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Maritime Archaeology and Ancient Trade in the Mediterranean

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3: Ancient sailing-routes and trade patterns: the impact of human factors

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The scholarship of the last half-century has developed two opposing models of ancient sailing and trade patterns: the first postulates the absolute predominance of direct sailing on the open sea, with trade operations at the destination and also most often upon the vessel's return to its starting point.[1] According to this model, this form of ancient sailing and trading underwent a major change in Late Antiquity, as direct sailing declined in favour of a Medieval pattern of trade more characterised by cabotage and tramping. Ancient commercial sailing has consequently been viewed as being much faster than its Medieval counterpart and has been used to support a line of argument that would suggest that the Middle Ages can be considered as a period of regression when compared to antiquity.[2] The second model, on the other hand, sees no such discontinuity between ancient and Medieval sailing and views both periods, and indeed all pre-modern trade, as being characterised by both coastal sailing and tramping.[3]

In both models of sailing and trade, the patterns are generally reduced either to the binary system, open-water commercial sailing *versus* coasting and tramping, or to the combination of a primary direct distribution network and of a secondary cabotage redistribution network.[4] Such a view, however, is highly reductive when applied to the entirety of 'pre-modern' trade, or to the whole Mediterranean and its adjacent seas and oceans in the post-archaic ancient and Medieval periods. Indeed, we should question whether such approaches are even appropriate.[5]

One of the problems we must face is that of permanency and change in sailing and trading patterns. In other words, can we really imagine an unchanged and unchallenged maritime landscape within the whole Mediterranean during the whole pre-modern period? I do not think so. Recent studies of Medieval sailing tend to illustrate the contrary. McCormick has shown that the sea of the early Medieval sailor is not that of the classical Greco-Roman one: the beach assumes a place it had lost since Homeric tales; a place for dinner and sleeping.[6] McCormick furthermore assumes that 'patterns of communication changed, dramatically, between AD 700 and 900'.[7] Petti-Balbi pointed out that the increasing number of ports of call for ships from the thirteenth to the fifteenth centuries was due to changes in trade patterns (especially the alum trade).[8] She also underlined that sailing routes and times were entirely different if applied to pilgrims' voyages or to trade routes. Such conclusions urge us to be very cautious of oversized models.

Modern scholarship, in response to a distinct lack of evidence, has widely used Roman Imperial or even Late Roman regulations to illustrate and explain Classical Greek evidence and vice versa. The result is a strong impression of unity amongst the regulations and customs that framed the trading patterns of the Classical world in the Mediterranean.[9] Such a comforting picture is undoubtedly supported by the sustainable validity of some Greek regulations, such as the *Lex Rhodia de iactu*, still effective in Visigothic law, as well as by the continued use of the Greek terminology of maritime regulations. Any noteworthy differences can be conveniently explained as being the result of adaptations of the same solutions to particular legal contexts. While it must be said that most of the attempts to distinguish special periodic patterns have also not been very convincing,[10] in my opinion, this situation has led to much confusion; for example, when the particular status of Late Roman *naucleri* is used to explain earlier situations.[11]

But is this enough to support the idea of a sustainable, unchanged sailing pattern valid throughout the ancient period? When and where is it supposed to have started? How long did it last? How, where and when did it give way to the early Medieval (or Late Antique) pattern described by McCormick? Such questions arise but find no clear solutions. On the other hand, any attempt to build on the basis of clear evidence of possible Archaic and early Classical, late Classical/Hellenistic, Roman Republican, or Roman Imperial patterns, have failed so far.[12]

1 Rougé 1966; Casson 1971; McCormick 2001.
2 Rougé 1966; Casson 1971; McCormick 2001.
3 Pryor 1987; 1989; Duncan-Jones 1990; Reynolds 1995.
4 Nieto Prieto 1997.
5 Cf. Horden and Purcell 2000: 137–52 for a less Manichean vision of shipping lanes.
6 McCormick 2001: 422.
7 Ibid.: 569.
8 Petti-Balbi 1996.
9 Cf. e.g., Vélissaropoulos 1980 and Bresson 2008, where Roman imperial documents are considered as pertinent evidence for the Greek Classical and Hellenistic periods.
10 Cf. Rougé 1966: 345–79.
11 Vélissaropoulos 1980.
12 Gras 1993; De Salvo 1992.

The second problem one must face is that of terminological confusion. Although cabotage is widely discussed in both English and French secondary sources, the same word can imply different forms of sailing and trading practice. In eighteenth-century French sailing vocabulary a distinction is made between '*commerce en droiture*', which is applied to direct trans-oceanic overseas trade and *capotage* (better than cabotage), meaning 'sailing from cape to cape'. This was in turn divided into 'grand cabotage' and cabotage, where 'grand cabotage' referred to international commerce following the coasts and cabotage to commerce along national coasts. These terms not only characterise a pattern of sailing, but also trading with regard to national boundaries. Last, but not least, 'commerce forain', more or less translates the English 'tramping' and describes sailing from port to port in search of markets for parts of the cargo. Cabotage, therefore, is terminologically not the equivalent of tramping and the slippage in English language publications between the use of cabotage to describe tramping is very reductive or simply incorrect.[13] This discussion of the language used to describe trading and sailing not only demonstrates that sailing patterns cannot be separated from trade patterns, but also that they cannot be reduced to the simple binary opposition that has become traditional in modern scholarship; sailing and trading are much more complex than this.

The French sailing vocabulary, with its highly descriptive sailing and trading terms being tied to the concept of the nation state, would suggest that the patterns of Medieval trade within the Mediterranean did not have their origin within the unchanging world of pre-modernity with its geographic and technological *longue durée*, but amongst a shifting background of geopolitics, administrative and fiscal practices, culture, and specific economic purposes. Clearly such considerations will also have affected sailing routes and trading patterns in the ancient world. The issue, however, is how we can trace, and with what precision, such changes in the pre-modern, Classical, Greek, or Roman periods.

In what follows, we will try to gather from the surviving documentary evidence the human contexts that framed ancient maritime trade. While the poor state of preservation and the uncertain value of evidence suggest caution,[14] the sources do provide evidence pertaining to both continuity and change in sailing patterns during the Classical period, down to the fourth century AD, when the growing lack of shipwrecks clearly marks an important change in the maritime history of the Mediterranean.[15]

The limits of meteorological and technological determinism

This is not the place to re-open the discussion about the sailing abilities and technological progress of ancient ships. Suffice it to say, however, that it is commonly held that ancient ships and sailors should normally have been unable to sail on the open sea and were constrained to coasting and that tramping is the normal consequence of this method of sailing. Eratosthenes, as recorded by Strabo, appears to challenge this:

> *the Ancients, whether out on piratical excursions, or for the purposes of commerce, never ventured into the high seas, but crept along the coast.*[16]

Coasting, according to him, characterised the mythical period of the *primordia* (here, the Argonauts), pre-emporial state of trade and sailing and belonged to the protohistory of Mediterranean seafaring. This does not mean, however, that coasting was a forgotten practice, but that by the time of Eratosthenes sailors did not have to follow the coasts and knew other forms of sailing that fitted better with the supposed goals of maritime trade. Homer himself contrasts the ships and sailing capabilities of the Achaeans with those of the new merchant ships, which 'crossed the wide gulf of the sea', while Calypso teaches Ulysses to build a ship in imitation of a merchant ship and to sail it at night, looking at the stars, far from any visible land.[17] Clearly, the pattern of sailing in Classical times was formulated as early as Homer, with both day and night sailing on the open sea.

Obviously coasting did not disappear from the Mediterranean, which is nothing but a large fishpond, and any cross-sailing within it inevitably starts and finishes with coasting. Within this sea there was no place for *commerce en droiture*, rather it was the place for *capotage* and this sailing pattern, from cape to cape, is exactly that which we may infer from the ancient evidence.[18] It is also interesting to note that the distances related to the value of sailings made between sunrise and sunset (journeys between 600 or 700 *stadia*) concentrate only upon a very limited number of routes,[19] suggesting that sailing at night was commonplace. Such a daylight sailing route was that from Antioch to the Adriatic, which is a difficult journey for those who wanted to sail westwards as they would be exposed to contrary winds, except in December or January.[20]

13 E.g., Horden and Purcell 2000: 140–2; Wilson, this volume (Chapter Two) for discussion.
14 Cohen 1990: 39; Möller 2000.
15 Cf. Parker 1992: fig. 3; Parker 2008: 187; Wilson shipwreck graphs (this volume, Chapter Two).
16 Eratosthenes I.B8 Berger = Strabo *Geographica* 1.3.2, C.43.
17 Homer *Odyssea* 9.319 ff; 5.248–78.
18 Arnaud 2005: 97–148.
19 Mainly along the route from Issus to the Adriatic, and between islands, cf. Arnaud 2005: 74–8; 224–8.
20 Ibid.: 221–4; Zimmermann 1992.

Coasting could be a choice. In Roman Imperial times, Phoenician ships seem to have used the coasting route on their way back from Brentesium, instead of the much easier and quicker way to Alexandria. In such conditions, by the time of Caligula, it was considered easier, quicker and more comfortable to sail to Caesarea using the Alexandrine fleet from Ostia rather than the Levantine fleet from Brentesium.[21] This choice is rather puzzling, for at first glance one would think that both fleets would have sailed directly to the Nile Delta. However, it appears that Phoenician ships preferred to sail along the western shores of Greece, then to Crete, Rhodes, Lycia and Cyprus, with prevailing winds.[22] Such a sailing pattern may be the sign of special trading patterns, perhaps related to special ships (hence the allusion to comfort), and maybe also to cultural habits.

On the other hand, more attention should be paid to the evolution of anchors as a piece of evidence for sailing patterns. The increasing number of small iron anchors[23] on small vessels from the third century AD to the Byzantine period is clearly a sign of coasting and of an increased number of moorings along the route to a destination. Each and any mooring provides several opportunities of losing one or several anchors. A vessel may have to leave quickly a mooring becoming dangerous. The mooring lines are then just cut. It also happens that the anchor, fouled, cannot be hauled back. Having on board a high number of anchors was a response to such difficulties and fits with a coasting programme. Wrecks with several small iron anchors, however, often have homogenous cargoes that do not accord to the varied pattern of goods carried on ships engaged in tramping.

