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THE ATHENIAN *NAUKRAROI* AND ARCHAIC NAVAL WARFARE

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Resumo

O objectivo deste artigo é analisar as evidências dos *naukraroi* atenienses e do seu contexto social, bem como as *naukrariai* e seus dirigentes, os πρυτάνεις τῶν ναυκράρων. Procuraremos ilustrar esta instituição através do que recolhemos sobre os primórdios da guerra naval. Essa investigação conduzir-nos-á inevitavelmente a uma polémica problemática: a asserção de Heródoto de que estes *prutanes* ou *prutaneis* (no dialecto ático) «administram Atenas» e tinham desempenhado um papel relevante na morte dos conspiradores cilónios no século VII a. C.

Palavras-chave: Naukraroi; Prutaneis; Atenas; naval; guerra.

Abstract

I propose to examine the evidence for the Athenian *naukraroi* and their social context, and the *naukrariai* and their leading officers, the πρυτάνεις τῶν ναυκράρων.¹ I shall attempt to illuminate this institution through our evidence about early naval warfare². This inquiry shall inevitably lead to a notorious crux: Herodotus' asserted that these *prutanes* or *prutaneis* (in the Attic dialect) «administered Athens» and played a role in the deaths of the Kylonian conspirators in the late 7th century.

Key-words: *Naukraroi*, *Prutaneis*; Athens; naval; warfare.

Etymology and fundamentals

Our first inquiry concerns the basic nature of this institution. The term ναύκραρος is an archaic form of ναύκληρος «ship master», which was created through dissimilation of the *r* sound (a common phenomenon) and through a false etymology to κλήρος «allotment».³ Some late intermediaries do indeed tend to conflate *naukraroi* and *nauklēroi*. Both *naukraros* and *nauklēros* mean commander of a ship, since the first element of the word is derived from ναῦς, and the Greek stem **kraros* < **kraira* < **kra-s-* is derived from the Indo-European *ker*¹ «horn». The same root is seen in *kāra* «head». Associations with *κραίνω* «command» and with *κραίρα* «top» or «head» have also been noted. The term ναυκράρια is a feminine abstract built on ναύκραρος. Two points follow from this etymology. In the first place, the original *naukraroi* were simply ship-owners/captains. Weak social differentiation stood between merchant captain and warship captain because no sharp distinction yet existed between merchant galley and warship, and commerce as a vocation had not yet differentiated from other elite activities. *Naukraroi* became *nauklēroi* as social roles evolved. Having a ship as one's *klēros* «allotment» meant that one subsisted by seafaring, just as a farmer or colonist supported himself by cultivating his agricultural *klēros*. Time does not permit me to explore the ramifications of this semantic evolution. Yet, averring that one's livelihood was a ship constituted a significant ideological claim. It defied the prevailing early archaic normative system that restricted seafaring chronologically, subordinating it to the calendar of agricultural labor and connected religious rite. That had been the Hesiodic and Theognidean vision of subsistence. This willingness to claim *naus asklēros* is associated with emergence of new social groups like *aeinautai* «ever-sailors» at Miletos.⁴ However, the older term *naukraroi* was retained at Athens as the term for men officially providing warships for communal defense.

Secondly, while the *naukraroi* can be seen as officers of *naukrariai* and thus state officials, constituting an *arkhē*,⁵ their quasi-private or vocational character should be recognized. They began as Athenians able to offer ships for military purposes. This opens the possibility that the *naukraroi* in the various *naukrariai* may have varied in number depending on local economic conditions. Collected into units called *naukrariai*, they eventually had *prutaneis* as a «presiding» committee, who were presumably responsible for activating or coordinating *naukratic* activities. They were more obviously state officials, although we resist below the temptation to equate them with other archaic governmental organs. The *naukraroi*

must have been relatively numerous; otherwise, there would have been no necessity for *prutaneis*. There were perhaps several hundred men with sufficient requisite involvement in seafaring. In early Attica, the position of *naukraros*, like other political functions determined by social status, probably tended toward inheritability. Sons presumptively followed fathers. Later, one could dispute designation as a *naukraros*.

This etymology is disputed in recent scholarship, which sees its connection with ships as folk etymology. As an alternative, the first element of the word is to be derived from *váoç* «temple», and the *naukraroi* were temple officials.⁶ This interpretation is objectionable for its discarding both the explicit testimonia linking *naukraroi* to ships, and the persuasive etymology outlined above. By changing the meaning of *naukraros*, the evolution of the term *naukiēros* is also rendered opaque. Moreover, there are very few (and late) words with the first element *vau-* that relate to temples, and, in the Attic dialect, the element *vau-* exclusively forms words connected with ships and sailing (LSJ 1161-83; *Supp.* 103). Moreover, the phoneme *vau-* was among word elements well known to ordinary Greeks through wide usage in personal names⁷. There, *vau-* always means «ship», and the force of aural reinforcement in naming strengthened a maritime connotation for all other words with *vau-*. Therefore, using *vau-* to denominate an institution connoting anything other than ships and seafaring defies the principle of economy of reference in archaic public discourse. The idea of Billigmeier and Dusing (1981: 15-16) that an etymological link with «temple» implies survival of a Mycenaean institution is farfetched, absent a single such parallel. The problems addressed by the hypothesis considering *naukraroi* temple officials are susceptible to other resolutions that preserve their maritime affiliations.

The etymology of their name suggests the *naukraroi* were an early archaic institution, developing before the concept of the *naukiēros* emerged. The appearance of their *prutaneis* in Herodotus' account of Kylon would confirm this point, if only one could be sure that this tradition was not anachronistic. But they did precede Solon if *Ath. Pol.* 8.3 can be trusted. Although citation thereof laws, mentioning the *naukraroi*, as «Solonian» does not guarantee an actual link with that statesman – the qualifier merely connoting archaic Attic law – it probably vouches for their existence in the early sixth century⁸. A *terminus post quem* is irrecoverable, since visual evidence of combatant ships on Attic Geometric pottery is merely suggestive. A lexicographical tradition presents the *naukraroi* and *naukrariais* charged with providing ships⁹, and a fragment of the Attidographer Kleidemos may support this. He and his transmitter Photius connect *naukrariai* with

summariai (FGH 323 F 8; Phot. s.v. *vaukpaρ(a)*). These were possibly the 4th century trierarchic *symmories*, grouping affluent Athenians for joint provision of a trireme (see, e.g., Jacoby FGH 3b, 67). Yet, the chronology of 4th century fiscal administration is controversial, so that the *eisphoric symmories* may be a preferable option (Thomsen, 1964: 113-14; Jordan, 1975: 12). Gabrielsen even discusses whether *Kleidemos* refers to a combined *symmoric* system covering trierarchies and *eisphorai* (1986: 33-37; 1994: 22-23). In either case, *Kleidemos* indicates that *naukrariai*, like both sets of *symmories*, were subsidizing Attic military expenditure. The principle of advance outlays in *symmoric* administration, such as those made by the *proeisphorantes*, may help activate this comparison (note Schubert, 2008: 56-57).

