difficulties for Spanish subjects as for French. In 1557, two years before the Treaty of Cateau-Cambrésis ended hostilities with France, Philip II cut commerce with the neighbouring kingdom.[35] We have records of a long series of complaints over the following two years by the inhabitants of the northern coast and their requests for exemptions from the prohibitions. The brotherhood *(cofradía)* of seamen of La Coruña asked the king to lift the ban on French goods, especially tar *(brea)* and canvas *(olona).*[36] Because the cold, humid regions of the Cantabrian coast had difficulty in producing their own food, they were greatly dependent on France for wheat and other food products. One example of the numerous requests is that of Diego de Alvarado and Pedro Ruiz de Bolívar, citizens of Laredo and Colindres, who asked permission to take fruit to France and return with wheat, wine, meat, salt fish, and tallow.[37] What sort of fruit was it? We find a probable answer in the request of Martín de Rucondio to ship out oranges, limes, and lemons to France in return for wheat, barley, and other goods.[38] The town of Motrico, the *señorío* of Vizcaya, the

[33] Examined in detail by Phillips and Phillips, "Spanish Wool and Dutch Rebels," pp. 213-30.

[34] Enrique Herrera Orio, ed., *La armada invencible (Documentos procedentes del Archivo General de Simancas),* in *Archivo Histórico Español,* vol. 2 (Madrid, 1929), pp. 388-406.

[35] AGS, *Guerra antigua, leg.* 66, fol. 318.

[36] Ibid., *leg.* 69, fols. 144-45.

[37] Ibid., *leg.* 69, fol. 206, ite.s 21 and E36.

[38] Ibid., *leg.* 68, fol. 197, item 8. Similar requests: ibid., *leg.* 68, fol. 195, item 56; *leg.* 69, fol. 202, item 40. On the cultivation of citrus fruit on the Cantabrian coast, see

"cuatro villas de la costa de la mar", and the province of Guipúzcoa requested permission to bring provisions from France, as they were accustomed to do in peacetime and as they had been able to do in previous wars.[39] Another permutation involved Juan Martínez de Aiztarri, who found himself with a load of French wine in San Sebastián. Prohibited from selling it in Spain, he asked permission to take it to England and exchange it for wheat.[40] Shippers could get caught innocently in the dislocations of war. Isabel de Escalante, acting for seven other women of Laredo, asked that their husbands be rescued from the French; the men had gone to France with ships loaded with fruit and had been interned there.[41] Rodrigo de Palacios, citizen of Villaviciosa, lost merchandise worth four thousand ducats when the French ship in which he loaded it went to Brest instead of Flanders and the goods were confiscated.[42] These secondary war damages were annoying and, to judge from the numbers of complaints registered, widespread. They were particularly damaging because by the second half of the sixteenth century the Cantabrians routinely imported naval stores as well as foodstuffs from abroad.

Even more annoying for the ship owners were the crown requisitions. As we have seen, the crown resorted to requisitions of merchant vessels in times of need, for wartime service or for the transport of supplies, troops, money, and even monarchs to and from the Netherlands. Naturally, the requisitions and the dispositions of the impressed vessels were done to suit the wishes of the crown, often at considerable financial sacrifice to the ships' owners. In 1556 Captain Francisco de Ylarreta had armed a ship *(nao)* to fight the French (undoubtedly as a corsair)

J.A. García de Cortázar, *Vizcaya en el siglo XV: Aspectos económicos y sociales* (Bilbao, 1966), p. 103.

[39] AGS, *Guerra antigua, leg.* 65, fol. 247, item 16, 20 and 22.

[40] Ibid., *leg.* 69, fol. 203, item 6.

[41] Ibid., *leg.* 65, fol. 247, item 53.