The increasing tonnage of ships up to the second century AD certainly contributed to the development of direct sailing routes as, amongst other reasons, larger ships could not enter some of the smaller harbours. The well-known Law of the port of Thasos seems to have excluded ships smaller than specified tonnages from certain harbour basins.[24]

We may assume that coasters, as well as other types of ship, were specifically designed to fulfil their role as coasters. The most characteristic coaster may well have looked like the *akatos*, or *actuaria*, a long and narrow open merchant galley of rather small size.[25] It is noteworthy that such ships are the most frequent type mentioned in *P.Bingen* 77.[26] Although the vessels mentioned in the papyrus are coasters, none of them appears to have been involved in tramping, so we may conclude that there is no *a priori* link between tramping and coasting. No technical constraint could prevent ancient maritime traders from sailing 'straight' to the expected destination. Consequently, evidence for tramping or direct sailing must be sought from elsewhere.

Trade and the State: Treaties and Emporia, Clearance and Tax Collection

Recent studies have pointed out the strength of the dirigisme of the Greek city, as well as that of the Ptolemaic and Roman Empires.[27] Trade—more than 'Economy' *stricto sensu*—was placed under state control, both because it used to be a noteworthy source of fiscal income for the state and because it allowed the city to get its most essential supplies. At the same time, the largest share of maritime trade in such a context was international.

Herodotus may have inspired the idea that tramping was a common ancient trading practice, at least in the Punic world, when he describes something like 'beach trade'.[28] Here a ship stops on a beach, and trade takes place with the local population without any control of any kind. The location of Herodotus' description, Libya outside the Pillars of Herakles, a geographical touchstone for *mirabilia* and for human wildness and under-development, is important.[29] Herodotus does not describe a normal trading practice, but an incredible one for a Greek of the mid-fifth century BC, and exactly what would not have happened within the civilised

21 Philo of Alexandria *in Flaccum* 26.

22 Ibid.; cf. also Strabo *Geographica* 6.3.7, C.282.

23 Ten were still on board the Dramont E wreck (fifth century AD), but the stern anchors are missing; eleven were found on the Yassı Ada wreck (seventh century AD).

24 *IG* XII Suppl. 151, no. 348 = *SEG* XVII: 417. This important text, dated 250/200 BC, would need further commentary: not only are the numbers highly conjectural, but the world ἀνέλκειν used in the decree normally does not mean 'berth', but 'haul up'.

25 Casson 1995: 159–60.

26 Heilporn 2000. This document is a register of entries in an unknown Egyptian harbour, dated August of an unknown year of the second half of the second century AD.

27 De Salvo 1992; Andreau, Briant *et al.* 1994; Bresson 2000; 2007; 2008; Bang 2007; 2008; Scheidel 2009.

28 Herodotus Historia 4.196 Λέγουσι δὲ καὶ τάδε Καρχηδόνιοι. Εἶναι τῆς Λιβύης χῶρόν τε καὶ ἀνθρώπους ἔξω Ἡρακλέων στηλέων κατοικημένους· ἐς τοὺς ἐπεὰν ἀπίκωνται καὶ ἐξέλωνται τὰ φορτία, θέντες αὐτὰ ἐπεξῆς παρὰ τὴν κυματωγήν, ἐσβάντες ἐς τὰ πλοῖα τύφειν καπνόν. τοὺς δ' ἐπιχωρίους ἰδομένους τὸν καπνὸν ἰέναι ἐπὶ τὴν θάλασσαν καὶ ἔπειτα ἀντὶ τῶν φορτίων χρυσὸν τιθέναι καὶ ἐξαναχωρέειν πρόσω ἀπὸ τῶν φορτίων. 'Another story is told by the Carthaginians. There is a place in Libya, they say, where men live beyond the Pillars of Herakles; they come here and unload their cargo; then, having laid it in order along the beach, they go aboard their ships and light a smoking fire. The people of the country see the smoke, and, coming to the sea, they lay down gold to pay for the cargo, and withdraw from the wares'.

29 Romm 1992: 82–94, 172–175.

Mediterranean world, where it would have been thought to be nothing but smuggling.

Within the civilised Mediterranean, there was no maritime trade unless it was under the control of the state and it took place in quite a small number of official locations. During the Classical Greek period, the large number of cities ensured that the largest part of maritime trade was international. From potentially the first half of the fifth century BC at Athens,[30] and as early as the late sixth century BC in the western Mediterranean, trading relationships were framed by international treaties (*synthekai*, *spondai*) of friendship.[31] Their jurisdictional aspects—a key to sustainable trade relations—were defined by additional agreements or conventions, called *symbola*.[32] These established unchallenged leadership over certain areas and ensured a conventional state of peace. Violation of such a treaty induced a state of war. Such treaties also established which nationalities were allowed to have trade activities in a given city, the rules to be applied to trade and the protection to be given to both foreign and native trading operations and traders. The Peloponnesian war erupted when the Athenians denied the Megarians the right to enter the harbours of the Delian League.[33]

Polybius made copies of the texts of not less than three treaties between Rome and Carthage from the bronze tablets in the *aerarium* of the *aediles*, near the temple of Jupiter Capitolinus.[34] Their date and exact prescriptions have been much disputed and shall not be discussed here, and, of course, their text may well have been neither wholly nor exactly quoted by Polybius. The first treaty is allegedly dated to 509 BC,[35] the second seems to go back to 348 BC and the third has generally been related to the context of Pyrrhus' wars. Their main clauses can be summarised as an interdiction against marauding, trading, or founding a city in specified areas:

- sailing was forbidden beyond specified points, 'unless driven by stress of weather or the fear of enemies'.[36] In forbidden areas, calls for provisions, ship-refit or the worship of gods were tolerated, although the stop should not exceed five days;
- trade was prohibited in these areas;
- marauding and founding cities in the other's area of authority was forbidden;
- trade was allowed only in certain places, under the control of local officials;[37]
- later clauses established the competence of local jurisdictions to arbitrate conflicts and avoid private vengeance. The model is probably that of the Greek *symbola*.

Conventions could also exist between individuals and a city, for example, very similar prescriptions appear in an Athenian decree in favour of a certain Lycon of Achaia.[38] In addition to the usual privileges of *proxenia* (*ateleia* and *asylia*), Lycon was awarded the right to sail and traffic in every country under Athenian control. The last clause is unfortunately mutilated and seems to have prohibited sailing in an unknown gulf.[39]

An important risk for the ancient trader of the classical period was in *sylai*: the right of 'reprisal'. Any city had the right of seizing, in its harbour or along its shores, a foreign ship and/or its cargo, in order to cover losses or injuries previously received through a citizen whose city of origin was the same as the ship's, the charterer's or the final destination. Treaties or individual grants could also recognise *asylia*, the exemption from the right of reprisal, for ships and traders from a specified city, or to individuals. *Sylai* were undoubtedly a serious limit to

30 *IG* I3.10 (468–450 BC): treaty between Phaselis and Athens, with mention of a former similar treaty between Chios and Athens. The date is not consensual and may be slightly later. *IG* I3.118 (408–407 BC) = *SIG*3 112: treaty between Athens and Selymbria, with special clauses related to disputes (cf. Gauthier 1972: 162–3); in 431 BC a treaty between Oeanthia and Chalaeum regulated the practice of reprisals (*sylai*), secured the total discontinuance of seizures in the ports, and restricted the practice on the open sea, and established the legal solution of disputes (Phillipson 1911 (2): 70); between 350 and 345 BC, a treaty was concluded between the Erythreans of Asia and Hermias, tyrant of Atarneus (ibid.: 72). It established that unloaded goods would not be subject to duty, unless sold.

31 Phillipson 1911 (1): 198–200, (2): 70–3; Hasebroek 1965: 110–16.

32 Gauthier 1972; *IG* I3.10 (468–450 BC); *IG* I3.127 = *SIG* 116 (405–404 BC); *IG* I3.118 = *SIG*3 112 (408–407 BC).

33 Thucydides 1.42.2; Brunt 1951; French 1976; MacDonald 1983; Tuplin 2009 (who re-evaluates the role of this event in the starting of the Peloponnesian War).

34 Polybius *Historia* 3.22–5.

35 As a date for this treaty, 509 was long disputed, but is now accepted by most recent scholars, cf. Moret 2002; Scheidel 2009.

36 It is noteworthy than at least by the time of the Peloponnesian war, Lacedemonian ships had full access to the forbidden zones, east of Cape Bon, generically called the 'emporia area', and that this area was familiar to both Sicilians and Athenians (Thucydides *History of the Peloponnesian War* 7.50.2). According to Polybius' paraphrase, in the first two treaties, the Carthaginians forbade the Romans to sail beyond the Fair Promontory (Cape Bon), because 'they did not wish them to be acquainted with the coast near Byzacium, or the lesser Syrtis, which places they call *Emporia*, owing to the productiveness of the district'. This clearly suggests that until Rhegium fell into Roman hands, there used to be two distinct areas.

37 Polybius *Historia* 3.22.8–9: 'Men landing for traffic shall strike no bargain save in the presence of a herald or town-clerk. Whatever is sold in the presence of these, let the price be secured to the seller on the credit of the state'.

38 Vélissaropoulos 1980: 130–31; Pébarthe 2000: 63.

39 *IG* I3.174 (425–411 BC) = *SIG*3 92.

tramping, as bottomry loan contracts included a clause of exclusion for harbours not granting *asylia* to the borrower.[40] The increasing number of grants of *asylia* to single foreign individuals during the fourth century BC conferred increasing safety on such traders.

Such treaties and contracts ensured that it was impossible to undertake legal trade outside of a limited number of specified harbours. In their study of a mid-fifth-century Aramaic customs papyrus from Persian Egypt, Briant and Descat were strongly reluctant to admit the idea that the Phoenician and Greek ships mentioned in the document would have been constrained to a single harbour.[41] But this is exactly what Herodotus explicitly says about the *emporion* of Naukratis in terms that sound very close to those of the Rome-Carthage treaty.[42] In other words, it seems that from the late sixth to the first half of the fifth century BC, trade within the Mediterranean was organised on the basis of a certain number of common rules and, moreover, centred on a small number of places, which are usually called emporia.