In the early archaic period, the ships of the *naukraroι* were vessels usable for warfare that belonged to Attic *oikoi*, *genē*, and perhaps phratries. The primitive *polis* did not as yet own fully public vessels, i.e., state procured, maintained, and utilized exclusively. The first *polis* ship was the sixth-century state galley, the *Paralos*¹⁰. The *pentekontor* «fifty-oared vessel» was in use, and, ultimately, the trireme became increasingly important. A few individual Athenians would have owned *pentekontors*, utilized for piracy and long-distance trade, in the manner of the Aiginetans or the Phokaians in the western Mediterranean (Figueira forthcoming[a]). Even in the classical period, wealthy individuals like Kleinias, the father of Alkibiades, would still provide their own warships for campaigns (Plut. *Alcib.* 1.1). Nevertheless, let us not overestimate the number of warships in private possession. Athens had no strong tradition of *lēisteia*, unlike Phokaia, Samos, or Aigina. Salamis did have such a tradition (Hes. fr. 204W, 44-51). Salaminian *lēistai* might have been a factor for the *naukraroι*, but probably only after the flight of some Salaminioi to Attica, when Megara conquered their home in the late 7th century. A consideration of the two accounts of Plutarch on the Solonian recapture of Salamis (of which one should actually be credited to Peisistratos) imparts a sense of primitive early 6th century naval warfare in the Saronic Gulf regardless of lack of historicity in detail¹¹.

The *Naukraric* system in the polis structure

There is a temptation to envisage *naukraroι* and *naukraria* as virtually the same. That is problematic when one considers whether the *naukrariai* had a local or a personal character in the civic structure¹². Starting with

the *Athenaion Politeia*, our sources do equate the *naukraroi* with demarchs and the *naukrariai* with demes, which hints at units determined, if only originally, by place of domicile¹³. That Cape Kollias was a *naukraria* seems to imply that the *naukrariai* were organized geographically (*Lex. Seguer.* s.v. Κωλιός). An additional complication is that the *naukrariai* were associated in turn both with seemingly gentilician pre-Kleisthenic Ionian tribes and with geographically-based Kleisthenic tribes. Here I assume that Kleidemos' reference to Kleisthenic *naukrariai* is conclusive for post-Kleisthenic survival of the institution¹⁴. Any impression from the *Athenaion Politeia* that Kleisthenes entirely replaced *naukrariai* with demes is a result of abbreviation and emphasis. Only some *naukraric* functions were surrendered to the demes.

Let us start with pre-Kleisthenic *naukrariai*. The *Athenaion Politeia* speaks of four Ionian tribes, each divided into three *trittyes* and twelve *naukrariai*¹⁵. Pollux elaborates by observing that each *trittys* had four *naukrariai*. It is uncertain whether he had independent evidence for this idea. He or his source could have read into the twelve *trittyes* and forty-eight *naukrariai* an implication that the *naukrariai* were split among *trittyes*¹⁶. Beyond their denomination «third», pre-Kleisthenic *trittyes* are one of the greatest obscurities of the Athenian constitution. One pre-Kleisthenic *trittys* is attested, the *Leukotainiai* «white-filleted» (*LSCG Suppl.* 10.41-6). That name suggests priestly activities, and seems improbable for a local entity. Arguably the pre-Kleisthenic *trittyes* were socio-functional and ideological, dividing Athenians into the traditional tripartite classes of Eupatrids, *geōrgoi*, and *dēmiourgoi*¹⁷. Whether or not this supposition is credited, the *Leukotainiai* do not help much in understanding the *naukrariai*. Yet they do suggest that *trittyes* and the *naukrariai* were discrete subdivisions of pre-Kleisthenic tribes, just as they were of the later ten *phylai*.

The nature of the *naukrariai* derives from the functions of the *naukraroi*. Notwithstanding their official duties, the *naukraroi* were persons active in seafaring, and thereby must have been scattered along the periphery of Attica. So understanding the organization of the *naukrariai* within the tribes has to struggle with the concentration of the *naukraroi* in one region of Attica, the coastal lands. The single known *naukraria* is Kollias, which is to be identified with modern Cape Hagios Kosmos, taking its name from the elbow-like shape of the coast at this point¹⁸. Some have believed this identification strong evidence for the local nature of the *naukrariai*¹⁹. Others have noted the existence of a *genos* Kollaidai (*Hsch. Mil.* s.v. Κωλιείς), which may have taken its name from the landmark²⁰. The *genos* would then have given its name to a gentilician *naukraria*. That seems farfetched. In

order to perform their role as ship providers the *naukraroi* of this *naukraria* must in practice have collaborated *in situ* at Cape Kolias²¹. We can perhaps identify a second *naukraria*. Kleidemos preserves a tradition that set the origins of Attic thalassocracy in a confrontation of Theseus and Minos. In its course, Theseus establishes a shipyard in the deme of Thymaitadai. This gratuitous mythological element probably establishes Thymaitadai as an archaic naval base, a *naukraria*²².

Kolias was so tiny a place that it was not even given its own deme in the Kleisthenic system, but included in the small deme of Halimous that provided just three councilmen for the *Boulé*. My hypothetical *naukraria*, Thymaitadai, is also small, with only two *bouleutai*. Note first what this implies about the scale of the Attic maritime sector: a community with two or three counselors constituted a forty-eighth or fiftieth of Athenian involvement with the sea. In addition, it is unlikely that everyone at a Kolias or a Thymaitadai drew his subsistence from seafaring²³. Paradoxically, identification of such small communities as *naukrariai* also tends to exclude a geographical character for the *naukrariai*. That is because it seems unreasonable to envisage a sizable block of territory extending inward from a Kolias or Thymaitadai in the shape of a quadrilateral with a short side lying along the shore. However, imagining that all the inhabitants at Kolias belonged to a single non-geographical Ionian tribe also seems incredible. And such small places could never have accommodated multiple *naukrariai* for the local members of different Ionian tribes. Thus, the identification of such *naukrariai* creates problems, whether they were personal or geographical entities.

