

# Pólis/Cosmópolis

## Identidades Globais & Locais

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& Thomas Figueira (coords.)**

IMPRESA DA UNIVERSIDADE DE COIMBRA  
COIMBRA UNIVERSITY PRESS

ANNABLUME

# DEFENSE AND DETERRENCE IN THE CONTEXT OF THE FOUNDATION OF THE DELIAN LEAGUE

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**ABSTRACT**— This contribution examines the plans of the Athenians and their allies at the foundation of the Delian League in 478 by exploring conjectural force structures. Likely Persian forces of c. 600 triremes could be anticipated. Persia had also demonstrated noteworthy capacity to mount closely successive expeditions and to recover from losses. Therefore, the Delian League was severely challenged to match ship for ship and to find the requisite manpower. Various methodologies yield both total and practicable allied fleets of different sizes (with total hulls touching 600 at highest estimate). Financial administration and tactical deployment discouraged small ship contingents for the allies in favor both of levying monetary tribute which funded the Athenian fleet and of manning its ships with personnel from smaller maritime allies. Hypotheses on the costs of allied forces can be proposed in order to understand the high initial Aristeidian assessment of the allies. Eurymedon represents a turning point, demonstrating how early preemptive deployment and confrontation far eastward from the Aegean by the Delian League compensated for superior Persian resources.

**KEYWORDS:** Athens, Delian League, Eurymedon, Greek navies, Persians, tribute and assessment

The bibliography on the foundation of the Delian League is voluminous, as scholars have grappled with controversies as varied as the league's purpose, organization, classification of allies, and the nature and scale of tribute in the early alliance.<sup>1</sup> The primary text is Thucydides (1.96.1-97.1).<sup>2</sup> I intend to take a different approach through a consideration of the parameters of the military mission that was undertaken by the Greeks who united in confederation with Athens in the early 470s.<sup>3</sup> Let us start on the issue of force structure by considering the

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<sup>1</sup> Main alternatives to the hypothesis on the tribute system offered below: 1) the assessment covered ship-contributing allies: e.g., *ATL* 3.234-7; 2) Cyprus was assessed: e.g., Meiggs 1972: 56-8; 3) the *phoros* constituted non-monetary services/payments in kind: e.g., Eddy 1968: 184-6; 4) the *aparkhai* lists do not reflect all the tribute collected: e.g., *HCT* 1.275-8; French 1972, 71-3; Unz 1985.

<sup>2</sup> Thuc. 1.96.1-2: [the Athenians] ἔταξαν ἄς τε ἔδει παρέχειν τῶν πόλεων χρήματα πρὸς τὸν βάρβαρον καὶ ἄς ναῦς πρόσχημα γὰρ ἦν ἀμύνεσθαι ὧν ἔπαθον δηρῶντας τὴν βασιλείῳ χώραν. καὶ Ἑλληνοταμίαι τότε πρώτον Ἀθηναίοις κατέστη ἀρχή, οἱ ἐδέχοντο τὸν φόρον οὕτω γὰρ ὠνομάσθη τῶν χρημάτων ἢ φορά. ἦν δ' ὁ πρώτος φόρος ταχθεὶς τετρακόσια τάλαντα καὶ ἐξήκοντα. ταμειῖόν τε Δῆλος ἦν αὐτοῖς, καὶ αἱ ξυνοδοὶ ἐς τὸ ἱερὸν ἐγίγνοντο.

<sup>3</sup> I am drawing on a research project on the finances of 5<sup>th</sup>-century Athens, following up on Figueira 1998. See also Figueira 2003; 2005; 2006; forthcoming[b]; forthcoming[c].

adversary forces that Athens and its allies reasonably expected to face. Table I outlines the evidence for Persian expeditionary forces against the Greeks during our period. Traditionally, analysis of these mobilizations has focused on whether the data, much of which was transmitted through Herodotus and Ephorus, are correct. Going back to the 19th century, a lineage of formidable scholars has expressed substantial doubts over the factuality of such mobilizations, with particular suspicion falling on details of Xerxes' expedition in 480.<sup>4</sup> Considerable ingenuity has been applied, for instance, in calculating whether hydrologic resources along his line of march would have provided sufficient fresh water for his vast host.<sup>5</sup> Secondly, some doubts have also attached to the received figures for the invasion force of Datis that was eventually checked by Athens at the Battle of Marathon in 490.<sup>6</sup>

In thinking about the scale of the Persian threat in Greek eyes, however, our concern is not primarily the truth of such reports. Whether accurate or not, the received estimates shaped planning at the foundation of the Delian League regarding contingencies in defending Aegean Greece from Persian aggression.<sup>7</sup> This point is especially probative, since there is no evidence that popular and expert opinion diverged significantly in this matter. Herodotus and Aeschylus reflect popular opinion, but both also had access to elite informants aware about military planning at higher levels of decision-making. In any event, Thucydides, who had held the office of *stratēgos*, was manifestly conversant with privileged military thinking at Athens. Yet he makes no effort to correct Herodotus about the scale of Xerxes' forces, and, in fact, has an Athenian speaker at Sparta (1.73.4-74.2), just before the outbreak of the Peloponnesian War, provide an estimate of the Attic contribution at Salamis that seems even higher than Herodotus (1.74.1). Moreover, critiquing any individual figure in our evidence, albeit seemingly inadequate, is less important than allowing the general magnitudes of these forces to impart a quantitative sense of the Greek intentions when forming the Delian League.

It is worth noting at the start that deployed forces, whether Greek or non-Greek, were always less than the "administrative" forces conceived in the minds of leaders (which have sometimes perhaps been transmitted in later historiography). This is particularly valid for Herodotus' likely use of renditions of Persian documents.<sup>8</sup> Furthermore, intelligence and surveillance directed toward

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<sup>4</sup>E.g., Macan 1908: 150-67; Wells 1923: 145-50; Munro 1926: 271-3, Hignett 1963: 350-5; Young 1981: 221-3; Lazenby 1993: 90-2; Cawkwell 2005: 237-54; Flower 2007.

<sup>5</sup>Maurice 1930: esp. 221-4.

<sup>6</sup>E.g., Hignett 1963: 58-9.

<sup>7</sup>Cawkwell 2005 offers a recent overview of this struggle, with pp. 126-38 dealing with our period.

<sup>8</sup>See Briant 2002: 197-200; Cawkwell 2005: 239-43.

an enemy's preparations could only be rather primitive in a classical military environment. Direct observers of varying expertise, care, and objectivity provided input about forces at the actual time of deployment. In that context, over-counting and duplication would probably have been more prevalent than underestimation. It may well be that by the 450s or 440s the Athenians had achieved a more realistic appraisal of the likely enemy forces. If that is so, it appears that their understanding was reflected in actual military dispositions and not used to "correct" the historical record of the earlier 5th century. Thus, the traditions on 480 and earlier Persian campaigns help to illuminate thinking during the first period of the alliance. Nonetheless, I should emphasize that 5th-century military planning was never so much a matter of how many, but rather how many at which place, and at which time.

Even if one discounts Xerxes' great expedition as a special effort, impossible to duplicate, the Persians often deployed considerable naval assets.<sup>9</sup> An armada of 600 triremes seems to emerge as a realistic fleet for regular periodic deployment, although realizable force in battle may have fallen closer to 300 at mid-century. That total appears three times before the foundation of the Delian League. Indeed, Herodotus claims that Darios' force of 600 ships against Thrace was enumerated on *stelae* erected at Byzantion that contained rosters in both Aramaic and Greek which were later available for inspection (4.87.2). In principle, then, this muster of forces could be verified. Subsequently, a complement of 600 ships was also a total associated by the Attic local historian Phanodemos with Persian strength at the battle of Eurymedon in the early 460s (*FGH* 325 F22). While it is doubtful that 600 Persian warships faced allied forces together there, 600 ships might signify a mobilization toward which the Persians were building. The aggregation of their forces then was clearly preempted by the intervention of the Delian League fleet.