It is not the purpose of this paper to discuss the exact meaning(s) of the word *emporion*, which most likely varied through space and time.[43] It is not only a 'port of trade', a notion that was once popular but now unsatisfactory,[44] but also a bounded, cosmopolitan space, devoted to trade, where, through appointed officials (at least a herald) the state could fully exercise its prerogatives and provide, together with services, its jurisdictional protection to traders, both native and foreign. It was the place of heavy, time-consuming bureaucracy, but also of services that made trade easier. Basically, the *emporion* is the place devoted to maritime trade (emporia) and to the activity of maritime traders (*emporoi*). The international nature of the Classical maritime world resulted in heavy control procedures, which framed trade patterns. These were obviously necessary to allow fair trade practices under the control of the State, but they also ensured that trade coincided with the city's needs and interests and provided substantial fiscal incomes.

The ancient harbour was not just a mooring and trading place. Its traditional functions for shelter, as a technical base (shipyards, watering and victualling) and as a trading location were subject to different types of access and procedures of control.[45] For example, a ship could enter the harbour of Rhodes for watering without waiting and be away after three hours, whereas the situation of ships entering the harbour for trade operations was very different.[46]

The issue of whether there could be one or several emporia within a single city is partially misleading. Every state could decide which were the places where trade was legal and where it was illegal. For example, King Leukon could be praised by Demosthenes for having opened a new *emporion* at Theodosia, in addition to that already existing at the Cimmerian Bosporus.[47] Trade outside the right place (the *emporion*) was not impossible; it was just smuggling and therefore illegal.

Tolls and procedures of control for the traceability of cargoes became increasingly complex. As early as the Peloponnesian War, the Athenian embargo had been made possible by a large set of documents that made it possible to know the origin and destination of goods, even when trans-shipments had disguised their actual origin. During the fourth century BC, the whole cargo was subject to declaration and control both at the port of loading and at the port of unloading.[48] An Aramaic customs papyrus from Persian Egypt found at Elephantine and dated to the mid-fifth century BC already registers cargoes entering the Nile and coming from Gadara in Phoenicia and Phaselis in Caria.[49] Seven centuries later, *P.Bingen* 77 is a register of goods arriving in an unknown port of the Nile Delta. The first column seems to note how the port taxes were paid (gold, silver, oil), the port of origin, the date of departure, the type of ship (*akatos*, *plauda*, or no mention when just a normal *oneraria*), the ship-owner's name, the ship's name and capacity, the shipper's name and the cargo he had loaded. All of the ships mentioned in this document were involved in interregional or overseas transport.[50] Neither the emergence of Hellenistic empires, nor the Roman Empire itself, led to the introduction of major changes

40 Demosthenes *Against Lacritus* (*Oratio* 35): 13.

41 Cf. Yardeni 1994 for the text of the papyrus; Briant and Descat 1998.

42 Herodotus *Historia* 2.179: ἦν δὲ τὸ παλαιὸν μούνη Ναύκρατις ἐμπόριον καὶ ἄλλο οὐδὲν Αἰγύπτου· εἰ δέ τις ἐς τῶν τι ἄλλο στομάτων τοῦ Νείλου ἀπίκοιτο, χρῆν ὀμόσαι μὴ μὲν ἑκόντα ἐλθεῖν, ἀπομόσαντα δὲ τῇ νηὶ αὐτῇ πλέειν ἐς τὸ Κανωβικόν· ἢ εἰ μή γε οἷά τε εἴη πρὸς ἀνέμους ἀντίους πλέειν, τὰ φορτία ἔδεε περιάγειν ἐν βάρισι περὶ τὸ Δέλτα, μέχρι οὗ ἀπίκοιτο ἐς Ναύκρατιν. 'Naukratis was in the past the only *emporion* in Egypt. Whoever came to any other mouth of the Nile had to swear that he had not come intentionally, and had then to take his ship and sail to the Canobic mouth; or if he could not sail against contrary winds, he had to carry his cargo in barges around the Delta until he came to Naukratis'.

43 Cf. Bresson and Rouillard 1993; Bresson 2002.

44 Cf. Polanyi 1963; Vélissaropoulos 1977; Möller 2000: 19–25.

45 Again, in the second century AD, a harbour regulation from Caunus in Caria (Marek 2006: no. 34) made strict distinctions in the treatment of ships in transit, just entering the harbour for a couple of hours (B, ll.11–12), ships berthing for trade (C, *passim*; D, ll.1–18), and ships needing shelter or refit (D, ll.18–21).

46 Marcus Diaconus *Vita Porphyri* 55.

47 Demosthenes *Against Leptines* (*Oratio* 20): 31–3.

48 Demosthenes *Against Zenothemis* (*Oratio* 32).

49 Yardeni 1994; Briant and Descat 1998.

50 Heilporn 2000.

to this pattern. The *Stadiasmus*, whose sources may not be later than AD 50–60, but may be partly Hellenistic, still makes a distinction (§ 336) between places that have an *emporion* and others that have an *agora*. This was probably done in order to differentiate between different sets of commercial operations, with emporia related to maritime trade and *agora* to local redistribution.[51]

Trade and the State: clearance, fiscal background and procedures

Ships coming into harbour were subject to two kinds of tax. The first one, *ellimenion*, was probably levied by port authorities and was the price of harbour services and facilities. The second one consisted in taxes, *tele emporika*, levied on behalf of the state and was a substantial source of income.[52] This form of tax concerned both incoming, *eisagoge*, and outgoing, *exagoge*, goods. The exemption from such duties is often mentioned among the privileges, *ateleia*, granted by Greek cities to their foreign benefactors.[53] These customs duties were the object of the *Lex Portorii Asiae*, otherwise known as *Monumentum Ephesenum*.[54] Although the original date of this law is uncertain[55] it was still valid, albeit in a partially modified form, between AD 58 and 62, the date when its Latin copy was received in the record office of the *curatores* of the public revenues.[56]

The Roman Empire did not put an end to such taxes, called portoria or portus. These applied either to single provinces, such as Asia, or to groups of provinces, such as the Gauls (Alpine districts, Narbonensis, Galliae Tres Germania, Britannia), and were collected for the state, except in free cities or in cities granted with specific privileges, who used to collect it for themselves.[57] The recent discovery of a brand mark of the *statio Massiliensis Quadragesimae Galliarum* applied on what seems to have been a *tabula cerata* added a new station to the others known in the Province, at Narbonne and Arles.[58] Did such *stationes* exist in each city as suggested, but not demonstrated, by an addendum to the *Lex Portorii Provinciae Asiae*,[59] apart from in those excluded from the provincial assessment book by special privilege? Or were *stationes* only to be found in some cities, as suggested by the known harbour *stationes* of *XL Galliarum*? The latter solution seems more credible. The number of ports of clearance could be quite numerous. The same *Lex Portorii Asiae* lists (ll. 22–26; l. 32) 28 harbours in perfect 'hodologic' order—i.e., following the order of the places along the coast, as seen through a traveller's eyes[60]—between the Mouths of Pontus and Side, in the existing, incomplete and mutilated state of the text.[61] It has been noted that islands have been excluded from the list of the *stationes* where goods to be imported or exported had to be declared and the taxes paid.[62]

It is highly probable that there were not customs *stationes* in each port. There would, therefore, exist a port hierarchy with the established ports of clearance operating as the main transhipment harbours, or 'warehouse-harbours'. If true, there would have been a sustainable distinction between three kinds of maritime trade: intra-state redistribution, inter-state trade, and smuggling.

It is almost certain that customs clearance required the entire unloading of the cargo, or at least of the portion of the cargo to be sold. Indeed this seems to have been stipulated by the *Lex Portorii Asiae* (l. 22).[63] Unloading is almost necessary as it would have allowed customs officials to affix lead seals or wooden tablets to cleared items of cargo,[64] to mark ingots or write painted inscriptions on amphorae. There is further confirmation in a decree of the city of Caunus dated to the second century AD, which will be examined below. Two Roman reliefs from Ostia, the Torlonia relief and the Tabularii relief from Portus, show officials with registers. In the latter, the officials are making an inventory of the cargo being unloaded (not after *professiones* or *apographai*). If the goods were re-embarked, the same process of registration had to be gone through again. The clearance of goods, therefore, was far from being a light duty, but was arduous and time consuming. This probably helped to establish a strong link between customs stations,

51 Cf. Uggeri 1994 for a date in the first century AD and McNicoll and Winikoff 1983: 320; Uggeri 1998; Desanges 2004: 38–46, for a Hellenistic date.

52 Vélissaropoulos 1980: 218; Aristotle (*Oeconomica* 2.1–6) considers it the second source of income of the city-state, and the third in the satrapic pattern. Cf. also Xenophon *Oeconomicus* 3.12–13.

53 *IG* II2.8 = *SIG*3 118; *IG* I3.98; *SIG*3 126; *IG* XII 5.1000; *IK*-41 Knidos 5 = *SEG* 39 1989, no. 1117.

54 *AE* 1989, no. 681. Cottier *et al.* 2008.

55 Merola 1996; 133 BC according to Cottier *et al.* 2008: 257–8.

56 Nicolet 1990; 1991; 1993; 1999; Cottier *et al.* 2008: 1–14; 89; 236–78.

57 Such was the case of Alexandria Troas according to the *Lex portorii Asiae* (Nicolet 1993: 943) and of Thelmessos, according to the *Lex Antonia de Termessibus* (*FIRA* I, no. 11). Such was also the case of Caunus (Marek 2006: no. 34).

58 France and Hesnard 1995.

59 Nicolet 1993: 943.

60 For the notion, see Janni 1984.

61 Initially, they are supposed to have been forty-five, but number is quite uncertain.

62 Nicolet 1993: 947.

63 Nicolet 1993. It is not clear whether it was also necessary to unload the cargo in the case of taxes levied on passing ships such as those entering or leaving the Black Sea, who had to pay the Fortieth of Asia at Chalcedon, even when they did not intend to import or export goods to or from any harbour in Asia, Bithynia, Galatia, or Cilicia.