To allay these concerns, we must distinguish between the *naukraroi*, the *naukraria*, and the members of the *naukraria*. The *naukraroi* were the leading men concerned with the sea in specific coastal communities, and they could only collaborate with their neighbors of similar situation. They did so regardless of tribal affiliation. Their focus of domicile gave a name to their *naukraria*. A Solonian law quoted from Aristotle and preserved in Photios has τούς ναυκράρους τούς κατὰ ναυκραρίαν. The preposition κατὰ should not simply equal the genitive here, but may well mean «connected with» or «involved with». Similar phrasing is employed when the *Athenalon Politeia* speaks of the *naukraroi* as a magistracy established ἐπὶ τῶν ναυκραρίων «for» or «over» the *naukrariai*. Photios, again citing Aristotle, attributes to Solonian law the phrase ἂν τις ναυκραρίας ἀμφισβητή, «if someone disputes the *naukraria*». This implies that an assignment as *naukraros* approximated a liturgy, the eligibility for which one could contest²⁴.

The surprising conclusion following from my hypothesis is that the *naukraroi* need not have been members of the tribes whose *naukrariai* they served. The expenses and perhaps manpower requirements of the *naukraria* could only be satisfied by drawing upon a larger pool of citizens than those of the *naukratic* center. Not all the common members of a *naukraria* lived in physical proximity to the headquarters of its *naukraroi*. The *naukrariai* were aggregates of tribesmen inheriting their station as members of an Ionian *phylē*. Their main contribution to the *naukraria* probably consisted of making payments, the *eisphorai* mentioned in the *Athenaion Politeia*. Secondly, citizens assigned to a *naukraria* may have supplied crew members, although the initial complement of any warship held at the ready probably came from the circles of association of the *naukraroi* themselves. Members of different *naukrariai*, as members of different Ionian tribes, were neighbors throughout Attica. The *naukrariai* were groups of a double character, local from the standpoint of their *naukraroi* and their ships, but personal from the perspective of ordinary participants in the *naukraria*. Since the hinterlands of the coastal *naukratic* centers differed significantly in topography, population density, and economic means, the burden of keeping a fleet needed to be spread from coastal areas far into the interior of Attica, and among all economic sectors. Otherwise, seafaring could become so enervated by warfare that Athens would suffer economically and, in the end, militarily as well.

Naturally, this rather idiosyncratic amalgamation of gentilician and local organization would have changed markedly with Kleisthenes. The *naukrariai* ceded tax-collecting and any supervision of registers and property of citizens to demes and their demarchs. Two additional *naukrariai* were added, but these could easily have been created at the Peiraeus and/or Phaleron. Clearly, five *naukrariai* in a tribe could not be coordinated with three *trittyes*. Thus the demarcations of the memberships of the *naukrariai* crossed the *trittyes'* boundaries. How the demes were assigned to individual *naukrariai* is less obvious. We might surmise that each Kleisthenic *naukraria* was centered on a Kleisthenic deme of the Paralia, and some large demes might even have harbored multiple *naukrariai*. One supposition is that other contiguous demes were then added until an aggregation of citizens equaling around ten *bouleutai* was reached. In that case, our customary reconstructions of Kleisthenes' legislation would have to be rethought, because it is a much more complex process to assign both demes and *naukrariai* to *phylai* than allocating demes alone. Anyone can establish this for themselves by taking a copy of John Traill's map of the Kleisthenic demes (Traill, 1975) and trying to overlay fifty *naukrariai* on it.

Therefore, it is tempting to conjecture that Kleisthenes did not try to reconcile assignment of fifty *naukrariai* to *phylai* with the geographic demarcation of *trittyes* and demes. The pre-Kleisthenic *naukrariai* were assigned to Kleisthenic tribes, five each, and Kleisthenic demes of that tribe were allocated to the *naukrariai* without regard to their location, so that each *naukraria* drew on demes encompassing ten *bouleutai*. Therefore, pre-Kleisthenic Attica was a finely detailed mosaic comprising citizens from different tribes and *naukrariai*; post-Kleisthenic Attica a jigsaw puzzle of demes allocated to various *naukrariai*.

It is quite unclear when Athenian census quotas, originally defined in terms of natural products, were given monetary equivalents (*Ath. Pol.* 7.3-4; Pollux 8.130). Thus, because some early archaic *naukraroi* drew on non-agricultural subsistence activities for the majority of their income, appointment as a *naukraros* differed fundamentally from sociopolitical classification in the agrarian Solonian *telē*. The *naukraroi* are usually assumed to have belonged to the traditional aristocracy or the two highest census classes, but that is not necessarily true (cf. e.g., Bravo, 1977: 27-30; Valdés Gula, 2002: 72). Some may indeed have rated as *Pentekosiomedimnoi* and *Hippeis* only by plausible self-designation or if non-agricultural income were taken into account. Some were perhaps merely *zeugirai* even in these terms. Yet, many 6th-century *naukraroi* were legally *thetes* because of their basically non-agrarian assets and income. Therefore, it is hard to imagine the operations of the *naukrariai* being conducted through the other, that is, gentilician units of the *politeuma*, like *phylai*, *phratriai*, and *genē*.

Military functions of the *naukraroi*

Let us explore how the *naukraroi* may have functioned militarily²⁶. By the sixth century, the *naukraroi* were persons from families otherwise involved with seafaring who had the experience to equip, man, and handle ships. They had been granted by the *polis* the authority to muster men and to collect taxes to these ends. They needed to acquire the material to build the ships, especially the long timbers for keels and masts, which were in short supply in Attica. They supervised shipbuilding themselves. Because the Peiraeus had not yet developed as a center for naval construction, ships were probably built in various places along the coast by workers who may have sailed for their livelihoods, sometimes in combination with other subsistence activities. Recall the mythological exemplar of Theseus building ships for use against the Cretans at Thymaitadai (Kleidemos *FGrH* 323 F17).

Compared with ship procurement, the manning was an equal or more substantial task. Being a rower was not yet a salaried occupation. Without a pool of workers for hire, ships could only be manned through clientage or local affiliation. In this context, there was unlikely to have been any process for training rowers as a craft, turning men with no experience of seafaring into sailors. This was quite unlike the classical period, where a poor Athenian learned to row in a trireme and crews learned to coordinate rowing by being maintained at sea at public expense. In archaic Athens, each man who owned a ship for piracy, fishing, or trade had a circle of associates (family members, retainers, neighbors, or even slaves). Only individuals with such circles of affinity could probably serve as *naukraroi*.

The shipbuilding and personnel responsibilities of the *naukraroi* grew over time. According to Thucydides, the trireme was invented at Corinth in the late eighth century (Th. 1.13.1-4). Although a vessel with three tiers of rowers was a significant technological advance, it imposed greater costs and required much higher rates of mobilization. *Pentekontors* needed fifty-five to sixty men, while triremes demanded at least two hundred. The *naukratic* system implies a minimum of forty-eight ships. A minimal fleet mixing *pentekontors* and smaller *triakontors* required c. 2,300 sailors. A trireme fleet of the same size, however, called for 9,600. Unlike the Sicilian tyrants and the Corcyreans, as Thucydides observes (1.14.2-3), the Athenians and their enemies on Aigina were slow to convert to triremes. Triremes and *pentekontors* were not easily deployed in the same battle line because of different speeds. The tyrants had unusual capacity to conscript large numbers and hire mercenaries, while the Corcyraean elite was heavily involved in seafaring. At Athens, the quasi-public/private character of the *naukraroi* made procurement of a fleet in a predominantly agrarian state feasible, but militated against the trireme in favor of the *pentekontor*. Thucydides vouches for the continued late archaic use of the *pentekontor* in the Athenian fleet (1.14.3).