We can alternatively approach the Athenian and allied appraisal of the opposing military strength by examining the possible constituents of a Persian fleet to be mobilized against Greece after 478. According to Herodotus, Xerxes had mustered 600 Phoenician, Egyptian, and Cilician ships (7.89.1-90). Another 300 ships were supposedly gathered from Cyprus, Pamphylia, Caria, and Lycia (7.90-93). In 478, the Athenians and their Ionian allies might suppose that a forceful, preemptive showing in resistance to a future invasion might cut deeply into this mobilization in Asia Minor and Cyprus. A forward strategy might exclude the launching of such ships. Local rivalries there could probably drain off men and resources too. The Cypriot Greeks could be expected to show a lack of enthusiasm for Persia if only in the interest of their own autonomy. Their

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<sup>9</sup> The recent treatment of Cawkwell 2005: 254-73 explores underlying facts, not Greek perceptions.

resistance could tie down Phoenician Cypriots, otherwise prepared to support the Great King. In these eventualities, a Greek planner in 478 might be prepared to discount the contingents from Cyprus and southern Anatolia by 50%. Yet, even so, 150 ships might be a reasonable estimate for those available. That reduced levy would still add up to 750 vessels when combined with Phoenicians, Egyptians, and Cilicians. My point is not that this is perforce a realistic prediction for a modern scholar envisioning an expedition against Greece in the 470s or 460s. Rather, I emphasize that such a prediction was not an over-estimate of the enemy in terms of the data apparently available to an observer in 478. Therefore, when we imagine Greek planners in 478 formulating contingencies in terms of a Persian force of 600 triremes, their estimate of their adversary may already reflect a 20% offset from the 750 ships that their recent experience implied as a possible opposing force.

In our investigation of how the founders of the Delian League measured a potential enemy force, two more aspects of past Persian mobilizations are significant: 1) the ability of the Persians to recover from military adversity; and 2) the effect on Persian strength of distance linked with time. The pattern of military activity presented on Table I attributes to the Persians remarkable recuperative abilities. Evidently they were well able to withstand the incidental losses that modern scholars tend to ignore, that is, ongoing, but by no means negligible, losses of ships that occur during warfare through meteorological circumstances, accidents, mishandling, and low grade combat.<sup>10</sup> Beyond weathering such losses, the Persians were also able to remediate the effects of major combat, such as the defeat at Cyprus or the battle of Lade, and natural catastrophes like the great storm at Mt. Athos in 492. As shall be noted shortly, Greek *poleis* did not possess such recuperative powers.<sup>11</sup> Thus, the balance of power offered risks to the Greeks on two levels of attrition. It seems from Herodotus' account of the Artemision campaign that they were vulnerable to a contest with the Persians of attritional rates in which Greek ability to inflict higher losses did not offset superior Persian numbers (cf. 8.16.3, 18). Nevertheless, there was a second Greek vulnerability in attrition because Persia could mount large expeditions into the Aegean at short intervals. As proof, note that Herodotus reports Dareios preparing to attack Greece with a huge force in the fourth year after Marathon, only preempted by a revolt in Egypt (7.1.1-3). Men and ships amassed against Greece were probably used by Xerxes to pacify Egypt (a revolt in Babylonia appears less consequential). Moreover, although two years later c. 300 ships were lost at Mt. Athos (Hdt. 6.44.3), Datis supposedly sailed against the Cyclades and

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<sup>10</sup> Isoc. 8.87 refers to ongoing incidental Attic losses in amounts of five or ten.

<sup>11</sup> Kimon's striking force at Eurymedon primarily comprised triremes built by Themistokles (Plut. *Cimon* 12.2), and hence of long service life.

mainland with 600 ships that had entered the Aegean as a single armada (Hdt. 6.95.1-2). Thus he embarked without drawing on levies from the east Greeks. Similarly, the Persians sent a fleet of 600 vessels against Ionia, the force that would prevail at Lade in 494, only a few years after the Ionian rebels had won a major victory at sea in the waters off Cyprus (Hdt. 5.112.1).

Naval warfare from the mid-19th century onward has been characterized by the application of mechanical energy, which allows a projection of power over long distances. Previously, expeditionary warfare worked under the serious limitation that a campaigner striking over distance could not easily be resupplied or reinforced. Naturally, this factor constrained Xerxes in 480; for one thing, once his fleet withdrew from homeland Greece after Salamis, he was compelled to withdraw a large portion of his land forces. However, the geography of the eastern Mediterranean disadvantaged Greek military prospects. Because of the political fragmentation of the Greeks and their littoral disposition, Persian advances into the Aegean tended to subtract rapidly from potential friendly forces and convert some (at least) of their ships into Persian assets. In the nightmare scenario of Xerxes' invasion, Herodotus reports 347 Greek ships from the Aegean and Propontis mobilized for the Persians. At the crucial moment of Salamis, the Aiginetans were withholding some ships in home defense (Hdt. 8.46.1). Under this perspective, estimates in 478 of the potential strength of the Persians ought to have been couched in terms of not only how many enemy ships might set sail, but also where they might be met. Thus, 350 Greek ships deployed against the Persians in Cyprus, Pamphylia, or Cilicia might have the same defensive capacity as 500-600 ships operating from the Peiraieus in the Saronic Gulf and western Cyclades.

By the same token, even a relatively modest separation had a disproportionate impact on military strength if that distance was in Greek home waters while facing a strong adversary. Observe the notable difference in ships between the initial Greek fleet at Artemision and the subsequent fleet there and then later at Salamis (Table II.2-3). Yet standing at Salamis gave a bare margin of victory, as any further retreat would have dissolved the Greek confederates into individual squadrons. These could have been easily mopped up by the Persians, as both Herodotus and Thucydides note (Hdt. 7.139.1-5; Thuc. 1.73.3-4).<sup>12</sup> Clearly, dozens of miles of distance along the southern coast of Anatolia could never have an impact anywhere approaching this crucial difference of a few miles in homeland Greece.

Such a calculation of military power focuses our attention on the related issue of time and force deployment. Ancient sources are often read to indicate that

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<sup>12</sup> Even the anti-Athenian Corinthian speaker in Thuc. 1.69.5 observed that the Spartan reaction to the invasion was tardy and conceded how nearly run a matter victory was.

great numbers of ships from multiple origins converged precisely at rendezvous and then advanced *en masse* toward their military targets. This is hardly true in our age of radio communications, as the naval battles (like that of Leyte Gulf) in the Pacific theater during World War II demonstrated. In the 5th century, the coordination of hundreds of ships must have been a daunting proposition even for a steeply hierarchal, authoritarian state like Persia. Major battles took place toward the ends of campaigning seasons for the reason that it took spring and early summer to get forces into place. Deploying a hundred ships entailed the management of, at least, 20,000 men. Our source material on the Eurymedon campaign indicates how aggregation of squadrons in antiquity proceeded. A Persian fleet and land army had advanced to the Eurymedon River in Pamphylia (Table I.8). That both land and sea forces were together there suggests that the army did not intend to march toward Sardis in Lydia or toward the Hellespont, since such a force might then have diverged northward in Cilicia. The likely Persian target was Caria and Doris in southwestern Asia Minor, perhaps especially Kaunos, Rhodes, and Knidos. They intended to seize a base from which to operate in east Greece, possibly the next year after wintering over.<sup>13</sup> The Persian commanders at Eurymedon were indeed awaiting concentration of other contingents with their main force. After Kimon's great victory on sea and land, he was able to surprise 80 Phoenician ships arriving as reinforcements at Cyprus (Plut. *Cimon* 12.4; 13.3). Moreover, no Egyptian ships are cited as present at Eurymedon, so that a squadron was likely expected from that satrapy as well. The account in Ctesias of the later Egyptian revolt of 459 seems to describe an initial Persian reaction by a sizable army, one unbelievably large, as so often in Ctesias, (*FGH* 688 F14[36]). Yet its accompanying naval contingent was 80 ships, which might actually have been a standing Persian naval force in Egypt. At that juncture, 50 of these were incapacitated, with 20 captured with crews and 30 destroyed.