64 Such seals are mentioned as early as the fourth century BC, cf. Aeneas Tacticus *Poliorketika* 2.9.3–7.

transhipment and/or warehouse-harbours, making them the normal destinations of maritime trade.

These arrangements appear to be similar to the more frequently discussed Greek procedure of the *deigma*. As far as the Greek world is concerned, however, there are two theories that give two opposite meanings to the *deigma*: a sample-market or the exposition of goods for sale. For several scholars, the *deigma* allowed only the unloading of samples of the goods to be sold, with the rest of the cargo remaining on board until the conclusion of the sale. The price was then discussed between the seller and the buyer until an agreement was found. Once the transaction was done, the goods were unloaded and the taxes paid on the base of the sale price. This should take place in a free-market economy.[65] Bresson, however, has recently proposed an entirely different analysis of the actual steps involved in the *deigma*. According to him, all the goods on sale were unloaded. The seller had to fix the price as soon as the cargo was unloaded, before any discussion, and to pay the import taxes according to the declared price and quantity. In the event that he found no buyer, he had to re-load the unsold cargo and pay the export taxes, again at the declared price.[66] Bresson's theory has much to support it. For example, it would explain why Phormio, finding himself unable to sell 'his trash' at his destination, refused to leave when the ship he had arrived on was supposed to re-embark on for the return journey, according to the bottomry loan contract.[67] By refusing to reload the original ship with his 'trash' and wait for another vessel, Phormio was giving himself more time to find a possible buyer. A passage from Cicero strongly suggests the existence of a similar procedure (unloading, exposition and herald proclamation) at Puteoli, then the most important harbour in Italy, during the first century BC.[68] This passage, in fact, refers to cargoes as 'heard'—proclaimed by herald—and 'seen'—exposed at the *deigma*—at Pozzuoli.

The *deigma* seem to have lasted at least down to the second century AD at the latest. The most important documents in support of Bresson's theory date from the Roman Imperial period. It is not clear what 'unloading the cargo' refers to in the previously discussed and lacunose *Lex De Portorii Provinciae Asiae*, but a tax regulation of the Imperial period from Caunus is much clearer.[69] This set of regulations has been connected with the grant of *libertas* to the city, together with the right to collect its own *portoria*. Among other exemptions to normal practices, made possible thanks to its benefactors,[70] it afforded traders, both native and foreign, a privileged treatment with respect to other harbours. The most important passage reads as follows:

> *Foreigners who sail to and call at Caunus and offer goods for sale shall also enjoy the privilege of exemption (ἀτελεία) on the goods they import after unloading; and any of the wares imported and put ashore by them which remain unsold may be put back on board and re-exported by the merchants themselves within twenty days, without payment of export duty or any charge (. . .).*

After twenty days, the merchant had to re-value and re-declare the unsold goods: one third of the unsold had to be sold at the place or, in case of re-loading, was liable to export taxes.

The tax regulations from Caunus would indicate that the normal practice was to unload a vessel, pay the import tax *ad valorem* on the ground of the declared value (i.e., the selling price, declared immediately after berthing and likely to have been declared as early as departure, for it also appears in bottomry loan contracts) and to reload the unsold goods after paying the export tax. The same conclusions may be drawn from the contract made between the Erythreans of Asia and Hermias, tyrant of Atarneus by the middle of the fourth century BC.[71] This practice would not leave much space for the expected free-market discussions; instead any transaction was reduced to a binary option: sold at the price fixed by the merchant, or unsold. The Caunus regulations also stress the exigency of good economic information, even before the departure, in order to avoid useless and costly calls at ports that did not require the embarked cargo. Only unexpected conditions, due to war, had led Phormio to be unable to sell his 'trash', an unidentified load that did not fit with the actual state of the market at his destination. This undoubtedly supports the view of quite direct pendular movements between two identified ports, much more than that of tramping.

The problem that arises, and will arise again with regard to bottomry loans, is that it is difficult to know the scale of unofficial and illegal practices versus legal trade: false declarations, forged documents and false contents may well have been more common than one imagines. To judge from the text of the *Lex Portorii Asiae*, the network of observation posts along the shores was extremely dense and may have left little space for unwatched moorings. But it is almost impossible to keep watch over a whole

65 Meyer 1895; Jacobsen 1995.
66 Bresson 2008: 101–5.
67 Demosthenes *Against Phormio* (*Oratio 34*) 8–9.
68 Cicero *Pro Rabirio Postumo* 40–5.
69 Bean 1954: 97–9, no. 38; Vélissaropoulos 1980: 224; Marek 2006: 171–221, no. 34, C, ll. 8–10 for a more detailed and convincing analysis of the document.
70 Who had paid 60,000 *denarii* to the public treasury as a compensation for the losses subsequent to the immunity of import taxes.
71 Tod 1948: no. 165.

coast both day and night. The procedures of control seem to have reached a high level of efficiency, especially when taken in conjunction with the standardisation of containers, such as the barrel, during the second century AD; nevertheless corruption may well have opened the way to a large set of 'parallel options'.

Contracts: *naulotike*, bottomry and other loans and their stipulations

Various kinds of loans appear to have been omnipresent in maritime trade from the Classical age down to the Roman empire. Some of these may well have been 'fictional' ones, which operated as a form of insurance given by the carrier.[72] An example of this appears in Tablet 78 of the Sulpicii archive (Agro Murecine).[73] Such insurance contracts may have existed prior to the introduction of formal chartering contracts in the Late Hellenistic period. Many of the receipts preserved on papyrus seem to belong to a pre-contractual mindset.

There is evidence of chartering receipts from the Hellenistic period, which demonstrate that ships, or parts of ships, could be rented for a single voyage, a season, or even on an almost emphyteutic (long-term) basis. Despite this, *naulotike* contracts, in their final form, do not appear before the Julio-Claudian period.[74] Loan contracts may have been a useful and simple tool to create not only formal obligations between the parties involved in a trade operation, but also a complex framework of securities. Their form and contents may help us to understand the most common sailing and trading patterns.

Contracts were initially constructed in Greek private law and subsequently strongly influenced Roman Late Republican and Imperial commercial practices. These contracts were very restrictive for ancient maritime traders. A good set of ancient maritime trade contracts, both bottomry loans or chartering contracts, dating to between the mid-fourth century BC and the mid-second century AD, have been preserved. Among these, bottomry loans are acceptably documented[75] and have been accurately studied,[76] although some confusion sometimes exists between the complex set of loans involved in ancient maritime trade and the bottomry loans *stricto sensu*.[77] The earliest evidence for maritime loans is dated 421 BC.[78] These had an average rate of interest of between 20 and 24 per cent and included something very close to an insurance, although this was not strictly speaking a maritime insurance, as the loan was to be reimbursed only when the ship and its cargo had safely reached their expected destination, after the sale of the cargo, or within 20 days after the ship's arrival in port.[79] In the case of maritime loans the risk was assumed by the creditor.[80]

The contracts are all relatively similar in that they contain standard information, which is laid out more or less in the same order:

- the ship and the name of the *nauclerus*
- the port of departure of the ship
- the port of loading
- the port of destination
- sailing agenda, with possible references to sailing-routes.

For chartering contracts, the ship-owner (or the *nauclerus*) and the charterer could make an agreement based on the time, where the ship and its crew were rented for a stipulated duration, or for a predetermined voyage. The second option, called the *naulotike*,[81] required that the general journey, if not the exact details of it,

72 On the chartering contract as a form of loan, see Vélissaropoulos 1980: 282–3.

73 Gofas 1994: note 46; Tchernia 2007: 60. Here the Carian Menelas, supposed to be the *nauclerus* declares that he has received from a slave of P. Attius Severus the sum of 1,000 *denarii* to be reimbursed according to the terms of the sealed *naulotike* concluded with the lender. *Naulotike* must be understood in its usual meaning of chartering contract. According to such contract, the lent sum is due at destination only if the cargo has reached its destination. It is therefore in fact an insurance, for the lender covers the charterer's/borrower's risk, within reasonable limits.

74 Vélissaropoulos 1980: 280, with bibliography. There is no evidence for a *naulotike* strictly speaking before AD 62 (*P.Oxy* XLV.3250).

75 *P.Oxy* 2741; Lysias *Against Diogeiton* (*Oratio* 23) 6; Demosthenes *Against Aphobus* (*Oratio* 37) 11; *Against Zenothemis* (*Oratio* 32) 14; *Against Apaturius* (*Oratio* 33) 6; *Against Phormio* (*Oratio* 34) 7–10; *Against Lacritus* (*Oratio* 35) 6–16; *Against Polycles* (*Oratio* 50) 17; *Against Dionysiodorus* (*Oratio* 56) 3; *P.Vindobonensis* G.19792 (149, CE); *P.Vindobonensis* 40.822 (mid-second century AD); *Sammelbuch griechischer Urkunden aus Ägypten* III.7169; *Sammelbuch griechischer Urkunden aus Ägypten* VI.9571; Plutarch *Cato Maior* 21.6; Cato *De Agricultura proem*.; *Digesta* 22.2 *passim; Digesta* 45.1.122. The rest of evidence consists mainly in moral judgements about maritime loans.

76 Calhoun 1930; De Martino 1935; Biscardi 1936; Casson 1957; Bogaert 1965; de Ste. Croix 1974; Perdikas 1978; Vélissaropoulos 1980: 301–11; Millett 1983; Cohen 1989; Casson 1990; Krampe 1995; Thür 2000; Sirks 2002; Andreau 2005; Pébarthe 2007.

77 Rougé 1966: 345–79.

78 Harvey 1976.

79 Pseudo-Demosthenes *Against Lacritus* (*Oratio* 35) 11. The same twenty days deadline still appears about half a millennium later in a Roman imperial decree at Caunus (Marek 2006: no. 34). It seems to have been widely agreed to be the reasonable time to sell a cargo. In *Novella Iustiniani* 106 the deadline had been extended to thirty days.