Because of their enmity, the Athenian and Aiginetan navies grew in conjunction, with the early advantage inclined toward Aigina²⁶. Our data are scarce, but a few observations are possible. The Aiginetans likely had fifty to sixty triremes in 519, when they fought the Samians at Kydonia in Crete (Hdt. 3.44.1-2, 59.3). The Athenians probably had at least forty triremes in 498, when they dispatched twenty to assist the Ionian rebels (Charon *FGH* 262 F10; cf. Hdt. 5.99.1). In the early 480s both navies were well matched, with over seventy triremes each. An expeditionary force of 70 triremes entails a massive mobilization, requiring at least 14,000 men. Thereafter, the naval law of Themistokles permanently altered the

balance of power between the two *poleis* in favor of Athens, but it also ended the *naukratic* system.

These remarks reveal my position on the relevance of the number of the *naukrariai* to the size of the Athenian fleet. That there were only 48 *naukrariai* in the 6th century and 50 under the Kleisthenic constitution makes it improbable that the institution could ever have supported the navy of democratic Athens with its hundreds of triremes. Yet it is also improbable that the *naukrariai* ever limited Athens to only 48 or 50 ships²⁷. In that case, it would be hard to understand how the introduction of the trireme could have been handled or how a mixed complement of *pentekontors* and triremes was maintained. The Athenian squadrons used at Aigina and Paros in the early 480s already numbered 70 ships (Hdt. 6.86, 132), a strength out of alignment with the number of *naukrariai*. Kleisthenes only increased the 48 Solonian *naukrariai* to 50, making a minor adjustment to fit his new tribal system²⁸. If there was strict linkage between the number of *naukrariai* and fleet size, we might rather expect Kleisthenes to have increased their number markedly to reflect the economic and demographic growth of Peisistratid Athens. Managing the size of the fleet is probably a reason why the *prutaneis* of the *naukrariai* existed²⁹. Possibly, they had to help allocate equitably among the *naukraroí* tasks of procurement and maintenance of ships – in proportion to the number of *naukraroí* in various *naukrariai*? – after the archons (and later the *stratēgoí*), endorsed by the *ekklēsia*, decided how many ships and in what types Athens needed and could afford.

Pollux states that ναυκραρία δ' ἐκάστη δύο ἰππέας παρείχε καὶ ναῦν μίαν, ἀφ' ἧς ἴσως ὠνόμαστο. «each *naukraria* provided two horsemen and one ship, from which perhaps it was named». The word ἴσως seems to mark the last clause as lexicographical speculation, although probably correct³⁰. That every *naukraria* provided two cavalrymen and one ship might be explained merely as the force that each had to keep at the ready. Pollux follows his notice on the *naukrariai* (which are introduced to explain *demarkhoí*) with an explanation of *trittuarkhos* and *trittys* wherein, schematically and improbably, a *trittys* is assigned 30 *genē*. He then goes on to name the Athenian tribes under Kekrops, Kranaos, Erikthonios, Erekhtheus, and Akmaion, this last perhaps reflective of Kleisthenes. These elements appear to have been culled from a treatment of the archaic Attic *politeia*, one resembling but distinct from the *Athenaion Politeia*. Pollux establishes 96 or 100 horsemen for the mounted troops of 48 or 50 *naukrariai*. This small body of horsemen was not the 6th century Attic cavalry, which probably never numbered less than 300³¹. Potentially,

Athenian mounted soldiers would have included an able-bodied man from each *oikos* of the two highest census classes, the *Pentekosiomedimnoi* and the *Hippeis*. Rather, the horsemen of the *naukrariai* would have had a role in naval defense. They were probably used as messengers to alert other *naukrariai* and neighboring communities of a hostile incursion. With *naukratic* centers and members of *naukrariai* scattered throughout Attica, there had to be some mechanism to disseminate news of threats and to summon assistance in haste.

The *naukraroi* were supplanted by the demarchs, who kept registers of those liable for military service. A similar function for the *naukraroi* might have existed. Although it is unlikely that archaic Athens had a complete enumeration of the thetic class, the *naukraroi* may still have had records of persons available for service in ships' crews. They could doubtless have had lists of hoplites for service as *epibatai* «marines». The composite document that we call the «Themistokles Decree» (Meiggs-Lewis #23) was probably synthesized from genuine Attic enactments of 480. Lines 29-30 indicate that the ληξιαρχικά γραμματεῖα, the deme registers of citizens for military service, might already have existed in 480.

The *naukraroi* as financial officials

In state finance, the *naukraroi* had important responsibilities³². *Athenaion Politeia* 8.3 speaks of the ἀρχή «magistracy» of the *naukraroi* «tasked» (τεταγμένη) for ongoing εἰσφοράς 'capital taxes' and δαπάνας «expenditures». The *Athenaion Politeia* goes on to quote from pertinent Solonian laws: τοὺς ναυκράρους εἰσπράττειν «the *naukraroi* exact», and ἀναλίσκειν ἐκ τοῦ ναυκραρικοῦ ἀργυρίου, «to spend from the *naukratic* silver». Pollux refers to the same activity: τὰς δ' εἰσφοράς τὰς κατὰ δήμους διεχειροτόνουν οὗτοι, καὶ τὰ ἐξ αὐτῶν ἀναλώματα «they used to vote on the *eisphoras* involved with demes, and the expenditures from them». Similarly, Hesychius notes that the *naukraroi* were οἵτινες ἀφ' ἐκάστης χώρας τὰς εἰσφοράς ἐξέλεγον, «the very ones who collected the *eisphoras* from each place». Moreover, a fragment of Androktion establishes that the *kōlakretai* are to give ἐφόδιον «travel provisions» ἐκ τῶν ναυκραρικῶν «from the *naukrarika* [*naukratic* funds]» to *theōroi* to Delphi³³. Androktion is also a possible source for the Solonian laws cited in the *Athenaion Politeia*.

In their fiscal aspect the *naukraroi* are juxtaposed with the demarchs. Kleisthenes established demarchs with the same ἐπιμέλεια

«responsibility» as the former *naukraroi*, as the *Athenaion Politeia* notes and lexicography emphasized³⁴. Now these laws appear to reflect an embryonic monetary economy with the specifications ἐκ τοῦ ναυκραπικοῦ ἀργυρίου, ἐφόδιον, and ἐκ τῶν ναυκραπικῶν. Therefore, one must be reluctant to envisage a Solonian or early archaic date in the form in which they were ultimately cited (cf. Bravo, 1977:27-30). The revision of the laws had to reflect a fiscal progression in which the *naukraroi* moved from handling both levies in kind and weighed bullion, through pre-monetary media, to early coined money.