[42] Ibid., *leg.* 65, fol. 247, item 58.

at an expense of more than two thousand ducats, only to have the captain-general of Guipúzcoa requisited it for royal service.[43] We have the protest of Ochoa de Capitillo, citizen and councilman of Portugalete and a well-known ship owner, about the requisition of two of his ships in Santander.[44] In 1557 Lope de Montaño, in the name of four shipmasters whose vessels had been loaded with wool and ready to leave for Flanders the previous year, protested that the ships were requisited to take money (200,000 ducats) to England (this was while Philip II was married to Mary Tudor) and demanded compensation for the lost wool revenue.[45]

Although the dislocations for merchants and masters were bad enough when done in or near their home ports, they were even worse when they occurred in distant places. In 1556 Diego de Bernuy, a city councilman of Burgos, had loaded a ship (a *nao* whose master was Juan de Berroiz, citizen of Deusto near Bilbao) with dyestuffs for Cartagena on Spain's Mediterranean coast. In the western Mediterranean the ship ran into pirates and eluded them by putting into Cádiz. Before the vessel could leave, it was requisited.[46] In 1557, Ochoa de la Sierra, an important northern ship owner, had a ship requisited in Málaga to ferry troops to La Goleta in present-day Tunisia.[47]

We have a particulary informative inventory of the ships requisited for the armada of 1567 from La Coruña to Flanders. There were twenty-eight *naos,* five galleons, three *urcas,* one caravel, one unspecified ship, with the addition of ten small *chalupas* and *zabras.* The duties being carried out at the time of requisition by all but eleven of the major vessels were indicated in the documents. Of these, ten were empty when they were im-

[43] Ibid., *leg.* 63, fol. 273, item 19.

[44] Ibid., *leg.* 72, fols. 82-85.

[45] Ibid., *leg.* 65, fol. 248, item 9; *leg.* 70, fol. 120 for the statement of one of the captains, Antonio de Bertendona.

[46] Ibid., *leg.* 64, fol. 415.

[47] Ibid., *leg.* 1323, fol. 391.

pressed into service; presumably the owners of these vessels suffered no great financial damage in the short run, but their ships were no longer available for commerce. The requisitions of the rest no doubt did cause hardship for their owners. Two other ships were also empty, but the Consulado of Burgos had them chartered to carry wool to Flanders. One other was in the shipyards; whether being built or undergoing repairs is unknown. Eight were already outfitted for fishing voyages to Newfoundland, and five were loaded or in the process of being loaded for commercial voyages. Thus, over one half of the ships whose dispositions at the time of requisition were specified were diverted from commercial ventures, thereby disrupting the financial activities not only of the ship owners, who were compensated at least in part for their losses, but also the investors in high-seas fishing and maritime trade, who were not. Once embargoed, even the empty ships may have lost commercial contracts.[48]

Any number of horror stories about the difficulties befalling ships and their crews during the embargoes can be gleaned from the documents. One such case occurred in September of 1568, when Juan de la Peña, the administrator of the *diezmos de la mar* (import-export taxes), requisited a ship owned by Ochoa de Larrea and Juan de Vallecilla, both citizens of Portugalete, and ordered that it transport a Captain Vala del Rey from Santander to Flanders, accompanied by 250 soldiers, women, and youths. After leaving Santander, the ship ran into bad weather in the English Channel, and to escape the storm, its master took it into the mouth of the Seine. At that point the ship's master and pilot perceived danger there and turned the ship back into the Channel. This was more than the soldiers and their captain could support. Rather than endure more heavy weather at sea, they were willing to face whatever dangers were necessary to get back to dry land. They revolted and forced the ship's master to land the vessel at gunpoint ("con sus arcabuzes cargados"). The storm-

[48] AGS, *Contaduría del sueldo, leg.* 197.

tossed, weatherbeaten soldiers did reach dry land, but at the expense of the ship, which went aground and sank. The financial loss to the owners was reportedly five thousand ducats.[49]

Although most cases concerning requisitions that have been preserved in the archives dealt with complaints, at least one master actually requested a requisition. In 1554 Juan de Orbea wanted his two 600-ton ships to serve in the armada forming up in La Coruña.[50] There were some important reasons, at least in theory, why builders and owners would want their ships to serve in royal armadas. The requisition pay was adequate, and owners could take advantage of crown loans for construction. On the surface, the Spanish crown policy of loaning money for ship construction might seem to have been an enlightened and beneficial means of providing the necessary capital. In practice, though, there were many drawbacks because of the different ideas about the proper size of ships, as we saw earlier. Royal requisitions worked even more clearly to the disadvantage of shipowners and merchants. The archives divulge a long list of distressing notices about delays in settling accounts for owners and masters of embargoed ships. As a consequence of the increasing financial difficulties of the Spanish crown in this period, it was characteristic that debts were often settled only after lengthy delays. Most of the complaints indicated a lag of about two years between the end of requisitions and the settlement of the crown debt, and such tardiness seems to have been ordinary.[51] One case which took far longer was that of the heirs of Ortún Sáez de Echevarri, who were finally compensated in 1558 for a claim