80 *Periculum creditoris*: cf. Digesta 22.2.4 (Papinian III *Responsorum*); *Codex Iustinianus* 4.33.2.

81 Vélissaropoulos 1980: 280–82.

had to be agreed beforehand. This would be especially important when several charterers were involved in the same trip. Altering the itinerary was always possible, although it would have been subject to negotiation (but our evidence for this is entirely related to travellers, for whom landing in an unplanned harbour did not have the same implications as a commercial stop especially in terms of duration).[82]

Bottomry loans could be contracted for both a single and a return voyage. Deadlines were added to the contracts for such loans and the return date was in general fixed before mid-September. Bottomry loans covered the risk of shipwreck, as the borrowed capital and the interest on the loan was only payable if the ship did not sink. The date clauses within the contract were inserted in order to protect the interests of the lender and to make the risk acceptable to them. The cargo was given as security. The rate of interest increased with the risk: in the contract given *in extenso* in the *Against Lacritus* of Pseudo-Demosthenes, it rose from 22.5 per cent to 30 per cent if the ship were to leave the Black Sea (i.e., would still be on its way back) after mid-September.[83] The same date occurs in a fictitious example of the jurisconsult Scaevola, where the *stipulatio* said that by the ides of September the ship should have left Brentesium and be on its way back.[84] All of the preserved contracts have dates stipulated within them to ensure that the ships would have returned to the port of departure prior to winter. We may assume that as the rate of interest was proportional to the risk, it would have been too high to make such a transaction commercially viable during the winter.

The destination port was clearly stipulated, as sometimes was the itinerary. The only known exceptions to this pattern are the bottomry loan contract given by Pseudo-Demosthenes in *Against Lacritus* (Oratio 35),[85] and a Diocletianic contract recorded by the Codex Justinianus,[86] which only name an area of destination. But as the contact has been preserved *in extenso* this may indicate that it contained specifications and clauses that were not common. It is clear that lenders had the same interest in determining the route for the borrower as the Late Roman administration did for ships loaded with *onera fiscalia*.[87] Sailing routes were clearly supposed to be as direct as possible, which would, among other reasons, prevent the borrower from contracting other loans during the voyage on the same cargo. Consequently, the evidence from maritime contracts gives the impression that 'direct' sailing and planned trading operations were the norm from the late fifth century BC down to at least the second century AD. Unfortunately, there is insufficient evidence to establish with certainty the extent to which the borrowers actually followed the stipulations of their contracts.

82 *Acts of the Apostles* 20.136–21.2, 38; *Vita Sanctae Melaniae* 105, Rampolla; Marcus Diaconus *Vita Prophyrii* 55. It also happened that a captain refused to change his course, cf. Galien *De simplicium medicamentorum temperamentis* 9.1.2 = Kühn XII: 173.

83 Pseudo-Demosthenes *Against Lacritus* (*Oratio* 35) cf. *infra* App.

84 *Digesta* 45.1.122 = Scaevola lib. XXVIII *Digestorum*. Cf. Krampe 1995.

85 Pseudo-Demosthenes *Against Lacritus* (*Oratio* 35) 'Αθη-῀ νηθεν εἰς Μένδην ἢ Σκιώνην, καὶ ἐντεῦθεν εἰς Βόσπορον, ἐὰν δὲ βούλωνται, τῆς ἐπ᾽ ἀριστερὰ μέχρι Βορυσθένους, καὶ πάλιν᾽ Αθήναζε 'for a voyage from Athens to Mendê or Scionê, and thence to Bosporus—or if they so choose, for a voyage to the left parts of the Pontus as far as the Borysthenes, and thence back to Athens'.

86 *Codex Iustinianus 4.33.4: Imperatores Diocletianus, Maximianus. Cum proponas te nauticum fenus ea condicione dedisse, ut post navigium, quod in Africam dirigi debitor adseverabat, in salonitanorum portum nave delata fenebris pecunia tibi redderetur, ita ut navigii dumtaxat quod in Africam destinabatur periculum susceperis, perque vitium debitoris, nec loco quidem navigii servato, illicitis comparatis mercibus quae navis continebat fiscum occupasse: amissarum mercium detrimentum, quod non ex marinae tempestatis discrimine, sed ex praecipiti avaritia et incivili debitoris audacia accidisse adseveratur, adscribi tibi iuris publici ratio non permittit. DIOCL. ET MAXIM. AA. AURELIAE IULIANAE*. 'The Emperors Diocletian and Maximilian: You assert that you have granted a maritime loan on the condition that, after the voyage, which the debtor had declared to have Africa as its destination, the ship would reach the port of Salonae (Split) and that the amount of the loan would be given back to you there, in such terms that you had assumed the risk of the voyage only on that part whose destination was Africa; that because of the debtor's treachery, even the destination having not been observed, and illegal merchandise having been bought, the *fiscus* had confiscated the whole ship's cargo. The cost of the loss, which admittedly happened not as the result of the hazard of a tempest at sea, but as the consequence of the debtor's irresolute avarice and uncivil imprudence, the rule of public law does not permit to ascribe to you. Diocletian and Maximilian, Augustus, to Aurelia Juliana.' Here the contractual destination was the province of Africa.

87 *Codex Theodosianus* 13.5.33: idem, *AA. Anthemio praefecto praetorio: qui fiscales species susceperit deportandas, si recta navigatione contempta litora devia sectatus eas avertendo distraxerit, capitali poena plectetur. dat. XIII kal. aug. Constantinopoli Honorio VIII et Theodosio III AA. conss*. (409 iul. 19). 'Who would have taken upon his charge merchandises belonging to the *fiscus* in order to transport them, if he chooses to ignore the direct route of navigation, follows shores off his way, and drives the merchandise away, this will face capital punishment.' The opposition between *recta navigatio* and coasting along *litora devia* is very striking.

Much of the evidence for maritime loans is related to the creation of the *dikai emporikai*, in fourth-century BC Athens, and is mainly related to cases of unscrupulous, or supposedly unscrupulous, borrowers. As the evidence is related to cases of law, both real and theoretical, it offers a partisan point of view and is obviously associated with contracts between parties that were in disagreement. It can be assumed that when a ship returned with valuable goods, it was in nobody's interest to look at the actual itinerary of the ship and at the origin of its cargo.

The need to guard against fraud and to ensure that the lender's interests were safeguarded sometimes resulted in the decision to send representatives on the journey. This was still a relatively new phenomenon at the time of Cato the Censor,[88] but seems to have been quite common by the empire. In the text of Scaevola, the presence of the freedman representative of the lender on board the ship is essential to the matter discussed. The same passage also shows that sending a representative allowed for greater flexibility and allowed changes to the plans, with respect to the interests of both parties. But other documents show that this was not always the case.[89]

The second question that arises is that of the actual importance of bottomry loans in the overall volume of trade. It is certain that maritime loans did not underpin all maritime trade. Those who did not borrow simply accepted the risks in order to avoid having to pay the high rates of interest of such loans and to increase the scale of the potential profits. It has been noted that the sums mentioned in bottomry loans are generally rather low and from this it has been argued that that kind of loan was especially common among small merchants.[90] It is, however, almost impossible to be definitive about this with the available evidence.

Societies made it possible to divide the risk between the associates. Chartering or owning entire fleets could also divide statistically the risk between the ships, and reduce it, especially through convoys. It is not clear how illustrative may be the case of a guardian who, in late fifth-century Athens, had loaded, at the children's risk, a cargo worth two talents—or 12,000 drachmae, i.e., nearly five times the average amount of 2,600 dr. calculated by Bogaert[91] for the value of a cargo chartered by a single man in fourth-century Athens from the evidence gathered from the Attic Orators—, to some port in the Adriatic (i.e., somewhere between Otranto, Sicily and the southern Peloponnese) and made, for himself, a double profit.[92] Lysias blames him for this, implying that he should have borrowed the money or sailed at his own risk, but certainly not at that of the children, so that we can draw no conclusion from the unusually high amount mentioned here.

It is actually impossible to decide whether bottomry loans became less common when the value of the cargo increased and when trade became the affair of wealthy individuals or societies. Choosing to sail at one's own risk was mainly a problem of risk assumption, which probably subsequently implied a larger set of situations that are poorly documented in surviving evidence.

Maritime loans were most commonly not involved in financing winter sailing, probably, if not certainly, because the rates of interest charged would have been prohibitive given the risks involved with sailing at this time. The period of *mare apertum*, however, did not forbid sailing but ensured that risk was taken by the shipper. Winter sailing was already attested during the Peloponnesian war and in Zeno's archive,[93] and it had become common by the time of the Roman Republic, as a response to piracy and continued during the Roman Empire for economic reasons.[94] The emperor Claudius,

88 Plutarch *Cato Maior* 21.6: 'He used to loan money also in the most disreputable of all ways, namely on ships, and his method was as follows. He required his borrowers to form a large company, and when there were fifty partners and as many ships for his security, he took one share in the company himself, and was represented by Quintio, a freedman of his, who accompanied his clients in all their ventures'.

89 *Codex Iustinianus* 4.33.4 (and above, note 87).

90 Rougé 1980.

91 Bogaert 1968: 373.

92 Lysias *Against Diogeiton* (*Oratio* 23) 25: καὶ ἀποπέμψας εἰς τὸν Ἀδρίαν ὁλκάδα δυοῖν ταλάντοιν, ὅτε μὲν ἀπέστελλεν, ἔλεγε πρὸς τὴν μητέρα αὐτῶν ὅτι τῶν παίδων ὁ κίνδυνος εἴη, ἐπειδὴ δὲ ἐσώθη καὶ ἐδιπλασίασεν, αὑτοῦ τὴν ἐμπορίαν ἔφασκεν εἶναι. 'Again, he dispatched to the "Adriatic" a cargo of two talents' value and told their mother, at the moment of its sailing, that it was at the risk of the children; but when it went safely through and the value was doubled, he declared that the venture was his'. Here ὁλκάδα δυοῖν ταλάντοιν undoubtedly meant how much the cargo was worth, for the number of talents is too low to mean the tonnage of the ship, cf. Wallinga 1964.