However, one cannot help understand the financial responsibilities of the *naukraroi* by emending Herodotus, as Jordan has argued, to read that the *naukraroi* ἐνέμοντο «drew revenue» from Athens³⁵. This accepts an inferior manuscript of Herodotus, while failing to justify the middle voice of the verb, which means «to extract revenues for one's own benefit»³⁶. This revision makes even less sense representing a tradition on suppression of the Kylonians. Their fiscal authority hardly alters the allocation of culpability. Jordan's scenario tends to complicate that murky issue by adducing *ad hoc* details outside Herodotus (e.g., putative *prutanic* retaliation for Kylonian plundering of the sanctuary). An extension of this hypothesis is the unlikely theory that the *prutaneis* were the earliest supervisors of the treasures of the cult of Athena on the Acropolis, occupying the role later held by the *tamiai*³⁷. A conflation of treasurers and military financial officials does not withstand historical analysis³⁸. The former preserved dedications that in all but utter crisis times were expected to accrue; there is no evidence that they regularly dealt with a budgetary cycle, military subsidies, or the conversions required to utilize dedications in warfare. The *naukraroi* seem to have made actual preparations for belligerency, trying to raise the funds to defray them, in all likelihood retroactively.

The comparison of demarchs and *naukraroi* is primary, while the parallel between demes and *naukrariai* is somewhat in the background. Hesychius and Pollux give the number of *naukraroi*as one for each *naukraria*, but this is probably an inference from the analogy with demarchs, who individually presided over their demes³⁹. This specification is joined with the suspect idea that the *naukrariai* were allocated to *trittyes*. Yet, as suggested above, the existence of πρυτάνεις τῶν ναυκράρων argues for more than twelve *naukraroi*. This interpretation is also supported by the references to the *naukraroi* compiled by the Peripatetics, where multiple *naukraroi* for each *naukraria* are indicated by phrases like τοὺς ναυκράρους τοὺς κατὰ ναυκραρίαν (Photius) and, probably, ἐπὶ τῶν ναυκραριῶν ἀρχὴ καθεστηκυῖα ναύκραροι (from the *Athenaion Politeia*)

The *eisphorai* of classical Athens were the much resented emergency levies on capital, made primarily for military expenses. Thucydides speaks of the *eisphora* of 428/7 as in some sense the first (3.19.1). Alternatively, he meant that Athens revived the *eisphora* then, in other words using it for the first time in the Peloponnesian War, or that it first yielded two hundred talents. Thomsen doubted that there was truly a *naukraticeisphora*, suggesting that Peripatetic tradition postulated it on the basis of the term εἰσφοράται in the law of Solon quoted by the *Athenaion Politeia*⁴⁰. However, the phrase πρὸς τὰς τὰς εἰσφοράς καὶ τὰς δοῦ[άνας] τὰς γιγνομένας seems to be official language. Accordingly, Pollux and Hesychius follow Peripatetic tradition when they too speak of *eisphorai*. There seems no good reason to doubt that the *naukratoi* maintained whatever early lists of property that archaic Athens kept. Hence Hesychius could describe them as levying *eisphorai* ἀφ' ἐκάστης χώρας. Quite possibly such registers only preserved a record of assignment of the members of a *naukratia* to the four Solonian census classes. Thomsen and Ostwald emphasize that the term *eisphora* probably establishes the intermittent character of *naukratic* exactions, while for Ostwald the term *telos* for a Solonian class presupposes such payments⁴¹. The Peisistratid levy on production may well have been raised on the basis of the information about holdings held by the boards of *naukratoi* (Th. 6.54.5; *Ath. Pol.* 16.4). I would stress the probable *ex post facto* nature of *naukratic eisphorai* (cf. Schubert 2008, 55-59). Somewhat like trierarchs in the classical period, *naukratoi* probably undertook necessary expenditures up front and then tried to recoup their outlays afterward. Hence Pollux speaks about the *naukratoi* voting (διεχειροτόνουσιν) on *eisphora* and expenditures (ἀναλώματα).

Thus the *naukratoi* also supervised expenditures. These duties presumably involved ship procurement and conducting military operations through sustaining naval personnel, although our sources are unfortunately mute. Other officials, including the important board of the *kōlakretai*, stood downstream of the *naukratoi* in the flow of public funds toward final recipients. According to Androtion, the *kōlakretai* provided travel subsidies to *theatroi* to Delphi out of the *naukratic* fund. Provision for sacred embassies would have been among the earliest financial responsibilities of the *polis*. Many *theatroi* travelled by sea, carried by the Athenian state galleys, the *Paralos* first, later joined by the *Salaminia*. Perhaps the *prutaneis* of the *naukratoi* collectively supervised the state galleys.

The title *kōlakretai* means «collectors of the limbs», referring to sacrificial animals, so that early duties included management of apportionment of meat from sacrifices belonging to the *dēmos*. In a pre-monetary

society, the value of sacrificial meat (and other ritual comestibles) was an important component of all goods redistributed through the «state». From this role, the *kōlakretai* evolved into officials responsible for the supervision of state expenditures (Rhodes, 1981: 139-140). We cannot tell from the fragment of Androtion whether the *kōlakretai* had always funded the *theōroi* from the *naukraric* treasury. It cannot be excluded that subsidy of the *theōria* passed to the *kōlakretaiat* some juncture, after having been the exclusive province of the *naukraroi* previously. Speculating on their other interactions with the *naukraroi* is futile⁴². The appearance of the word ἀπύργια here might suggest that the surviving formulation of the rule of subsidization of *theōroi* refers to coined money, so that provision could not be earlier than the end of the sixth century. Broad early authority for the *naukraroi* would fit the characterization of their functions in *Ath. Pol.* 8.3. Therefore, the *kōlakretai* may have assumed some fiscal duties of the *naukraroi* when coinage was becoming more prevalent in the later 500s and financial management became thereby more complex. The reforms of Kleisthenes would offer a context.

Some other financial duties of the *naukraroi* are more obscure. A gloss of Photius and a differentiation of Ammonius have them leasing public property. This would be another aspect of their role as supervisors of the property holdings in Attica. Secular public property would not derive from dedications, which would go to the benefit of individual cults and be handled by *famiai*, but from expropriations from those subjected to confiscations. A scholion to Aristophanes seems to give the *naukraroi* authority over recalcitrant debtors, although the Greek is difficult and may relate to the attested process by which later demarchs compiled *apographai* of forfeited properties. Some have understood from Σaristoph., *Nubes* 37b (Kosfer), that the *naukraroi* marshaled the Panathenaic procession⁴³, but this may be a distortion based on the role of the demarchs⁴⁴. If the archaic *naukraroi* were indeed involved, that might explain the carriage of Athena's *peplos* on a ship's mast (Paus. 1.29.1; *Suda* s.v. ἰστὸς καὶ κερὰ; Harpocration s.v. τὸναιῶν).