[49] Biblioteca Nacional (Madrid), Mss. vol. 781, no. 605, fol. 141. The document is a letter from Philip II to the Duke of Alba, 20 December 1569, asking him to investigate and report on the matter.

[50] Philip II to Bernardino de Mendoza, AGS, *Guerra antigua*, *leg.* 1320, fol. 134.

[51] AGS, *Guerra antigua*, *leg.* 65, fol. 237, items 12, 24, 25; *leg.* 65, fol. 244, item 43; *leg.* 68, fol. 195, item 15, 23, 39, 55: *leg.* 68, fol. 196, items 16, 28: *leg.* 68, fol. 197, item 1; *leg.* 68, fol. 200, items 11, 45; *leg.* 69, fol. 189, item 41; *leg.* 69, fol. 190, item 6; *leg.* 69, fol. 191, items 43, 59; *leg.* 1322, fols. 209 and 392.

on the requisition of his ship twenty years before.[52] The accounts of Joanes del Cano, master of the *nao La Concepción*, which served in the Great Armada of 1588, were still being audited in 1613.[53]

In addition to requisitions, complications arising from the Spanish "Navigation Acts" may have damaged northern shipping. Present in the late Middle Ages, codified by the *Reyes Católicos* in 1500, and reaffirmed in 1511 was an explicit prohibition on the shipping of Spanish goods in foreign bottoms.[54] The policy seemed to work well for a time, but by the late sixteenth century, foreigners, in collusion with Spaniards, had devised several means of evading the prohibitions. "Cargadores y maestres de mercadurías" were resorting to the presentation of faked bills of sale for small foreign ships, in order to avoid the use of large ships by claiming the small ships were their own.[55] This was a violation of a long-standing prohibition on selling Spanish ships to foreigners without royal permission.[56] False naturalization papers were being secured by Flemings, Englishmen, Portuguese, and Genoese. Merchants were also sending wool sacks from Navarre to France for loading in small ships in the French port of Saint Jean de Luz; this enabled them also to circumvent Castilian taxes on exports (the *diezmos de la mar*) and the specific tax on wool (the *nuevo derecho de las lanas*)

[52] Ibid., *leg.* 1322, fol. 233.

[53] AGS, *Contaduría mayor de cuentas, segunda época, leg.* 772.

[54] Granada, 3 September 1500, MN, Mss. vol. 444, doc. 16, fols. 545-47; ratified by Queen Juana, Seville, 25 June 1511, AGS, *Guerra antigua, leg.* 9, fol. 4; reaffirmed in 1566, AGS, *Guerra antigua, leg.* 71, fols. 116, 123. Exemptions were periodically granted: to Seville and Cádiz, for example, in 1511 for one year. AGS. *Diversos de Castilla, leg.* 42, fol. 26 See also, Modesto Ulloa, "Unas notas sobre el comercio y la navegación española en el siglo XVI," *Anuario de historia económica y social de España* (1969): 191-237, especially pp. 202-203.

[55] Diego Marroquín to the King. His message was sent along with Barros's "Discurso." Barros, in Navarrete, *Colección*, 22:214-15.

[56] Real Academia de la Historia (Madrid), *Colección de Salazar*, vol. K-6, fols. 229-31v.

established in 1558.[57] Barros in the 1570s also asked that the existing laws be enforced preventing northern ship owners from selling their ships abroad. Such sales were potentially quite lucrative ventures, since a ship worth four thousand ducats in northern Spain could bring six thousand in the Mediterranean.[58] In the 1580s there were also complaints about, and laws prohibiting, Spanish sailors leaving the kingdom to serve on French ships.[59] The widespread pattern of circumvention would seem to indicate that commercial interests and individual Spaniards did not find the royal regulations useful.