In the Eurymedon campaign, the Persian rendezvous in Pamphylia may not yet have been the initial rallying point for this expedition. Xerxes' great armada had massed further east in Cilicia. Wallinga has offered an elaborate hypothesis in which Cilicia plays a special role in Persian naval affairs,<sup>14</sup> pointing to an otherwise disproportionately moderate Cilician tribute. He ought not to be followed in imagining that a Cilician base served as arsenal and storage for hundreds of triremes. Nevertheless, the existence in Cilicia of supply depots for fleets intended to project Persian power toward Greece may not be inconceivable.

For the Greeks, we perceive similar difficulties in concentrating naval squadrons. A Corcyrean flotilla of 60 ships was supposedly delayed by adverse

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<sup>13</sup> [Plato] *Menex.* 241D describes Artaxerxes' intent as the conquest of Greece.

<sup>14</sup> Wallinga 2005: 13-15.

winds from rounding Cape Malea in time to participate at Salamis (Hdt. 7.168.1-4). A certain reluctance to commit wholeheartedly to the cause of the Hellenic League was suspected as their motivation. Nonetheless, a genuine delay through factors beyond their control must have been sufficiently plausible that it was worth the Corcyrean effort in excusing themselves. Consequently, just as we have seen that a contingent of ships further east was more valuable militarily to the Delian League than a similarly sized contingent to its west, a body of warships early in the campaigning season was worth more than the same force later in the year. The coordination of large confederate forces that we perceive the Athenians making at Eurymedon and onward reveals their mastering of this relevant skill set.

To recapitulate, we have learned that Greek planners in the early 470s expected to face at least 600 Persian triremes. On the basis of previous Persian achievements, the build-up of this force might be thought to require c. 2-5 years. The dispatch of such a force into the Aegean basin ought not then have taken as long as a decade. The actual battle at Eurymedon probably occurred not earlier than 469 nor later than 466. From the vantage point of a planner in 478, a hypothetical Persian attack on the scale of Eurymedon should have happened years earlier. In other words, Eurymedon was late. A hint that this conclusion is not speculative emerges from the actions of the Naxians. At some point between 472 and 469, Naxos had recklessly defected from the Delian League, only to suffer a siege leading to surrender on unfavorable terms (Thuc. 1.98.4). Naxian foolhardiness in challenging Attic hegemony makes better sense if the Athenian allies were aware of Persian preparations already underway

Let us turn now to the other side of the planning equation in 478. What would a prudent strategist have considered a feasible force structure for the Delian League? Did any complement of triremes stand a reasonable chance of blunting another Persian effort at subduing Greece? Table II collects data about Greek naval potentialities during the early 5th century. Before considering this matter, however, preliminary discussion is in order about the development of early trireme navies. Our chief source is Thucydides, who takes pains both to emphasize the early introduction at Corinth and adoption at Samos of the trireme and to stress the late development of large all-trireme navies.<sup>15</sup> His first large trireme navies belonged to the Sicilian tyrants and Corycreans, his unspecified criterion perhaps being 100 ships. Thucydides also mentions Ionian navies built up in confrontation with Persia, singling out Polykrates of Samos. According to Thucydides, the Aiginetan and Athenian navies were late developing. We can reconstruct the history of their naval competition. Aigina had an

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<sup>15</sup> Thuc. 1.13.1-4, 6; 14.2-3. See Figueira forthcoming[a].



early advantage, possessing perhaps 50 triremes as early as 520. By the early 480s, both *poleis* had c. 70 triremes, supplemented by *pentekontors*.

Themistokles' naval law broke this equilibrium, with 100 triremes in its first phase and perhaps 200 overall, using resources from the silver mines at Laurion. These ships defeated the Persians and saved Greece, as Herodotus observes forcefully (7.144.2-3). Continuation of ship building also explains the existence of more than 200 ships in Attic possession in 480. Herodotus has Athenian ships at Salamis numbering 180 (8.44.1). There were also 20 Attic ships manned by their allies from Chalcis in Euboia (8.46.2). Their total number was perhaps higher: the "Themistokles Decree" preserves a provision for 200 ships companies (*SGHI* 23.12-14), and as a step taken early in the process of mobilization that probably represents a minimum, without supplemental crews like the Chalcidians. A speaker in Thucydides speaks of an Attic contribution of a little less than two-thirds of 400 ships (1.74.1).<sup>16</sup> Let us estimate this force in the range of 230 to 260 triremes.<sup>17</sup> The evidence on Attic ship-building programs is weak, but sources imply later additions to the fleet of 10-20 triremes annually.<sup>18</sup> Hence, unsurprisingly figures of 200 or 250 Athenian ships appear several times after the founding of the Delian League (Table II.6-8). Even this larger number implies a notable reserve at home, since the Peiraeus and Saronic Gulf could never be left entirely unguarded.

For comparison, Athens possessed 300 seaworthy warships in 431; the qualification *πλωίμους* 'seaworthy' in Thucydides implies others in construction, storage, or salvageable (2.13.8; cf. Arist. *Ach.* 544-5; Xen. *Anab.* 7.1.27). A distinction between deployable ships and every hull in Athenian possession is also illustrated by two references to resources during the Peace of Nikias, or 421 to 415. Both Andocides (3.9) and Aeschines (2.175) derive material from a common historical source (Hellanicus, an Atthidographer, or a pamphleteer). This authority enumerated two types of warships, of which 400 represented all the hulls under Attic control and 300 the total vessels available for immediate service. Thucydides specifies the height of Attic naval power during the Archidamian War in 430 or 428 (3.17.1-2).<sup>19</sup> Athens actually had 250 triremes manned in this campaigning season, a total not taking into account 100 best-sailing triremes, kept aside each year as an "iron" reserve (Thuc. 2.24.2: for use only if an enemy fleet was sailing against Attica itself). Counting every vessel in

<sup>16</sup> The phrasing is difficult in interpretation, cf. *HCT* 1.234-5; Walters 1981; Wankel 1983.

<sup>17</sup> Moreover, captures from the Persians may have more than offset losses (Table I.7).

<sup>18</sup> *DS* 11.43.3; *PStrasbourg* 84 = *ATL* 1, T9, 2, D 13 = *Anon. Argentinensis* 10-11. Andoc. 3.3-5 has perhaps 100 new ships in 5 years around mid-century. See Blackman 1969: 202-12.

<sup>19</sup> This passage has been questioned in authenticity and placement, but, while redating to 430 is an option, its character as Thucydidean may be accepted. See Gomme *HCT* 2.372-77; Hornblower *CT* 400-1.

any condition, the upper end of the Athenian fleet before the debacle at Syracuse seems to have hovered around 350-400 triremes. Note also the number of trierarchs appointed annually was 400 ([Xen.] *Ath. Pol.* 3.4). However, there was probably a point after which it was no longer productive to add further triremes without taking older ships out of circulation. The real limits on the size of the Delian League fleet were set by manpower and logistics. Even if the alliance could have procured 600 ships in the 470s to match the Persians trireme for trireme, they probably could not have manned them.