The rationale in social analysis for the financial functions of the *naukraroi* is manifest. Maintenance of a fleet would have been the major ongoing fiscal activity of an early *polis*, demanding aggregation and disbursal of appreciable resources, whether in silver bullion, products, or coins. Other state functions were less asset-intensive. The land army was provided by citizen farmers, who did not receive subsistence support. Ritual activity was the responsibility of priestly personnel or, in the case of certain state cults, was underwritten through dedications, production

from cult property, cult levies, and, eventually, elite liturgies. The judicial apparatus and most routine official activities were supported by elite office-holders themselves. Sanctuaries were embellished by cooperative civic efforts, assisted by conversion of dedications. These activities were supervised by *tamiai* «treasurers». The limited spectrum of state expenditure was balanced by a slight arsenal of taxes. Until the very end of the sixth century, coinage, and especially fractional coins, circulated in modest amounts. This circumstance greatly restricted efficiency of collection for the indirect taxes on which *poleis* depended. Sales taxes, import duties, and harbor tariffs were cumbersome without coins to provide a scale of value and a means by which fractional values could be sequestered for governmental use. The tasking of the *naukraroi* with public finances illustrates a principle of early *polis* organization in which state organs were shaped by their most demanding responsibility, in this case, provision of a fleet. Less demanding duties, such as subsidizing sacred embassies, in this instance, are appended in a process of economy of administrative energy. Similarly, on Aigina, the authority for the main archaic mint seems to have been associated with the fleet¹⁵.

The *prutaneis* of the *naukraroi*

We must first recognize our difficulty in interpreting the *prutaneis*, with only the single explicit attestation of Herodotus to assist us (5.71.1-2). We cannot answer so basic a question as whether each *naukraria* appointed its own *prutanis* or in what other way they were selected, or, alternatively, whether there was a *prutanis* (or two?) for each tribe. By their title, the *prutaneis* could have been the superiors of the *naukraroi* – *n.b.* not of the *naukrariai* – or they could merely have been those *naukraroi* who were presiding out of the whole body of *naukraroi*. There is no suggestion that they performed the main functions with which our discussion has dealt: construction and provision of ships, mobilization of manpower, maintenance of property registers, levying of *eisphorai*, and expenditures on naval matters. Interestingly, the *Lexicon Seguerianum* has the *naukraroi* subordinated to the *polemarch*, not to their own *prutaneis*. That implies that the *polemarch* actually commanded the *naukraric* ships. Just on common sense grounds, one might assign to the *prutaneis* a role in exaction and disbursements of public funds. It seems more efficient to suppose that four, eight, even possibly forty-eight/fifty *prutaneis* handled conveyance of money to the *kōlakretai* than envisioning perhaps several

hundred *naukraroi* undertaking such tasks. While the archons and later *stratēgoi*, whose actions were endorsed by the *ekklēsia*, presumably determined the size and composition of squadrons and their use, the *prutaneis* probably collaborated in the supervision of the *naukraroi* in their activities, including exactions and expenditures. Another role may have been to help the *polemarch* in designating the *naukraroi*, just as the later *stratēgoi* named the trierarchs. There is no evidence for another assembly or council of *naukraroi*. Herodotus' notice on the suppression of the Kylonians is probably warrant for the presence of the *prutaneis* in the *asty*, where they were permanently on call to handle exigencies. They may have dined in the *prytaneion* with the other officials, that is, the other *prutaneis* in the general sense of the term, first and foremost the archons.

Although the archons may have convened with *prutaneis* by virtue of their presence in the *asty*, one need not proceed to speculate that the *prutaneis* formed a council, either a forerunner or rival of the Areiopagos or perhaps the body of fifty-one *ephetai* with three archons (cf. *IG I³* 104.13, 18; Plut. *Solon* 19.3-4)⁴⁶. Nor ought one follow Wüst in believing the *prutaneis* to be the archons themselves.⁴⁷ As we have seen, Jordan expanded his theory concerning the financial preoccupations of the *naukraroi* by making them predecessors of the *tamiai*, so that their presence on the Acropolis during the Kylonian coup is understandable. Rather, let us view the *prutaneis* as genuine obscurities and not merely another set of magistrates about whose nature Herodotus was misled. At the worst, his informants probably tried to divert blame for the *Kuloneion agos* by obfuscation.

The permutations of interpretation of the Kylonian *coup d'état* are so numerous that I cannot to hope to exhaust them here.⁴⁸ Rather, I offer resolution in light of my reconstruction of the *naukraroi*. In the Herodotean account of the murder of the Kylonians, the *prutaneis* are the alternative choice for culpability. It has been thought that they might have mustered hoplite forces (Hignett 1952 71). This seems a more likely assignment for the *polemarch* and his assistants, including the phylarchs if they as yet existed. An enemy marching by land would usually have given the Athenians ample warning of his onset. Most sudden incursions would have come from the sea. The *naukraroi* and their *prutaneis* were likely responsible for rallying ships and sailors. The two horsemen of each *naukraria* provided a mechanism for doing so among each other and for alerting the *prutaneis*. When Kylon seized the Akropolis, no one would have immediately known whether his action was timed to coincide with an attack on Attica by his father-in-law, Theagenes, tyrant of Megara. Athens

and Megara were notoriously in conflict in the late 7th century over Salamis and the Eleusinian borderlands. When the *naukraroi* had gathered their forces against Kylon, the *prutaneis*, present in the *asty*, may have taken charge in the absence of the *polemarch* (cf. Lambert 1986 112). Hence, the *prutaneis* were in practical command of the Athenians rallying to blockade the Acropolis.