Northern shipping also may have suffered from an environmental problem: i.e. from the exhaustion of the forests of the Cantabrian slope and the consequent scarcity of shipbuilding material.[60] Crown policy toward the kingdom's forests was nothing new; in 1518 Charles V ordered replanting of cut-over lands, but problems surfaced anew in 1535-36 and again in 1550.[61] In 1556, Philip II wrote to the towns of the entire north coast, saying that he was aware that the region lacked ships and that he believed that the dearth of trees was the probable reason. His proposal was to prohibit cutting trees unless they were destined for ship construction, to have each locality replant oaks *(arboles robles),* and to appoint Cristóbal de Barros as overseer of the efforts.[62] Barros presented lengthy reports on his activities in 1568,[63] and by 1574, when he submitted the "discurso" that we have cited above, he had to confess that no great im-

[57] BARROS, in Navarrete, *Colección*, 22:199-200.

[58] Ibid., pp. 180-85, 203-205.

[59] MN, *Colección de Vargas Ponce*, doc. 22, fol. 33; doc. 27, fol. 34-35.

[60] C. R. PHILLIPS, *Six Galleons*, pp. 49, 79, 80.

[61] AGS, *Estado, leg.* 81, fols. 81 and 84; AGS: *Consejo y juntas de hacienda, leg.* 81, fols. 225.

[62] AGS, *Guerra antigua, leg.* 71, fols. 111, 115, and 121. The drafts for this proposal can be found in AGS, *Consejo y juntas de hacienda, leg.* 81, fols. 220, 225; *leg.* 82, fols. 299-300.

[63] AGS, *Guerra antigua, leg.* 72, fols. 297-300.

provement could be discerned. The forests were cut over and burned, and the wood was being used for the furnaces of the iron industry. Replanting was being carried out, but the impact was not as great had been anticipated. In Vizcaya and Guipúzcoa the forests were in better shape, but in the area from Castro Urdiales to San Vicente de la Barquera, and "in Galicia and Asturias, there is little care, or none, in planting, and great disorder in cutting, burning, and wasting the forests ..."[64] Barros proposed new provisions: no oak should be cut, except for ship or house construction; a commissioner should be appointed under the corregidor of each place, to oversee the plantings and make sure that the larger trees were left to grow; in lands controlled by the city councils, the councils should be responsible for the costs, monitored by the *corregidor*.[65]

The efforts to improve the forests brought no immediate improvements. Perhaps the ecological damage was too great to be made good, and certainly insufficient time had been allowed for the trees to reach maturity. Perhaps the very growth of the Spanish empire, with its attendant demands for naval construction, and Spain's sixteenth-century population rise, with increased needs for wood for building and fuel, placed unavoidable pressure on the forests. Whatever the explanation, after the defeat of the Great Armada of 1588 and especially after 1600, Spain was forced to import larger and larger amounts of shipbuilding materials and naval stores from northern and central Europe. These were expensive commodities, whose delivery was often threatened by the uncertainties of European politics. Yet Spain was not alone in facing problems of securing naval timber; the Dutch, the French and the English also had to import timber for their ships.[66]

[64] Barros, in Navarrete, *Colección*, 22:169, 173.

[65] Ibid., pp. 169-73. In 1574 Francisco Ortiz de Monasterio wrote that several valleys still contained fine stands of timber, but new roads would have to be built to make the wood accessible. Navarrete, *Colección*, vol. 22, part 1, no. 26, p. 157.