As for the allied force which the Athenians intended to fuse with their own navy, our judgment is difficult. Herodotus' force totals for Lade are our first valuable data (Table II.1). The newly liberated Ionians and Aiolians of 478 were probably no longer able to match their earlier commitments to the Ionian revolt in the 490s. However, they still held the survivors of their fleets of 480, whose ships had been supplied by the Great King (DS 11.3.7) in the sense that he had ordered their building out of the tribute ordinarily paid by the Ionians. Chios had suffered greatly at Lade and in its aftermath (Hdt. 6.15.1-27.3). It had been ravaged by Histaios of Miletos, who had also attacked and seized Lesbos (6.26.1-2). Miletos had provided eighty ships at Lade. Moreover, it may be thought that the fifteen ships from Priene and Myous are to be considered part of the Milesian contribution, as these two cities are otherwise attested as dependencies of Miletos.<sup>20</sup> Thereafter, Miletos had been besieged and sacked, with much of its population dead or deported (6.18-21). Samos had been afflicted earlier (c. 520), especially in an *andrapodismos* at Persian hands c. 510 (Hdt. 3.149; cf. 6.25). It had suffered less at Lade, where most Samian ships had quickly fled (6.14.2-3). Thus, its contribution of sixty may not have experienced the same erosion as that of the Chians, Milesians, and perhaps the Lesbians. Unsurprisingly, Xerxes had only 100 Ionian triremes with him during the Salamis campaign (Table I.7), which reflects the falling off from the 283 Ionian ships at Lade. And there must have been significant losses among these Ionians at Salamis and Mykale. Xerxes had 100 Aiolian ships, which might show less reduction than the Ionian complement because there were 70 Lesbian ships at Lade. A portion of the 100 Aiolian ships with Xerxes were from Kyme and the towns of the Troad. The latter were probably not participants in the Delian League at its inception. One supposes that the majority of Xerxes' 30 Dorian ships were from Rhodes. Rhodians had not fought at Lade.

The major insular allied states of the east Greeks recovered their economic vitality and military power in the second half of the 5th century. During the

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<sup>20</sup> The Milesian dispute with Samos over Priene seems to establish an earlier Milesian hegemony there (Thuc. 1.115.2). For Myous, note its Hellenistic (re)absorption by Miletos (cf. Rhodes/Osborne *GHI* 16). See Rubenstein 2004: 1092, 1089.

prosperous years of the *pentekontaeteia*, the levels of the early 490s were probably reached or exceeded, as scattered testimonia appear to indicate.<sup>21</sup> The Egyptian expedition, the Samian and Lesbian revolts, and the Syracusan campaign provide our evidence. Samos is the only ally for which conjecture is possible about its naval strength in the early Delian League. Two inscriptions found at Samos celebrate the Samian contribution to the early fighting of the Egyptian campaign c. 459 (*IG* XII.6 279, 468). A notable exploit is reported in which the Samian contingent of the Greek fleet captured 15 Phoenician triremes (*IG* XII.6 279.3-4). That suggests about 25 to 30 Samian ships as a part of the 200-ship Greek expedition. The Samians could still mobilize 70 ships in the first main battle of their revolt against Athens in 440/39, after some earlier mischances (Thuc. 1.116.1).

In the same revolt, Athens summoned aid from Chios and Lesbos and was quickly supported by 25 Chian and Lesbian triremes, an impressive mobilization on short notice for a campaign against another Greek city (1.116.2). Thirty Chian and Lesbian ships are later noted (1.117.2), and these would be further reinforcements. At the time of the revolt of Mytilene in 428, the Athenians interned 10 Mytilenaeen triremes on first rumors of sedition (Thuc. 3.3.4). Mytilene was surprised by the leaking of its intentions to the Athenians and had not completed their preparations for revolt, including equipping additional ships. When Athens sent a force of 40 triremes in a surprise intervention (3.3.2-3), the Mytilenaeans sought a negotiated settlement (3.4.4-5). Notably, the Athenians were not confident that their 40 ships could prevail in an engagement. That suggests that they were outnumbered by the remaining Mytilenaeen warships. Chios had many available ships during the Peloponnesian War. Fifty Chian and Lesbian ships participated in the expeditions both of Perikles and of Hagnon and Kleopompos of 430 (Thuc. 2.56.2, 6.31.2). Thirty-four allied ships went to Sicily in 416 (6.43), of which the majority was Chian (6.85.2; 7.57.4-5). And another five Chian ships later sailed in the second expedition with Demosthenes (7.20.2). Yet, at the time of its revolt (412), Chios still had at least 60 triremes (8.6.4), though those sent to Sicily had never returned.

Some states in the Hellespontine region, like Byzantion, probably stood aloof from the early alliance and there were relatively few ship contributors in the area. Xerxes' 100 triremes from the Hellespont thus seem exaggerated, or the complement was perhaps owed to Persian subsidy and construction efforts (Hdt. 7.95.2). Xerxes' contingent from the Greek islands was only 17, while the Hellenic League got the help of 23 ships, as augmented by defectors and including 5 *pentekontors* (7.95.1; Table II.3). Herodotus gives us no figure for the Persian demands made upon the Thracian Greeks, but the Delian League would

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<sup>21</sup> Figueira 1998: 79, 481-2.

certainly have had expectations of help there, starting with Thasos. Kimon would later take 33 of their triremes in battle during the Thasian revolt (Plut. *Cimon* 14.2). Let us suggest a 40-warship levy for Thrace and 30 ships for each of the two other regions, the Hellespont and the islands.

Thus, one might expect that the Athenians planned for a naval force of 250 to 300 of their own triremes, with 350 vessels as an outside upper limit. This is a total force and not one for practical deployment anywhere *en masse*. There are two ways to consider the total allied contribution accommodating this Attic force structure. First, for the Herodotean ship total of 378 for Salamis, the Attic contribution would be c. 53%. If the Athenians intended to imitate this successful fleet, an allied force of 47% can then be supposed. For Attic fleets of 250, 300, and 350, allied forces of 222, 266, and 310 are created, and total Delian League fleets of 472, 566, and 660. Second, the Athenian speaker at Sparta in Thucydides, who might perhaps be thought to have reason to exaggerate, refers to an Attic force of a little less than two-thirds. Could he be speaking under the influence of Attic practice during the Delian League, when the two-thirds Attic to a one-third allied split had become conventional?<sup>22</sup> Thus, his anachronism actually helps our analysis. Therefore, for Attic fleets of 250, 300, and 350, this ratio would yield 125, 150, and 175 allied ships and total fleets of 375, 450, and 525. Or, alternatively, we could add to an Athenian fleet of whatever size appropriate the number of allied ships that our previous discussion has proposed. Forty Thasian and other Thracian ships, 30 from the Cyclades, 30 from the Hellespont, 30 Rhodian ships, and 150 ships from the Samians, Lesbians, and Chians. That suggests a non-Athenian allied fleet in the Delian League that numbered 280 hulls or a total force of 530 to 630.