93 For winter sailing in general see Rougé 1952; Tammuz 2005. For the Peloponnesian War, Thucydides 8.35. Zimmermann 1992 for Zeno's archive. Arrivals and departures to and from Egypt in the mid-fifth century BC are recorded between mid-February and mid-December, cf. Briant and Descat 1998: 80; for the Late Imperial regulations and their impact on winter sailing, Sirks 2002.

94 Pliny the Elder *Naturalis Historia* 2.125 [XLVII]: *Ante brumam autem VII diebus, totidemque post eam, sternitur mare alcyonum feturae, unde nomen ii dies traxere. Reliquum tempus hiemat. Nec tamen saeuitia tempestatum concludit mare: piratae primum coegere mortis periculo in mortem ruere et hiberna experiri maria; nunc idem auaritia cogit.* 'For seven days before the winter solstice, and for the same length of time after it, the sea becomes calm, in order that the kingfishers may rear their young; from this circumstance they have obtained the name of the halcyon days; the rest of the season is winterly. Yet the severity of the storms does not entirely close up the sea. In former times, pirates were compelled, by the fear of death, to rush into death, and to brave the winter sea; now we are driven to it by avarice'.

for example, decided personally to assume the risk that was normally assumed by shipowners in winter in order to encourage them to devote themselves to *annona* freight.[95] It appears then that the shipowners and *naucleri* were more involved personally in trading operations during the winter months, a role that was usually devolved to the merchants during the summer.

Winter sailing may have necessitated the development of specific sailing routes and trading patterns. Winter brings increased weather instability and the risk of gales. We may assume accordingly that the practice of sailing on the open sea was reduced with respect to summer sailing, as the probability of finding constant and reasonable winds lowered. The reduced number of ships at sea also made supplies rarer and resulted in local shortages, the exact details of which would have varied from market to market. Together the reduction of sailing across open water and localised shortages of goods would have created the best conditions for tramping.

Economic contexts: profit and economic information

A merchant would have needed to make a substantial profit on the sale of a cargo, as deducted from this were a series of charges: export and import taxes, interests payments on loans, *naulotike*, and other travel expenses. In Classical Athens, the value of an imported cargo was approximately at the level of twice the initial investment. This ratio may be deduced not only from a text of Lysias,[96] but also from the bottomry loans mentioned in the speeches of Demosthenes.[97] In these texts the value of the cargo always appears to have been twice that of the price of acquisition. It is, therefore, to be interpreted as its value at destination.

The high price differentials within the Mediterranean were the driving force behind maritime trade. The ability of maritime traders to make a profit resulted in some hostility and criticism, which was widely echoed by the preamble of Diocletian's Prices Edict.[98] If the Edict had an effect, the universal levelling of prices to what was their actual level in the capital[99] may have had terrible consequences for maritime trade; it would have removed the price differentials that were its driving force. The methodical brutality of the destruction of the copies of this ill-famed Edict would give strength to this impression.

The most striking fact concerning ancient maritime trade is that the value of the cargo, i.e., its price at destination, is supposed to be known before any transaction. The value that appears in any contract for a bottomry loan is entirely virtual, but consensual. The collection of taxes *ad valorem* is also based upon declarations of the same virtual value. These declarations used to precede the sale. It is almost certain that this was written on shipping documents, as shown by the episode of the *emporoi* constrained by the Byzantines to enter their harbour. The former refused to sell unless at 10 per cent above the price.[100] This implies a predetermined consensual selling price, which in the Greek world, had to be sincere and coincide with the fair price. The notion of a *iustum pretium* is essential to Roman law too and implicitly means that prices at destination were the object of a consensus whose existence relied on a good information network, which also made tramping unnecessary.

The same certainty framed Trimalchio's account of his first shipping experience: he knew the need of the market for wine at a special time and built five ships to take advantage of this.[101] Trimalchio's knowledge of the market stresses the importance of this form of economic information in the development of ancient trade. The importance of maritime trade made possible highly specialised production in certain areas, which generated enough surplus and profits to satisfy the subsequent requirement to import supplies.

The result was a relative stability in the flows of commerce that could last several decades, until a war or some other change put an end to what had become a routine trade route. Business would then became more difficult for a while, until the flows of trade reorientated

95 Suetonius *Vita divi Claudii* 18.2: *suscepto in se damno, si cui quid per tempestates accidisset* 'he would assume the loss, if some accident would happen because of the storms'; and Rougé 1966: 359.

96 Lysias *Against Diogeiton* (*Oratio* 32) 25 cited above: ἐπειδὴ δὲ ἐσώθη καὶ ἐδιπλασίασεν.

97 Demosthenes *Against Aphobus* (*Oratio* 37) 11; *Against Zenothemis* (*Oratio* 32) 14; *Against Apaturius* (*Oratio* 33) 6; *Against Phormio* (*Oratio* 34) 7–10; *Against Lacritus* (*Oratio* 35) 6–16; *Against Polycles* (*Oratio* 50): 17; *Against Dionysiodorus* (*Oratio* 56) 3.

98 Graser 1940: 166–73; Callu 1969: 405; Crawford 1975; Corcoran 1996; Arnaud 2007.

99 Sperber 1974: 115–30.

100 Pseudo-Aristotle 2.3.1346b: the buyers were supposed to buy at the declared price. Eventually, by decision of the city, the extra 10 per cent was charged to the buyer. The claim for a 10 per cent compensation for the delay also means that sailing times were also planned. Such compensations were due to the *naucleri* when the ship's departure was delayed by the merchant's fault (Vélissaropoulos 1980: 154).

101 Petronius *Satyricon* 76: *Concupivi negotiari. Ne multis vos morer, quinque naves aedificavi, oneravi vinum—et tunc erat contra aurum—misi Romam. Putares me hoc iussisse: omnes naves naufragarunt. Factum, non fabula. Vno die Neptunus trecenties sestertium devoravit.* 'I embarked upon business. I won't keep you long in suspense; I built five ships and loaded them with wine—worth its weight in gold, it was then—and sent them to Rome. You'd think I'd ordered it so, for every last one of them foundered; it's a fact, no fairy tale about it, and Neptune swallowed thirty million sesterces in one day!'

themselves and a new route developed. To such routines belong the imports of cereals in Athens, the fourth-century BC exports of Thracian wine to Pontus, which was soon challenged by the development of the Rhodian wine trade, or the slaves-against-wine traffic of the Late Roman Republic.[102] The bulk transportation of wine on dolia-ships was organised from Campania, but was linked not only to the wine-production areas of Southern and Central Italy, Catalonia, Southern Gaul, but also to a network of harbours with special equipment. This lasted more than one century.[103] A possible explanation for the disappearance of these ships is maybe to be found in the increasing use of barrels, which made these ships obsolete, while the trade routes may have remained unchanged.[104]

It is interesting to note the similarity in the cargoes of contemporary wrecks that sank on their way to the same destination. It would appear that at certain periods everybody carried more or less the same goods along the same routes to the same destinations. Heterogeneous Spanish cargoes of the first century AD illustrate this pattern.[105] A Phaselite could borrow money in Athens to load Thracian wine and sell it in the Black Sea and then bring back probably grain to Athens.[106] A Massaliote ship and Massaliote traders could sail together with an Athenian merchant to bring Sicilian grain to Athens.[107] Under the Roman empire, significant quantities of Baetican olive oil consumed in Rome were sold and carried by families from Narbonne, as shown by numerous *tituli picti* from Monte Testaccio.[108]

The quality of information was partly consubstantial with those huge flows of goods. It was undoubtedly strengthened by the organisation of the traders and *naucleri*. There was probably a large diaspora of traders around the Mediterranean as early as the fifth century BC. Though living apart from their 'native' city at distant market places and often *proxenes* of their city of adoption, they would still have had a close relationship with their 'native' city. A civic organisation of foreign communities involved in trade already existed at Athens about 360 BC.[109] It was predominant at Delos during the second century BC[110] and culminated with the city-corporations of *navicularii* in the second and third centuries AD, as shown by the inscribed mosaics from the Piazzale delle Coropazioni at Ostia, and several other inscriptions.[111]

In addition to citizen or regional networks, family networks also played their part. During the second century AD, not less than five families from Narbonne, the Fadii, Valerii, Segolati, Alitii and Aponii, took a prominent role in the oil trade from Baetica to Rome. This is demonstrated by evidence from Monte Testaccio.[112] The *Fadii* were also present, through their freedmen, at Corduba and Astigi in Spain as well as in Rome.[113] Such family networks were surely essential for trade information. Another family of Narbonne, the Usuleni, sold and carried Catalan wine and tiles.[114]

As the scale of maritime trade increased so did the numbers of people involved in it and the more highly specialised the industry became. Already in Classical Greece, there were *emporoi* and *naucleri*, as well as more specialised *kapeloi*. During the second century BC, in a limited number of places, such as Berytus, Delos and Alexandria, enigmatic *ekdocheis* appear together with *emporoi* and *naucleri*. The Roman world introduced the *negotiatores*, or brokers, who were settled in the provinces and were often the representatives of high-status individuals,[115] who during the Roman Empire appear to have specialised either in trade with a particular country, or in particular goods.[116]

All of these networks would obviously have intersected and overlapped and this would have resulted in a high level of certainty with regard to both the demand for goods and how to supply them. This probably reached its peak under the Roman peace and in a more general way during periods of stability. This is quite important as the level of certainty is a key to trade patterns. The less a market is certain the more tramping appears to be the solution. With greater certainty about the market the greater the amount of direct sailing. The more the value of a determined item is subject to variation through space and time, the more it leads to tramping, in search