In the alternative version on the execution of the Kylonians by Thucydides, the archons are responsible for their murder (Th. 1.126.1-11). On a first level, Thucydides established the overall authority of the archons, probably in tacit correction of Herodotus. Then there are notorious difficulties. The nine archons seem to act collectively, in a situation where the 7th century archon and/or the *polemarch* would probably have predominated. The archons are also empowered by grant of the people, who tire of the siege of the Acropolis. Thus, the Athenian army acts rather like the 5th century *ekklēsia* in continuous supervision of military operations. If the *prutaneis* of the *naukraroi* took charge of the Acropolis siege as the Athenians were massing and awaiting the arrival of the archon and the *polemarch*, then the variants of Herodotus and Thucydides differ mainly about timing. Thucydides is probably correct that the archon, Megakles, made the crucial decision to execute the Kylonians, to which his colleagues likely assented. Herodotus can be read as implicitly admitting Megakles/Alcmeonid responsibility for the executions. However, he would acquit them of pollution because the *prutaneis* had given guarantees to the Kylonians. Thus, Herodotus might have received from informants, hoping to mitigate the guilt of Megakles, an exaggerated appraisal of the authority of the *prutaneis*. Thus, «...οἱ πρυτάνεις τῶν ναυκράρων, οἱ περ ἔνεμον τότε τὰς Ἀθήνας...», the *prutaneis* of the *naukraroi*, the very ones who administered Athens then.⁴⁸ In 1985, I raised, but was skeptical over, the possibility that τότε here can mean simply «at the time during the siege». Lambert, however, embraced this idea in same year and same journal⁴⁹.

The supersession of *naukraroi* and *naukrarai*

It was Themistokles' naval legislation that superseded the *naukraric* system.⁵⁰ Themistokles directed the surplus of mining at Laurion to an expansion of the fleet, legislation that provided it be subsidized from general revenues. The specific responsibility for command and stewarding of funds now fell to the wealthiest Athenians, without regard to their economic affiliations. One tradition on the Themistoklean naval bill has

the mining surplus entrusted to one hundred wealthy individuals in order to provide triremes (*Ath. Pol.* 22.7). While there are problems in interpretation, especially concerning the motif that the purpose of the grants was not made explicit, the tradition does appear to signal the first appearance of what would become the trierarchic system. There is no evidence that the *naukraroi* played any role in Themistokles' legislation. Nor are they attested during the campaigns of Xerxes' invasion. When the *eisphora* was revived, whether during the First Peloponnesian War or during the great Thucydidean war, it had become an extraordinary wartime tax.

By the early fifth century, the *naukraroi* had outlived their usefulness. The groups of *naukraroi* were scattered around Attica. However, as Athens traded more and more by sea, Attic shipping must have become concentrated in the Saronic Gulf. As early as 506/5, the Aiginetans had begun their campaign of raiding coastal Attica with a surprise attack on Phaleron (Hdt. 5.81.3, 89.2). This suggests that Phaleron was already the chief Attic naval base. In 493/2, during his archonship, Themistokles commenced conversion of the Peiraeus into a naval stronghold meant to replace Phaleron (Th. 1.93.1-2). During the years of the «Herakleides War» with Aigina, the greater part of the Athenian fleet was probably concentrated at Phaleron or the Peiraeus to meet Aiginetan threats and to threaten Aiginetan turn (Hdt. 5.81.3 with Figueira 1993, 133-39, 410). Yet, when the Athenians set off to rendezvous with Nikodromos, the dissident Aiginetan aristocrat, their mobilization miscarried (Hdt. 5.88-89).

They had intended a surprise attack on the *asty* of Aigina in conjunction with Nikodromos and his followers from the *demos*. The rebels duly rose up and seized the *Astypalaia* «Old-Town» of Aigina. But the Athenians failed to arrive at the agreed time, being stymied by their last minute discovery of a shortage of «battle-worthy» ships. That indicates a failure in ship maintenance, probably by the *naukraroi*. The failure to exploit the populist uprising at Aigina was probably a strong argument in support of Themistokles' proposed reforms. The ships built from the Laurion surplus were explicitly to be employed against Aigina (Hdt. 7.114.1-2; Th. 1.14.3). External to this evidence from the naval bill, there are other indications of Themistokles' hostility toward the Aiginetan oligarchs (Figueira, 1993: 143-146).

One echo of the controversy over this issue may be an *ostrakon*, Agora 17.1065, bearing an elegiac couplet hostile to Xanthippos, the father of Perikles⁵². Here I follow my earlier exegesis from 1986 (revised in 1993 151-72)⁵³. The couplet observes that Xanthippos did the most *adikia* of the «accursed» *prutaneis*. The *prutaneis* of the Boulé are not

attested until after the reforms of Ephialtes, so that it is doubtful that they existed in the 480s (1993: 161-163 ~ 1986:267-270). One *prutanis* out of fifty would hardly seem capable of engendering such animosity. The term *aliteros*, «accursed», suggests someone whose extreme criminality has adopted a religious dimension. One doubts that the man who scratched this *ostrakon* composed the couplet himself, which probably served as a mnemonic from an ostracism campaign against Xanthippos in 484. One voter was so impressed that he took the trouble to record it. That Xanthippos was a *prutanis* of the *naukraroi* makes good sense on the eve of Themistokles' naval legislation. He could be accused of the failure of the fleet preparation before the surprise attack on Aigina, from which so much was expected. As a *prutanis*, Xanthippos may have attempted to uphold the *naukraric* system in the face of Themistokles' innovations, protecting an important political asset. If my interpretation is correct, the *ostrakon* is further evidence both for the continued existence of the *prutaneis* of the *naukraroi* in the early 5th century and for the termination of the *naukraric* system by the Themistoklean naval reforms. Such existence may also be substantiated by the appearance of the *prutaneis* in the narrative about Kylon in Herodotus because his informants might well not have invoked an office that had not existed in living memory (Hignett, 1962: 69).

Conclusion

Land warfare differed from sea warfare in its dependence upon a hoplite phalanx composed of small-holders. At least after Solon, the latter would have been of the *zeugite* census rating, and would have had certain political rights like participation in the *ekklēsia* and holding minor offices guaranteed to them. Doubtless the *naukraroi* themselves were men of some means and often of the *zeugite* status, if not in some cases higher (if total income were to be measured). Their influence on the political process through service in the fleet will have been reduced by the *naukrarai* dividing their influence and the board of *prutaneis* supervening. Although dealing mainly with the archons and later *stratēgoi*, the *prutaneis* may have also intermeddled with other governmental organs, like *ekklēsia*, Areiopagos, and the Solonian *boule*, if it truly existed. If my interpretation of the Xanthippos *ostrakon* is correct, it was elite *prutaneis* like Xanthippos (and possibly his father Ariphron) who exploited the *naukraric* system (1993: 169-171). The ordinary sailor, especially if he were a *thete*, would have been insulated from political influence, since his participation in the ship's

complement was primarily dependent upon his private connection with the *naukraros*/ship commander. By the same token, the entire manpower of Athens was not thereby readily available for naval warfare, but only those already connected with maritime activity. Hence, in archaic Athens rowers did not become an interest group. Their influence was buffered in a populist state to achieve a result approximating more oligarchical states, more dependent on commerce and their navy. There was no movement toward the *nautikos akhlos* of the Athenian hegemony, since ship procurement, manning and command was still quasi-private/public.