Once we begin to speculate about the nature of the Delian League fleet, we unsurprisingly generate force structures that balance the 600-ship fleets that appear in our records for the Persians. However, several points are to be stressed: 1) it was inconceivable for the Greeks to match the total maritime resources of the Persians; 2) the Delian League fleet approximated an armada fighting in the Aegean, i.e., in home waters, but that was the very setting which the allies wanted to avoid; 3) small naval contributors were to be discouraged while personal service and ship contribution were changing to tribute; and 4) manning the Delian League fleet would be challenging. Fortunately, for the Athenians and their allies, a smaller force for fighting in Pamphylia, Cyprus, or Egypt was equivalent to 600 triremes in their own environs. Thus, Kimon left Attica with 200 ships, and by the time he united with allied flotillas, he had 300; and the

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<sup>22</sup> Note how DS 11.60.3 explicitly reports the ratio of 100 allied ships for 200 Attic ships at Eurymedon. The disagreement of our sources over fleet sizes of 200 ships or 300 ships for the Egyptian campaign and Kimon's final Cypriot expedition (Table II.7-8) may derive from the misunderstanding of this same 1:2 ratio.

total for the campaign might have been 350 (Table II.6). Both Athens and allies had to retain ships for home defense, the need for which was made manifest after Eurymedon by a closely ensuing Persian strike against the Chersonese (Plut. *Cimon* 14.1)

Turning next to the subject of small allies and large allies, we must remember that the Athenians would not have sought to maximize the number of available ships from lesser naval powers. It was preferable that certain maritime communities provide funds instead. In this, the Hellenic League did not provide a model, but rather an approach to be rejected. As far as known from Hellenic League operations, its members were self-policing in ship provision. The Athenians and Aiginetans seem to have completely controlled their changing contributions at Artemision and Salamis, with the final Aiginetan reinforcements an unexpected benefit for the allies.<sup>23</sup> Moreover, operations under the Spartan navarch, Eurybiadas, were conducted by a council of war composed of all contingent commanders. If similar patterns had prevailed for the Delian League, one could envisage a fleet constituted from many differently scaled squadrons. Some of these would be in tiny units resembling the Ionian fleet at Lade (which had contributed to defeat) or at Artemision and Salamis. Such an approach manifestly leaves much to be desired in terms of military efficiency. The Delian League fleets were commanded by Athenian *stratēgoi*. A council of war, limited to squadron commanders actually present, may have been consulted, but the Athenian generals seem to have managed tactical deployments. During Kimon's final Cypriot campaign of 451/0, his fellow *stratēgoi* were able to keep his death a secret for a month (Plut. *Cimon* 19.2; Phanodemos *FGH* 325 F23). That is indicative of a very tight command circle.

Moreover, small states in all periods are always much less efficient in generating military power since the cost for the first units of any technology, be it tanks, jet fighters, frigates, or triremes, is so high. It is known from galley warfare in different periods that oared warships are optimally packaged in units from 40 to 55.<sup>24</sup> Therefore, squadrons of c. 50 triremes would have to be amassed from a group of smaller *poleis*, those supplying 10 ships or less. Yet, Herodotus' account of the battle of Salamis seems to show that almost all the damage done the enemy was meted out by the large Athenian and Aiginetan forces (Hdt. 8.86, 91-93.2). The Corinthian role in the battle was controversial. As the *polis* supplying the third largest detachment, their performance was significant. While Herodotus shares an Attic report of their withdrawal without

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<sup>23</sup> See Figueira forthcoming[d].

<sup>24</sup> Guilmartin 2002, 119; 2003, 215-17. In the early Delian League, 5 entities (Athens, Chios, Lesbos, Samos, and Thasos) would have provided over 75% of the combatant vessels. In the fleet of 250-350 at Eurymedon, for example, one small unit might have accommodated all the smaller ship-contributors.

fighting (8.94.1-4), he also reports their denial of this (8.94.4). The author of *De malignitate Herodoti* reports heroic fighting (*Mor.* 870B-871C).

This background material helps us appreciate the monumental departure marked by the organization of the Delian League. From the start Athens possessed the sole right to decide which allies would contribute ships and which would pay *phoros* (Thuc. 1.96.1). During the whole history of the alliance, the Athenians also held exclusive authority for assessing tribute. It is unknown whether this function was first exercised by the *stratēgoi* or by boards of *taktai* ‘assessors’. The tradition on the first assessment focuses solely on the justice of the Attic statesman Aristeides, but he can hardly have wielded such power without colleagues.<sup>25</sup> Thucydides states that the main cause of revolts and dissension in the early alliance was Athenian rigor in enforcing obligations for tribute or service with ships (1.99.1-3). Plutarch’s *Cimon* confirms this, although approaching from an opposite tangent: Kimon was allegedly gentle with delinquent allies by accepting contributions and empty ships in lieu of service (11.1-3).<sup>26</sup> Giving Athens sole control of the largest transfer of revenue in Greek politics tilted the essence of the league radically toward Athenian hegemonism at its start. It is almost superfluous to note the adage that power to tax is power to destroy.<sup>27</sup> By giving Athens so much power at the start, the allies showed the intensity of their fear of the Persians.

Each trireme ideally requires 200 oarsmen and other personnel, if one opts for a modest contingent of 10 *epibatai* ‘marines’, i.e., the infantrymen who fight from the deck. A fleet of 250 ships needs 50,000 men; 300 ships, 60,000; 350 ships, 70,000. Alternatively, if one imagines a more realistic contingent of 30 *epibatai*, split between 20 hoplites and 10 light troops, archers or peltasts, every 100 ships requires another 2,000 infantry.<sup>28</sup> These numbers are remarkable, considering the actual manpower of Athens in 480. They were hard-pressed to fill their ships during Xerxes’ invasion, so much so that they manned 20 triremes with Chalcidians and supplemented other crews with Plataians, who were available at Artemision but late arriving for Salamis. They also probably freed all able-bodied slaves. Moreover, the Themistokles Decree relates the forming of two hundred ships’ complements under trierarchs but only assigns 100 men to each unit (*SGHI*

<sup>25</sup> [Andoc.] 4.11; Dem. 23.209; Aesch. 3.258; Nepos *Arist.* 3.1-3; DS 11.47.1-3; Plut. *Arist.* 24.1-7, cf. 26.3; Paus. 8.52.2; Ael. *VH* 11.9. Cf. Thuc. 1.96.1-2; *Abb. Pol.* 23.5; Aristod. *FGH* 104 F 7. See Figueira forthcoming[b].

<sup>26</sup> On Kimon’s naval policies: Blackman 1969: 188-9; Boffo 1975; Steinbrecher 1985: 98-115.

<sup>27</sup> This idea was raised by Daniel Webster, arguing before the US Supreme Court in *McCulloch v. Maryland* (17 U.S. 327) in 1819, and given its classic formulation by Chief Justice John Marshall in his decision in the case.

<sup>28</sup> This complement compromises between the minimal complement of 10 hoplites and 4 archers of the “Themistokles Decree” (*SGHI* 23.23-6) or 14 hoplites and four archers (Plut. *Them.* 14.1) and the Chians at Lade with 40 *epibatai* (Hdt. 6.15.1), Persians at Artemision with 30 (Hdt. 7.184.2), and Corcyreans at Sybota (Thuc. 1.49.1). Even later 5<sup>th</sup> century troop-carrying triremes could carry complements like the 45 hoplites, 10 archers, and 10 peltasts of *IG I<sup>3</sup>* 60.

23.31-5). This may have been a muster of thetes, the lowest census class, since 20,000 later seems to be a conventional number for them (e.g. Arist. *Wasps* 709-11). These complements of 100 were later augmented with hoplitic *zeugitai*, metics, younger and older males, freed slaves, and Plataians. The difficulties become apparent if we try a thought experiment. If each ship had 10 hoplite *epibatai*, as specified in the “Themistokles Decree”, 200 ships require 2,000 *epibatai* (besides the 800 non-hoplite archers). There were c. 10,000 Attic hoplites at Marathon, so that 8,000 would be left to supplement ships’ crews. Thus, each trireme would have its original allotment of 100 supplemented by only 40, and still be left 40 rowers short. That leaves another 8,000 to make up from other sources. At some point the Chalkidians took over 20 triremes allowing the Athenians to reassign 2000 original sailors. Yet the ships may still have been undermanned.