102 Gianfrotta 2007.
103 Marlier 2008; Heslin, this volume (Chapter Nine).
104 Cf. Wilson, this volume (Chapter Two).
105 Colls, Etienne *et al.* 1977; Corsi-Sciallano and Liou 1985; Liou 1987; 1990; Liou and Domergue 1990; Bernard 2007.
106 Demosthenes *Against Lacritus* (*Oratio* 35).
107 Demosthenes *Against Zenothemis* (*Oratio* 32).
108 Héron de Villefosse (1915); De Salvo 1992: 193–8, 396–9; 2006; Remesal-Rodríguez 2004.
109 *IG* II2 141 = *SIG*3: 185.
110 Hatzfeld 1919.
111 *CIL* XIV: 279 (p. 614) = *CIL* XIV: 4549, 3b: *Nav[icu]l(ariorum) Tarric(inenses)*; *CIL* XIV: 4549,12–13: *Navicular[i H(ippone)] Diarry(to) [---]*; *AE* 1913: 90 = *CIL* XIV: 4549,10: *Naviculari(i) Misuenses*; *AE* 1913: 99 = *CIL* XIV: 4549, 11: *Naviculari(i) Mu[s]lu[vit]a[ni]*; *AE* 1915: 59 = *CIL* XIV: 4549, 21–22: *Navicul(arii) et negotiantes / Karalitani*; *AE* 1915: 64 = *CIL* XIV: 4549, 23: *[Navic]ulari(i) Syllecti[ni]*; *AE* 1917/18: 110 = *CIL* XIV: 4549, 34–36: *Naviculari(i) Curbitani d(e) s(uo) / s(tatio) n(egotiatorum) f(rumentariorum) c(oloniae); CIL* XIV: 4549, 17: *Naviculari(i) Gummitani*; *AE* 1955: 178 = *AE* 2002: 276: *Naviculari{e}i O[stienses]*; *CIL* III: 14165: *Navicularii marini Arelatenses*, etc.
112 Héron de Villefosse 1915; De Salvo 1992: 193–8, 396–9; 2006; Remesal-Rodríguez 2004.
113 Corduba *Inscriptions Latines de Gaule Narbonnaise* no. 586; Astigi *CIL* II: 1495 = *CIL*A 2/739; *EDH*-No.: HD032003; Rome *CIL* VI: 17651.
114 Christol and Mallart 1997.
115 Feuvrier-Prévotat 1981; Kneissl 1983; Garcia Brosa 1999; Andreau 2000; Verboven 2004; 2007; 2008.
116 Baldacci 1967; Rico 2003; De Salvo 2006.

of higher selling prices, and the more its supply tends to be controlled by the state, in order to limit the escalation of its cost. The more stable and foreseeable it is, the more it leads to direct sailing.

This does not mean that business could not be done at stops on the way to the main destination. Indeed it has recently been argued that Cretan wine was loaded on *annona* ships on their way to Rome and sold there.[117] It is not fully certain, for we lack archaeological evidence to demonstrate this hypothesis, but the cargo of the deep-water Plage d'Arles 4 wreck, which sank along the shores of the Camargue,[118] could help to substantiate the multiple pick-up theory argued for by Tchernia[119] for another route and with other loads. The origin of the cargo is very homogeneous and very much looks like many other wrecks of the first half of the first century AD. The only exception is the presence of amphorae of Ebusos (Ibiza), which were clearly loaded on the way, as confirmed by their location at the top of cargo. This would be of little significance, had the same assemblage not appeared on another wreck at Chiessi (isola d'Elba).[120] As both wrecks were found along a coasting route they may both support the idea of a repetitive pattern of trade.

Loading complementary cargoes on the way was thus clearly possible. For the case above, the stop at Ebusos was made easier by Ebusos and Baetica belonging to the same fiscal district, but it would have been necessary to have planned the stop in advance as the loading of the vessel stowage would have needed to be organised in such a way so that space was left for this complementary load. An alternative would be for the crew to place goods to be sold at the top of the cargo and in the middle of the hull, which could be replaced with the new items bought on the way. In the second option, the new goods may have been preferably loaded in the same fiscal district as the main cargo, and in both cases, light items must have been loaded rather than heavy ones. This probably explains the existence of specialised lightweight production at important maritime crossroads or technical calls, such as cooking-ware at Pantelleria, linen at Malta or sandals at Patara. Proper stowage is essential to ensure the efficient and safe sailing of a vessel. Adding heavy items as well as selling items stowed under the deck would have necessitated the entire reorganisation of stowage and the probable unloading of the whole cargo, with all the consequences one can imagine. Consequently, although loading certain types of complementary cargoes along the way was highly probable, this was organised in advance and this form of maritime trade was emphatically not the same as tramping.

Ships, harbours, sailors and traders—the social division of maritime trade and its limits

Not every ship could use every harbour. Some harbour authorities possibly forbade smaller ships access to their basins, as in Thasos.[121] On the other hand, big ships could not access all harbours and their moorings. Perhaps the most extreme example of this is the giant grain ship Syracusia, which finished her life as a floating palace in the port of Alexandria because she was too big for other harbours.[122] The ancient portolans, textual descriptions of harbours and coast lines, make it clear that merchant ships could access only a limited number of harbours and moorings, whose capacity and accessibility was known.[123]

The evidence for the size of ancient ships could be discussed at length.[124] It could be suggested that smaller vessels would have been used for coastal routes or tramping, whereas larger ships were used for longer distance voyaging over the open seas. Such inferences, however, are misleading. From the evidence gathered from shipwrecks, as well as from *P.Bingen* 77, it is suggested that ships with an actual capacity of 20 to 50 metric tonnes were the most numerous in the ancient world. Although such vessels were in the majority, the overall tonnage of goods they carried was actually inferior to that carried by bigger ships.[125] For the ship owner and the merchant there are several reasons why smaller ships should have been more popular than larger ones. They were less expensive to produce and to operate and their small capacity made it possible to restrict the number of chartered loads necessary to fill the vessel. Indeed, a merchant may have been able to charter the entire ship, which would have given him more of a say in any decisions taken during the voyage.

Hasebroek identified three types of Greek trader: the *kapelos*, who confined himself to the home market, the *emporos*, who was involved in interstate trade and the *naukleros*, who 'transports on his own ship'.[126] Recently, Reed has established a watertight bulkhead between *emporos* and *naukleros*.[127] He does not consider the *naukleros* a trader, but a shipowner involved only in

117 Tchernia 2007.
118 Long 1997.
119 Tchernia 2007.
120 Pallarès 1983.
121 *IG* XII Suppl. 151, no. 348 = *SEG* XVII: 417.
122 Athenaeus 5.37–44; ibid. 6.20; cf. Casson 1971: 186; Pomey and Tchernia 1978: 248; Rougé 1984: 230; Janni 1996: 425–52.
123 Arnaud 2010: 105; Strabo *Geographica* 4.6.3; *Stadiamus Maris Magni* 253 Helm = 12 Müller; 255 Helm = 14 Müller; 269 Helm = 226 Müller; 284 Helm = 41 Müller; 301 Helm = 57 Müller; 332 Helm = 86 Müller; *Periplus Maris Erythraei* 33, etc.
124 Cf. Wilson, this volume (Chapter Two).
125 Arnaud 2005: 34–8.
126 Hasebroek 1965: 1–6.
127 Reed 2003: 7–11.

carriage, while *emporoi* carried on interstate trade, relied for much (or probably most) of their livelihood on interstate trade, travelled by sea, in someone else's ship, owned the goods they traded in, did not produce the goods they traded in, remained *emporoi* year-in, year-out, and sold to retailers.

For Reed, Greek and later Roman law are in agreement in distinguishing between 'sailors' and traders. While this normative approach is intellectually satisfying, it does not fit entirely with the variety of situations we find in ancient sources.[128] Out of eleven ships mentioned in *P.Bingen* 77, two were empty, four had been chartered by a single individual, two had two charterers and three had been chartered by the *naukleros*.[129]

We may assume that occasional *emporoi* are well-known in the Classical period and that their actual role in the overall maritime economy was quite secondary. The case of multiple charterers is quite well documented in both the literary evidence in the legal cases presented by Demosthenes in *Against Zenothemis* and *Against Phormio*, as well as in the archaeological evidence of shipwreck. The Augustan Sud-Perduto 2 wreck[130] was carrying a cargo of Dressel 7, Dressel 9 and Haltern 70 amphora, as well as 48 lead ingots that were found foreward of the mast, on the mast-step. This cargo was owned by three different charterers, as shown by the inscriptions it bore. The *tituli picti* of Port-Vendres II, a small ship sunk between AD 41/2 and 50, let us know that at least nine *mercatores* had chartered the ship.[131] It is obvious that the charterers had agreed to the conditions of the voyage and trade prior to the departure of the vessel. Consequently, it would most likely have been easier for a single charterer to change plans, with the consent of the shipowner (or his representative). Obviously though, any such decisions may have had an impact on the terms and conditions of any bottomry loan.

It is likely, although not a prerequisite in every case, that the *naukleros* would have owned ships, (though the word and its Latin imitation *navicularius* had different meanings through time). He was the one who signed the *naulotike* and promised to bear a cargo safely to a destination for the benefit of one or several merchants and passengers. Strictly speaking, the *naukleros* is a carrier of goods and rents out a part or the totality of a ship's hull. In Roman law this renting is called *naulum* and is the object of *locatio/conductio stipulationes*. The ship and her crew may be rented for a determined time or to a specified destination.[132] Where a ship was simply contracted to take a cargo to a destination, it was in the interests of the *nauclerus* to make as many voyages as possible during the sailing season.

Quite often, in Classical Greece, the *nauclerus* was not the shipowner. In Demosthenes' *Against Phormio*, the *naukleros* was a dependant of Dio, in this case his slave. Ptolemaic papyri always distinguish the shipowner, expressed by the genitive, and the captain (*naukleros*). Roman imperial papyri make the same distinction, but call the captain *kybernetes*. This practice continued as shipowners began to own entire fleets from Late Classical Greece onwards. Indeed the Romans distinguished between the *magister navis*, in charge of the ship, and the shipowner, *dominus navis*, who acted as *exercitor* and was thus co-responsible for the former's decisions. *Misthoprasia* allowed the long-term rental of vessels, for periods of up to 50–60 years to *naukleroi*, who operated them as if they actually owned them.[133] It is difficult to estimate the extent to which such practices may have had an impact on trading practice.