[66] Unger, *The Ship in the Medieval Economy*, pp. 267-70. C. R. Phillips, *Six*

Faced with all these alterations that they could not control, Spanish investors made eminently suitable economic decisions about their own concerns. Their patterns of investment changed as they sought the most lucrative avenues of personal fortune. The evidence for these changes in the patterns of individual investment found its way only sporadically into the documents, but what remains is suggestive of a larger pattern. Cristóbal de Barros in the 1570s believed that the decline of the northern trade, especially the wool trade, was due primarily to three factors.[67] The item Barros listed first may turn out to have been the most crucial: many merchants who previously had shipped wool were investing by the 1570s in government bonds *(juros)* rather than trade. Next, Barros reported, the bulk of the trade in raw wool had shifted from Flanders to Italy. This is borne out by the export accounts and reflects a sound set of economic decisions about the markets and the facility of delivery to those markets.[68] Finally, Barros asserted that more wool was being spun and woven in Spain than was the case earlier. Additional monographic studies of the textile industry are needed, but those already published support Barros's assertions.[69]

Additional documentary evidence over the next two decades leads to the same general conclusion: investors were seeking

*Galleons*, pp. 80-81. Vizcaya was importing construction material and naval stores by the 1540s. AGI, *Patronato, leg.* 259, *ramo* 19.

[67] Barros, in Navarrete, *Colección*, 22:199-200.

[68] For an analysis of the wool export totals, see CARLA RAHN PHILLIPS, "The Spanish Wool Trade, 1500-1780", *Journal of Economic History*, 42/4 (December 1982): 775-95. Her findings confirm Barros's assertions.

[69] The most complete study of a Castilian textile centre is that of PAULINO IRADIEL MURUGARREN, *Evolución de la industria textil castellana en los siglos XIII-XVII: Factores de desarollo, organización y costas de la producción manufactura en Cuenca* (Salamanca, 1974). See also Jean-Paul Le Flem, "raies et fausses splendeurs de l'industrie Ségovienne.
(vers 1460 - vers 1650)," in *Produzione, commercio e consumo dei panni di lana*, Marco Spallanzani, ed (Florence, 1972): Felipe Ruiz Martín, "La empresa capitalista en la industria textil castellana durante los siglos XVI y XVII," *International Conference of Economic History*, Munich, 1965 (Paris, 1974), pp. 267-760.

new uses for their capital. In 1584 the provincial officials in Guipúzcoa wrote to the king that, in their opinion, the lack of ships had little to do with any dearth of trees. Rather, they reported that no one wanted to buy ships and cited several reasons for the reluctance: increasing foreign competition, oppressive or counterproductive regulations, and requisitions.[70] The situation was so bad by the 1590s that the king ordered a new investigation of the reasons for the severe lack of ships on the Cantabrian coast. The decisive analysis prepared by Alonso Gutiérrez can serve as an epitaph for the shipping of the north. The Cantabrians who still owned ships had them employed almost exclusively on the Indies run. Practically every ship built was lost to the enemies, especially those the crown requisited, and corsairs harassed the Spanish coasts from Vizcaya to Andalusia. In such a situation, Gutiérrez reported, "those who have [the ability] to build [ships] prefer to employ their money in things other than ships."[71]

Many of the difficulties encountered by ship builders and ship owners in the later sixteenth century were directly or indirectly affected by the political needs and actions of the crown. Where the crown took its most positive and enlightened actions, in its concerns for the forests, it faced its least responsive enemy, nature itself. Nevertheless, I should not like to leave the impression that all the problems of the north-coast seafarers can be laid at the feet of Spain's monarchs, whose primary aim, after all, was imperial defence, not the stimulation of the economy. A structural change was under way in the Spanish economy, one in which the economic centre of gravity was shifting from the northern cities of Castile to Madrid in the centre and Seville and Cádiz in the south. Merchants and ship owners alike were caught up in the shift and adapted themselves to it. With trade to the Low Countries disrupted by piracy, revolts, and war,

[70] MN, Mss. vol. 580, doc. 13, fols. 40-42.
[71] AGS, *Estado, leg.* 612, fol. 103.

wool increasingly went to Italy. More and more, ship owners in the north deserted their previous trade or used their vessels in the Mediterranean and on the Indies run. Those who had previously invested in the northern trade, faced with unprecedented difficulties, abandoned it and sought more secure and potentially more lucrative investments elsewhere. Far from being the helpless pawns of the political chess game of sixteenth-century Europe, they skilfully played a difficult game and moved to the more promising positions on the vast board. Their moves may have preserved their personal fortunes, but they did nothing to arrest the decline of the northern shipping industry.