Furthermore, this Athenian manpower deficiency existed despite access to the whole community for conscription. The depth of Xerxes’ penetration into Greece carried with it the seeds of his defeat because, by over-running Attica, he ensured that every Athenian male above the age of puberty was freed from all other activities. Except for any who chose simply to abscond, all were available to man ships. The founders of the Delian League naturally could not plan on total suspension of the Athenian economy as a regular feature of future resistance to Persia. True, they may well have expected to draw many away for other activities at times of intense operations, but some semblance of normal existence had to continue in Attica. In the moment of Salamis, Athens had achieved a rare existential state, total mobilization for survival of the *polis*, a *polis* that was a virtual city because actual Attica was occupied. That moment was essentially beyond duplication.

As already seen, distant deployments of a large numbers of warships took place during the league’s anti-Persian campaigns. The Athenians had to evolve toward professionalization of military service as a solution to manpower problems. In this new order, naval service became a regular salaried career and a minimum level of activation was maintained annually, with preference for Athenian citizens in order to sustain a pool of qualified personnel. The *Athēnaion Politeia* mentions 20 guard ships (24.3). Plutarch refers to a practice where 60 triremes were manned for eight months annually, with priority given to citizens (*Per.* 11.4). In the naval profession, metics and *xenoi* eventually served alongside citizens. This arrangement probably did not exist in the early alliance, which is another reason why the division of the allies into tribute payers and those serving in person was fundamental. The demobilized sailors and soldiers from the smaller allied cities thereby became available to row the triremes of Athens and the larger allied states. This is perhaps why we find several smaller cities from the Cyclades missing from the early tribute lists in the late 450s.<sup>29</sup> They were too small to provide ships usefully, but they could provide crews.

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<sup>29</sup> Cf. *ATL* 3.250; Lewis 1984; Wallace & Figueira 2010: 65; Rutishauer 2012: 94.

The scale of the fleets and mobilizations of the early Delian League sheds light on the tribute requirements of the alliance. As a matter of logistics, sailors needed money in order to embark with a stock of food, money to leave behind with their families, and money to purchase more supplies as operations continued. Even later in the century, at a time of greater administrative sophistication, Attic forces still depended on groups of private vessels under the control of merchants which aided in supply.<sup>30</sup> No administrative apparatus was in place in 478 to handle the departure of a large fleet. The larger the mobilization the less possible it was for crews to live off their areas of operations or even to purchase supplies from cooperative towns. Therefore, even in the dire emergency of the evacuation of Attica in 480 and total Athenian mobilization, money had to be found to disburse to those sailing. Who found and conveyed these funds became controversial in later Attic historiography. Partisans claimed both for Themistokles and for the Areiopagos the credit for providing an 8-drachma stipend to embarking sailors (*Ath. Pol.* 23.1; Plut. *Them.* 10.6-7; Cleidemus *FGH* 323 F1).<sup>31</sup> Once *poleis* had to utilize for ships' crews persons poorer than persons of affluence or smallholders, the zeugitic or hoplitic class and above at Athens and its counterparts elsewhere, in other words persons who could subsidize (at least) modest, short-term service from their estates, subsistence support for military personnel was crucial.

Let us then consider what an 8-drachma *per* man launching cost implies about the finances of the Delian League. Table III organizes such costs for forces of various sizes at two modest rates of subsistence (an obol or 2 obols daily; cf. Plut. *Them.* 10.3). Observe that we assume that the 8-drachma launching payment sustains operations for the first month. For example, to launch a 300-trireme fleet costs 80T. If allied states faced the same constraints as Athens, a 200-trireme allied fleet to accompany the Athenians requires 53T, 2000 dr. These are colossal sums of money in the context of the early 470s. That the early campaigning of the Delian League could have been very expensive is demonstrated by the huge cost of the later effort (440-39) to suppress the Samians, which cost 1200T.<sup>32</sup> French argued that this constituted an 8-10 months deployment of 215 triremes (over two years) and supporting troops.<sup>33</sup> Admittedly these costs reflect some inflation and the professionalization of allied forces, and the calculations to reach them are somewhat speculative. Yet the Samian War does portray well the immense expense of two years of intense mobilization.

The express purpose of the Delian League was to retaliate against the Great King by raiding his territory (Thuc. 1.96.1), a rationale that militated in favor

<sup>30</sup> See Figueira 1998: 261-2.

<sup>31</sup> See Rhodes 1993: 288-90; Figueira 2011: 199-203.

<sup>32</sup> Isoc. 15.111; DS 12.28.3; Nepos *Timoth.* 1; comparing *IG I<sup>3</sup>* 363.5, 12, 17, 19.

<sup>33</sup> French 1972: 56.



of costly annual campaigning during the early years of the league. Even if there had not been occasions to liberate Greek *poleis*, expel Persian garrisons, and uproot pro-Persian tyrants, annual campaigning suited disparately the interests of the Athenians, major allies, and tributaries. Thereby the Athenians instilled obedience to their officials; the stronger allies exerted control over former dependencies (especially mainland *peraiai*); and the tributary allies reinforced the premise that the alliance was committed to defend even lesser Greek communities. There was always the danger that the Athenians would become distracted by relations in homeland Greece, including regional feuds with enemies like Thebes, Aigina, and Megara. The goals and structure of the early alliance were promoted by the east Greeks, who took the initiative to keep the Athenians engaged in order to keep the Persians out (Thuc. 1.75.2; 95.1, 4; 96.1). Yearly campaigning brought to the foreground the aforesaid challenge of sustainability.

Hence, another strong motivation for the creation of the class of tributaries was to provide resources to sustain the manning, equipping, replenishing, and replacing of the forces of the league. That last factor must be remembered, because the allies had to anticipate replacing the losses of each campaign before the next. Naturally, the Athenians could not depend much on the mining revenues from Laureion for the near term. One also suspects that some Ionian triremes had been built in the years of their earlier revolt and might soon require replacement. Thus, the Athenians were authorized to assign allied states to the ranks of the tributaries. The alliance was not and could not be organized on the principle that all those willing to serve be permitted to serve regardless of their preparedness or suitability. Despite the professed autonomy of the original allies, which we know from Thucydides (1.97.1), some cities that probably would have chosen to contribute ships were not allowed to do so.

Thus, in this context, some mysteries of the first, Aristeidian, assessment receive clarification. Intense fear of Persian counterattack and the required magnitude of the naval mobilization, which has just been outlined, led to an assessment of 460T, a very high amount in its context. Later, the Battle of Eurymedon would be a vindication of the organization of the alliance. In its aftermath, a larger alliance after 454/3 faced a less acute threat, and its annual burden was lower, somewhat exceeding 400T. Aristeides' acclaim can thus be seen to have resided in his equity in undertaking a daunting, if not impossible mission, in trying to find resources for anticipated standing fleets of 500-600 triremes and expeditionary forces of 300-350 triremes. Though I cannot argue my case exhaustively, the *dasmos* of the hated Persians, a direct tax, is unlikely to have been taken over by Aristeides. Rather, Aristeides and his collaborators carefully reviewed and compared the revenues from the existing indirect taxes (like harbor duties) of the allied states and calculated assessments that seemed equitable in cross comparison, despite their total reaching a huge amount of silver. This exercise probably still fell short of matching the Persians, man for

man, ship for ship, and perhaps even of reaching their planned mobilizations (described above). Concomitantly, it may well have seemed quite infeasible to allocate shares among the tributary states of an unreasonably large (and rather abstract) total amount of money and men. Moreover, such a painful obligation would hardly have been celebrated except for the fear and loathing that Persian domination inspired in those Greeks who had experienced it. Yet the first assessment sustained annual well-subsidized operations by Athens and its better qualified allies on expeditions that took proactive strategies. Forward action was itself the result of a “virtuous” cycle in which incrementally higher quality and better subsidized forces could afford to operate farther from Attica and with smaller numbers of warships. After Eurymedon, a more manageable need for military funds was folded into a calculation of τὸ ἰκνούμενον ἀνάλωμα ‘the expense that was incumbent’ on each ally (Thuc. 1.99.3).