The shipowner or his representative could also act as an *emporos*. This could be a very flexible role and the merchant-shipowner could be the sole trader on board the vessel, or operate in a secondary capacity, undertake large- or small-scale trade and be occupied in this either permanently or occasionally. Many shipowners were in fact personally involved in trade. In his study of maritime traders in fourth-century BC Athens, Reed noticed that only ten *naukleroi* were known to have acted as *emporoi*.[134] At this period, however, the evidence is rather sparse and by the Roman period things become clearer. Although fictitious, the example of Trimalchio is quite clear in this respect, for in both trips, Trimalchio was at the same time the shipowner and the charterer.[135] Shortly before his supposed time (*c.* AD 20–30), the Sud-Lavezzi 2 wreck sank after colliding with the Sud-Lavezzi shelf.[136] It was carrying 5.2 metric tonnes of lead ingots, 5.7 metric tonnes of copper ingots, together with a cargo of at least 300 amphorae from Baetica (a proportion of this cargo was most probably jettisoned). The evidence shows that the owner of the lead ingots was also the *nauclerus*, Appius Iunius Zethus. The same name also appears on the lead-stocks of the anchors, demonstrating that Appius was both shipowner and trader. Being the freedman of a prominent family, he is likely to have been involved in the larger business of the Iunii. During the Late Roman republic, the Sestii headed a vertical trade organisation, which included wine-production, ship-owning and trade.[137]

128 Gianfrotta 2007.
129 Heilporn 2000.
130 Bernard 2007.
131 Colls, Etienne *et al.* 1977.
132 Vélissaropolos 1980: 279–82.
133 Vélissaropoulos 1980: 273–9.
134 Reed 2003: 13.
135 Petronius *Satyricon* 76.I.
136 Liou and Domergue 1990.
137 Manacorda 1980; D'Arms 1980.

Similarly Verres was involved in agricultural production and owned ships.[138] At his trial he was accused by Cicero of attempting to use a public ship to export the grain from his villa for the purposes of trade.[139]

Some self-chartering *naukleroi* were clearly involved in direct trade. In *P.Bingen* 77,[140] the *naukleroi* were all carrying homogeneous cargoes, or at least had made such a declaration. They are also the best candidates for possible tramping. It is noteworthy that Late Roman texts tend to consider the *nauclerus* (now meaning a shipowner involved in annonarian freight) as a merchant as well as a shipowner.[141]

Conclusions

The general impression that one may draw from the evidence presented in this paper confirms the general impression of the stability of the rules and practices that framed ancient trade from the Classical period at least down to the mid-fourth century AD. This picture nevertheless leaves a large space, within certain limits, for variations in trade patterns, for natural, technical and cultural determinism are likely to have had but a slight impact on trade patterns, if compared with human contexts.

Direct trade, increasingly large ships, and high volume / low value cargoes seem clearly to have been the predominant trade-pattern during Classical times. This was clearly related to stable contexts, and efficient information networking, standardized procedures, sustainable peace, and a high difference in prices in different areas. Fiscal regulations and frontiers did not challenge, but organized this pattern. The so-called Roman peace probably provided the best conditions for direct specialized trade. The routine of high volume and generally low-value trade undoubtedly contributed to more direct routes, including 'grand cabotage' and to faster sailing-times. In this pattern intermediary calls at ports on the way to the final destination were possible, but probably often restricted to ports situated in the same fiscal district as the harbour of departure or destination.

The overall picture derived from the analysis of the impact of human contexts on trade patterns certainly gives the impression of an active globalized maritime trade, but this probably had its exceptions, and may have left an open space for a large spectrum of intermediary patterns, down to tramping. Troubled political contexts, such as those of the late fifth and fourth century BC, may explain a tendency to increased regionalism and a discrete impact of long-distance trade, and may have stimulated tramping. The lack of information and commercial networking may have had the same origin and the same consequences.

In a more general way, and not least because sailing times have a cost, tramping is often a quest for higher and less certain profits. Not only does it fit better with higher intrinsic values, and higher profits; there seem also to be a link between risk management and tramping. The essential structural difference between winter and summer sailing must again be addressed. These not only generated different trading patterns, but also would have used different routes and sailing times. Winter sailing, more risky, probably meant coasting (in search of shelter), smaller ships (also in order to divide the risk between several ships), increased losses, a different structure of markets, a different scale and the search for higher profits.

When, in the third century AD, Philostratus described a merchant going from market to market, he speaks

138 Cicero *Actio II In Verrem* 1.17.[46]: *Delum venit. ibi ex fano Apollinis religiosissimo noctu clam sustulit signa pulcherrima atque antiquissima, eaque in onerariam navem suam conicienda curavit.* 'He came to Delos. There from that most holy temple of Apollo he privately took away by night the most beautiful and ancient statues, and took care that they were all placed on board his own freighter.'

139 Cicero *Actio II In Verrem*, 5.18.[46]: *tu tibi hoc numquam turpe, numquam criminosum, numquam invidiosum fore putasti, celeberrimo loco palam tibi aedificari onerariam navem in provincia quam tu cum imperio obtinebas? quid eos loqui qui videbant, quid existimare eos qui audiebant arbitrabare? inanem te navem esse illam in Italiam adducturum? navicularium, cum Romam venisses, esse facturum? ne illud quidem quisquam poterat suspicari, te in Italia maritimum habere fundum et ad fructus deportandos onerariam navem comparare.* 'Did you never think it would be grounds for an accusation, or cause for unpopularity, to have a freighter openly built for you, in a most frequented place in that province in which you had the supreme command? What did you suppose that they said who saw it? What did you suppose that they thought who heard of it? Did they think that you were going to take that vessel to Italy empty? That you were going to let it out as a merchant vessel, when you got to Rome? No one would even believe that you had in Italy any farm on the coast, and that you were preparing a merchant vessel for the purpose of moving your crops. Did you wish every man's conversation to be such as for men to say openly that you were preparing that ship to carry all your plunder from Sicily, and to go to and fro for the booty which you had left behind?'

140 Heilporn 2000.

141 *Codex Iustinianus* 4.61.6 (365 Feb. 18); Codex *Theodosianus* 13.5.16 and 13.9 (380 Feb. 6); 13.5.26 (396 Dec. 23). See also Sirks 2002.

of *agora* and *kapeloi*, not of *emporia*.[142] He probably does not provide us with an insight into tramping and possible changes in trade patterns, but delivers a *topos* about ill-famed maritime traders. The direct access of the maritime trader to the local market seems to belong to later, post-Classical, times, but it may also be part of winter sailing and trade patterns.

Fourth-century AD regulations, whose scope was clearly incentive, stimulated longer trade cycles of up to two years, to final destination for the *navicularii* involved in annonarian and fiscal transportation. It has been shown that these included, especially, but not only, during the winter season, shorter cycles close to tramping, the corn on board being sold on the way and replaced by corn bought elsewhere. The mutual interests of state corn-supply and of the merchant-shipowner was thus preserved.[143] It is difficult to establish if such regulations reflected new trade practices or created them. It is nevertheless obvious that under the Late Roman Empire the prevailing trade-pattern had turned to coasting and tramping, associated with longer sailing- and trading-cycles and to smaller ships. This evolution is well characterized by the adoption of the lateen sail as early as the fifth century AD.[144]

As a trade pattern, tramping fits well with high value/small volume flows of goods, such as the one involving oriental merchants in Visigothic Spain described in the Visigothic law.[145] There is no doubt that the fall in the volume of maritime trade in Late Antiquity may have contributed to an increase in the scale of tramping and a resurgence of its place in maritime trade. This is not to say that tramping was not present earlier within the Mediterranean, simply that its importance increased as soon as high values, small volumes and fluctuating markets were all involved together. Such conditions may be found during periods of crisis and uncertainty and would have resulted in more winter trading and operations certainly outside the *annona* cereals trade.

142 Philostratus *Life of Apollonius of Tyana* IV.4.32: Ἐμπόρων γε καὶ ναυκλήρων κακοδαιμονέστερόν τι ἐρεῖς ἔθνος; πρῶτον μὲν περονοσοῦσι, ζητοῦντες ἀγορὰν κακῶς πραττοῦσαν· εἶτα προξένοις καὶ καπήλοις ἀναμιχθέντες, πωλουσί τε καὶ πολοῦνται, καὶ τόκοις ἀνοσίοις τὰς αὐτῶν κεφαλὰς ὑποτιθέντες ἐς τὸ ἀρχαῖον σπένδουσι. Κἂν μὲν εὖ πράττωσιν, εὔπλοεῖ ἡ ναῦς, καὶ πολὺν ποιοῦνται λόγον τοῦ μήτε ἓκόντες, μήτε ἄκοτες· εἰ δὲ ἡ ἐμπορία πρὸς τὰ χρέα οὐχ ἀναφέροντο, μεταβάντες ἐς τὰ ἐφόλκια προσαράττουσι τὰς ναῦς καὶ τὸν ἑτέρων ναῦται βίον, θεοῦ ἀνάγκην εἰπόντες, ἀθεώτατα καὶ οὐδὲ ἄκοντες αὐτοὶ ἀφείλοντο . . . ἐν κοίλῃ νηι κεῖσθαι, λήθην μὲν ἔσχοντα . . ., φόρτου δὲ μνήμονα, καὶ ναυτικῆς ἀκριβολογίας, τίνος αἰσχυνης ἄπεσιν. 'Well, and can you mention any rabble of people more wretched and ill-starred than merchants and skippers? In the first place they roam from sea to sea, looking for some market that is badly stocked; and then they sell and are sold, associating with factors and brokers, and they subject their own heads to the most unholy rate of interest in their hurry to get back to the principal; and if they do well, their ship has a lucky voyage, and they tell you a long story of how they never wrecked it either willingly or unwillingly; but if their gains do not balance their debts, they jump into their long boats and dash their ships on to the rocks, and make no bones as sailors of robbing others of their substance, pretending in the most blasphemous manner that it is an act of God. And even if the seafaring crowd who go on voyages be not so bad as I make them out to be; yet is there any shame worse than this, for a man who is a citizen of Sparta and the child of forbears who of old lived in the heart of Sparta, to secrete himself in the hold of a ship, oblivious of Lycurgus and Iphitus, thinking of nought but of cargoes and petty bills of lading?

143 Sirks 2002.

144 Whitewright 2009.

145 Marlasca 2001.

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