In conclusion, let us consider which evolution of the *phoros* of the Delian League offers a suitable context for this vision of threat assessment in the early years of the alliance. Naturally, I shall limit myself to a statement of results from other research, some of it still in preparation. The alliance had c. 100 (or less) tributary members in the early 470s and c. 25 *poleis* contributed ships with personnel.<sup>34</sup> By the beginning of the tribute lists only the Lesbians in their five cities, the Chians, and the Samians remained non-tributary. Many later tributaries were dependencies of non-tributary states in the early alliance, and, therefore, also effectively non-tributary. The relative average burden on each tributary in the early alliance was approximately 200-250% as heavy as at mid-century. Assessments started high and moderated as the Persian threat receded after the battle of Eurymedon. My student Aaron Hershkowitz has created a data base that covers all attested tribute payments. This data base has significant value for modeling various scenarios for the evolution of the Attic alliance. It has already yielded an important paper by Hershkowitz that addresses changes in assessment.<sup>35</sup> He has confirmed the strong tendency of the assessment process toward reducing tribute from 454 to 431. In this period, the total assessment hovered around 400T. It appears that, as Athens added tributaries through the break-up of larger ship contributors, through new accessions to the alliance, and through commutations to tributary status, some existing assessments were more likely to be reduced in cases where it was worthwhile for tributary to mount a campaign for a reduction. The majority of smaller tributaries had stable assessments, while only a few large states were tempting targets for increases.

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<sup>34</sup> Islands: Andros, Naxos, and Paros; Ionia: Chios, Erythrai, Kyme, Lesbos (Antissa, Eresos, Methymna, Mytilene, and Pyrrha), Miletos, and Samos; Hellespont: Khersonesitai, Lampsakos, and Perinthos; Thrace: Abdera, Ainos, Mende, Poteidaia, and Torone. Caria: Rhodes (Ialysos, Kameiros, and Lindos).

<sup>35</sup> See Hershkowitz forthcoming.

However, memory of the higher Aristeidian assessments was preserved in Athenian institutional memory. When the Peloponnesian War depleted the reserve fund and an intensified tempo of operations was thought necessary against the Spartans, the Athenians, through the decree of Thoudippos (*IG I<sup>3</sup> 71*), appear to have returned to assessments in the spirit of the initial Aristeidian valuation (2-3 times higher). Thus, the tradition of higher assessments justified rigorous exploitation of the allies during the Archidamian War. And later again, when a compromise was needed to establish the Peace of Nikias, a reference to the 'Aristeidian *phoros*' was included in its provisions, as appears in a verbatim citation of Thucydides (5.18.5-6). The Athenians had wanted Sparta to surrender a small group of Thracian cities to restore the *status quo ante bellum*, but Sparta lacked the ability and the stomach to do so.<sup>36</sup> A deal was reached that these cities would be autonomous and immune from Athenian invasion if they paid Athens the 'Aristeidian *phoros*', although it is unlikely that some (or indeed any) of these states had even belonged to the alliance when Aristeides made his first assessment. This created an anomalous status between defection to Sparta and reincorporation among Athenian subject tributaries. Furthermore, the 'Aristeidian *phoros*' also connoted in contemporary polemics the current level of assessment which the Athenians held both necessary and fair. Thus, in its last years – the tribute system was superseded in 413 by the 5% import/export tax – the *phoros* of the Athenian allies came full circle from the existential threat of Persian domination to the peril of Spartan victory and an anti-democratic upheaval.

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<sup>36</sup> See Figueira forthcoming[b]

**TABLE I: PERSIAN MOBILIZATIONS OF THE FIFTH CENTURY**

Date/ Occasion	Force Size	Contingents	Outcome
1) c. 512: Darius' Balkan Campaign	600 ships (Hdt. 4.87.1)	Assorted allies including Phoenicians and Eastern Greeks	Only attritional losses?
2) c. 499: Campaign against Naxos	200 ships (Hdt. 5.31.3-4, 32)	Ionian and Aeolian Greeks (cf. Hdt. 5.37.1-38.2)	
3) c. 496: Persian fleet to Cyprus	"a great army with ships" (Hdt. 5.108.1)	Phoenicians	Badly defeated by Ionians (Hdt. 5.112.1)
4) c. 494: Fleet facing the Ionian rebels at Lade	600 ships (Hdt. 6.9.1)	Phoenicians and other non-Greeks	The Chians τῶν πολεμίων ἐλόντες νέας συχνὰς (Hdt. 6.15.2)
5) c. 492: Mardonios operates in Thrace	300+ ships (Hdt. 6.44.3)	Phoenicians and other non-Greeks	c. 300 destroyed in storm at Athos (Hdt 6.44.3)
6) 490: Datis' Campaign against Naxos, Euboea, and Attica	600 ships (Hdt. 6.95.1-2)	Phoenicians and other non-Greeks	Seven ships at Marathon (Hdt. 6.115) and attritional losses

<p>7) 480: Xerxes campaign against Greece</p>	<p>1000 triremes (Aes. <i>Persae</i> 341-43)          1207 triremes: (Hdt. 7.89.1, 184.1; cf. DS 11.3.7)          1000 ships (Ctesias <i>FGH</i> 688 F12[27])</p>	<p>300 Phoenician ships (Hdt. 7.89.1; cf. DS 11.3.7)          200 Egyptian ships (Hdt. 7.89.2; cf. DS 11.3.7)          100 Cilician ships (Hdt. (Hdt. 7.90)          80 Cilician ships (DS 11.3.7)          150 Cypriot ships (Hdt. 7.90; cf. DS 11.3.7)          30 Pamphylian ships (Hdt. 7.91)          40 Pamphylian ships (DS 11.3.7)          50 Lycian ships (Hdt. 7.92)          40 Lycian ships (DS 11.3.7)          70 Carian ships (Hdt. 7.93)          80 Carian ships (DS 11.3.7)          320 Greek warships (DS 11.3.7)          30 Dorian ships (Hdt. 7.93)          40 Dorian ships (DS 11.3.8)          100 Ionian ships (Hdt. 7.94)          17 <i>nēsiotic</i> ships (Hdt. 7.95.1)          50 <i>nēsiotic</i> ships (DS 11.3.8)          100 Aiolian ships (Hdt. 7.95.1)          40 Aiolian ships (DS 11.3.8)          100 Hellespontine Greek ships (Hdt. 7.95.2)          80 Hellespontine &amp; Pontic ships (DS 11.3.8)</p>	<p>400 ships lost to storm at Magnesia (Hdt. 7.188.1-190)          200 ships lost to storm at Hollows of Euboia (Hdt. 8.7.12; 131.4.2)          15 ships seized before the battle of Artemision (Hdt. 7.194.1-3)          Many ships (including 30 taken the 1<sup>st</sup> day) lost at Artemision (Hdt. 8.11.2, 14.2, 16.3)          Many ships destroyed at Salamis (Hdt. 8.86, 89.2; cf. 84-93.2)          100 ships destroyed (Dem. 14.29)          Most of the remainder burnt at Mykale after withdrawal of the Phoenicians (Hdt. 9.106.1)          500 ships destroyed (Ctesias <i>FGH</i> 688 F12[30])</p>
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<p>8) c. 468-66: Eurymedon Campaign</p>	<p>340 ships (Ephorus <i>FGH</i> 70 F 191, fr. 9-10, 192; DS 11.60.67; Plut. <i>Cimon</i> 12.5 [350 Ships])  + 80-ship Phoenician reinforce- ment from Cyprus (Plut. <i>Cimon</i> 12.4, 13.3)  600 ships (Pha- nodemos <i>FGH</i> 325 F 22 [Plut. <i>Cimon</i> 12.5])</p>	<p>80-ship Phoenician rein- forcement from Cyprus (Plut. <i>Cimon</i> 12.4, 13.3)</p>	<p>200 ships taken or destroyed (Thuc. 1.100.1)  100 ships captured (Lyc. 1.72; Aris- tod. <i>FGH</i> 104 F11.2;)  200 ships taken and the 80 reinforce- ments (Plut. <i>Cimon</i> 12.6; Nepos <i>Cimon</i> 2.2)  Many ships lost; 100+ with their crews; others empty (<i>FGH</i> 70 F 191, fr. 9-10; DS 11.60.67  340 ships taken: DS 11.62.1</p>
<p>9) c. 454: Sup- pression of the Egyptian revolt</p>	<p>300 ships: Ktesias <i>Per- sica</i> <i>FGH</i>, F14[37]; DS 11.77.1</p>		<p>Only attritional losses?</p>
<p>10) c. 451: Kimon's Last Cypriot Campaign</p>	<p>300 ships: DS 12.3.2</p>		<p>100 ships captured with their men and many others sunk (DS 12.3.3-4)</p>

**TABLE II: NOTABLE GREEK MOBILIZATIONS OF THE FIFTH CENTURY**

Date/ Occasion	Force Size	Contingents	Outcome
1) c. 494: Fleet facing the Persians at Lade	353: Hdt. 6.8.1-2	Miletos: 80 ships Priene: 12 ships Myous: 3 ships Teos: 17 ships Chios: 100 ships Erythrai: 8 ships Phokaia: 3 ships Lesbos: 70 ships Samos: 60 ships (Hdt. 6.8.1-3)	Most of the 11 Samian ships that fought (Hdt. 6.14.2-3) Many of the 100 Chian ships (Hdt. 6.15.2-16.2)
2) 480: Greek fleet at Artemision	272 triremes: Hdt. 8.2.1 + 53 additional Attic ships after the initial fighting (Hdt. 8.14.1)	Athens: 127 triremes Corinth: 40 triremes Megara: 20 triremes Khalkis: 20 triremes Aigina: 18 triremes Sikyon: 12 triremes Sparta: 10 triremes Epidauros: 8 triremes Eretria: 7 triremes Troizen: 5 triremes Styra: 2 triremes Keos: 2 triremes, 2 pentekontors Opuntian Lokris: 7 pentekontors (Hdt. 8.1.1-2.1) 53 additional Attic ships after the initial fighting (Hdt. 8.14.1)	Many Greek ships destroyed in the third day of fighting (Hdt. 8.16.3), including 5 Greeks ships taken by the Egyptians (8.17) One half the Athenian ships s damaged on the 3 <sup>rd</sup> day (Hdt. 8.18)

3) 480: Greek fleet at Salamis	310 ships ( <i>Aes. Pers.</i> 338-40) 378 triremes ( <i>Hdt.</i> 8.48) 400 ships ( <i>Thuc.</i> 1.74.1) 200 triremes ( <i>Dem.</i> 14.29) 300 triremes: <i>Dem.</i> 18.238 700 ships ( <i>Ctesias FGH</i> 688 F12[30])	Sparta: 16 triremes Corinth: 40 triremes Sikyon: 15 triremes Epidauros: 10 triremes Troizen: 5 triremes Hermione: 3 triremes Athens: 180 triremes Megara: 20 triremes Amprakia: 7 triremes Leukas: 3 triremes Aigina: 30+ triremes Khalkis: 20 triremes Eretria: 7 triremes Keos: 2 triremes, 2 pentekontors Naxos: 4 triremes Styra: 2 triremes Kythnos: 1 trireme 1 pentekontor Kroton: 1 trireme Melos: 2 pentekontors Siphnos: 1 pentekontor Seriphos: 1 pentekontor (all <i>Hdt.</i> 8.43.1-47) Athens: a little less than two-thirds of 400 ( <i>Thuc.</i> 1.74.1) Athens: 200 ( <i>Dem.</i> 8.238); 100 ( <i>Dem.</i> 14.29) Cf. Athenians more than the rest ( <i>Lys.</i> 2.42; <i>Isoc.</i> 4.98, 12.50)	Ionians capture many Greek ships ( <i>Hdt.</i> 8.85.2)
4) 479: Greek fleet at Mykale	110 ships to Aigina + Aiginetans and islanders? ( <i>Hdt.</i> 8.131.1)		Only attritional losses?



<p>5) 478: Pausanias Campaign against Byzantion &amp; Cyprus</p>	<p>?</p>	<p>20 ships from Peloponnesus          30 Attic ships          A mass of other allies          Thuc. 1.94.1)          50 triremes from Peloponnesus          30 Attic ships (DS 11.44.2)</p>	<p>Only attritional losses?</p>
<p>6) c. 468-66: Greek Fleet at Eurymedon</p>	<p>250 ships (Ephorus <i>FGH</i> 70 F 191, fr. 9-10; DS 11.60.6)          300 ships (Plut. <i>Cimon</i> 12.2; DS 11.60.3)</p>	<p>200 Athenian ships          100 allied ships (DS 11.60.3)</p>	<p>Only attritional losses?</p>
<p>7) c. 459: Egyptian Campaign</p>	<p>200 ships (Thuc. 1.104.2; Isoc. 8.86; Aristod. <i>FGH</i> 104 F11.3; Ael. <i>VH</i> 5.10)          300 ships: DS 11.71.5</p>	<p>40 Athenian ships (Ktesias <i>FHG</i> 4, fr. 32)</p>	<p>Almost 250? (Thuc. 1.110.1-5; DS 12.3.1)          200 ships (Isoc. 8.86; Ael. <i>VH</i> 5.10)</p>
<p>8) c. 451: Cypriot Campaign of Kimon</p>	<p>200 ships (Thuc. 1.112.2; Plut. <i>Per.</i> 10.4; DS 12.3.1; Nepos <i>Cimon</i> 3.4)          300 triremes: Plut. <i>Cimon</i> 18.1</p>		<p>150 ships (Isoc. 8.86; Ael. <i>VH</i> 5.10)</p>

**TABLE III: ESTIMATED EXPEDITION COSTS IN THE *PENTEKONTAETELA***

Expedition Size	Launching Fee = 8 dr. (covers one month's subsidy?)	+ an additional month at one obol@day/two obols@day	+ two additional months at one obol@day/two obols@day	+ three additional months at one obol@day/two obols@day
200 triremes	53T, 2000 dr.	87T, 2000 dr. / 120T	120T/ 193T	153T, 2000 dr./ 253T, 2000 dr.
250 triremes	66T, 4000 dr.	108T, 4000 dr./ 150T	150T/ 233T, 2000 dr.	191T, 4000 dr./ 316T, 4000 dr.
300 triremes	80T	130T/ 180T	180T/ 280T	230T/ 380T
400 triremes	106T, 4000 dr.	174T, 4000 dr./ 240T	240T/ 386T	306T, 4000 dr./ 506T, 4000 dr.
500 triremes	133T, 2000 dr.	217T, 2000 dr./ 300T	300T/ 466T, 4000 dr.	383T, 2000 dr./ 633T, 2000 dr.
600 triremes	160T	260T/360T	360T/ 560T	460T/760T