The *naukratic* system typifies the mechanisms of the late archaic *poleis* to utilize the economic resources of the whole community for naval warfare. Elsewhere, I have classified such systems as «mixed» regimes in order to highlight their fusion of different economic sectors and to distinguish them from other models for early naval warfare (Figueira, forthcoming[a]). The «mixed» regimes certainly differed from navies which were amassed by the amalgamation of the ships of elite *lēistai* «brigands»/merchant entrepreneurs, such as those of the Aiginetans and Phokaians. Such forces were heavily dependent on numbers of *pentekontors* with which they could strike quickly. I also distinguish some early, mainly trireme navies, such as that of Corinth under Periander, which enjoyed high state expenditures for shipbuilding and facilities and exploited the high level of conscription that strong tyrannical authority afforded, but which may have suffered from slowness in reaction. Furthermore, I classify the navy of Samos under the tyrant Polykrates as another «mixed» naval regime.

A distinction may also be profitably made between a *naukratic* and a trierarchic system. Trierarchs were wealthy members of the elite who were tasked with naval command and maintenance without the vocational connection with the sea possessed by *naukraroi*. In the context of the 480s, they were probably, on average, much more affluent than ordinary *naukraros*. A trierarch received his ship from the state. When it was lost at sea or in battle, he was not responsible for replacing it unless he was found negligent. Since *naukraroi* supplied the state with ships, despite any safeguards and the shared responsibility of the whole *naukraria*, the risks of combat at sea during the *naukratic* system must have rested more heavily on the maritime segment of society and its prominent individuals and families. The Athenians may have faced the problems of many societies that conscript ships, namely the reluctance of their captains to risk their peacetime livelihoods. The trierarchic system allowed for central storage, maintenance, and protection of the fleet. It brought the status of ships under the direct scrutiny of the *strategoi*. The *naukratic* system may

well have occupied an importance place in the ascent of Athens toward thalassocracy in the eastern Mediterranean, but it could never have served as the mechanism that achieved thalassocracy.

Evidence

Ammonius *De adfinium vocabulorum differentia* 330: ναύκληροι καὶ ναύκραροι· διαφέρουσιν. ναύκληροι μὲν γὰρ εἰσιν οἱ ναῦς κακτημένοι, ναύκραροι δὲ οἱ εἰσπρασσόμενοι τὰ δημόσια κτήματα. καὶ ναυκράρια οἱ τόποι ἐν οἷς ἀνέκειτο τὰ κτήματα. ἐλέγοντο δὲ ὁμοίως ναύκληροι καὶ οἱ μισθωτοὶ τῶν συνοικιῶν.

Androtion *FGH* 324 F 36 (ΣAristoph. *Aves* 1541): τὸν κωλακρέτην, τὸν ταμίαν τῶν πολιτικῶν χρημάτων. Ἀριστοφάνης ὁ γραμματικὸς τοῦτους ταμίαις εἶναι φησι τοῦ δικαστικοῦ μισθοῦ, οὐ μόνον δὲ τοῦτου τὴν ἐπιμέλειαν ἐποιούντο, ὡς φησιν, ἀλλὰ καὶ τὰ εἰς θεοῦς ἀναλισκόμενα, διὰ τούτων ἀνηλίσκετο, ὡς Ἀνδροτίων γράφει οὕτως· “τοῖς δὲ ἰοῦσι Πυθῶδε θεωροῖς τοὺς κωλακρέτας διδόναι ἐκ τῶν ναυκραρικῶν [mess.: ναυκληρικῶν] ἐφόδιον ἀργύρια, καὶ εἰς ἄλλο ὃ τι ἂν δέη ἀναλῶσαι.”

ΣAristoph. *Nubes* 37b (*Scholia in Aristophanem* 1.3.1 Holwerda): οἱ δῆμαρχοι οὗτοι τὰς ἀπογραφὰς ἐποιούντο τῶν ἐν ἐκάστῳ δήμῳ χωρίων, καὶ τὰ ληξιαρχικὰ γραμματεῖα παρ’ αὐτοῖς ἦν, οὐνήγόν τε τοὺς δήμους, ὅτε δέοι, καὶ ψήφον αὐτοῖς ἐπέδιδσαν, καὶ ἐνεχυρίαζον. 37c: ὄνομα πολιτείας οἱ δῆμαρχοι παρὰ ταῖς Ἀθηναίους οἱ πρῶην ναύκραροι καλούμενοι οἱ ἐνεχυρίαζοντες τοὺς ἀγνώμονας τῶν χρεωστῶν.

ΣAristoph. *Nubes* 37b (*Scholia in Aristophanem* 1.3.2 Koster): Ἀριστοτέλης δὲ περὶ Κλεισθένους φησί· “κοτέ σθησε καὶ δημάρχους τὴν αὐτὴν ἔχοντας ἐπιμέλειαν ταῖς πρότερον ναυκλάρους· καὶ γὰρ τοὺς δήμους αὐτῶν ναυκλαριῶν ἐποίησεν.” οἱ πρότερον ναύκλαροι, εἴτε ὑπὸ Σόλωνος κατασταθέντες εἴτε καὶ πρῶτον ... οὗτοι δὲ τὴν πομπὴν τῶν Παναθηναίων ἐκόσμουσαν Κλεισθένους καταστήσαντος ἀντὶ ναυκλάρων.

Athenaion Politeia 8.3: φυλαὶ δ’ ἦσαν δ καθάπερ πρότερον. καὶ φυλοβασιλεῖς τέτταρες. [ἐκ] δὲ [τῆς] φυ[λῆς] ἐκάστης ἦσαν νενεμημένοι τριτύτες μὲν τρεῖς, ναυκράρια δὲ δώδεκα καθ’ ἐκάστην· ἦν δ’ ἐπὶ τῶν ναυκραριῶν ἀρχὴ καθεστηκυῖα ναύκραροι, τεταγμένη πρὸς τε τὰς εἰσφοράς καὶ τὰς δαφ[άνας] τὰς γιγνομένας· διὸ καὶ ἐν ταῖς νόμοις τοῖς Σόλωνος οἷς οὐκέτι χρώνται πολλαχοῦ

γέ]γραπται, “τοὺς ναυκράρους εἰσπράττειν”, καὶ “ἀναλίσκειν ἐκ τοῦ ναυκραρικοῦ ἀργυρ[ιο]υ”.

Athenaion Politeia 21.5: κατέστησε δὲ καὶ δημάρχους, τὴν αὐτὴν ἔχοντας ἐπιμέλειαν τοῖς πρότερον ναυκράροις, καὶ γὰρ τοὺς δήμους ἀντὶ τῶν ναυκραριῶν ἐποίησεν.

Harrocration s.v. δήμαρχος, δ 89: τούτους δὲ φησὶν Ἀριστοτέλης ἐν Ἀθηναίων πολιτεία ὑπὸ Κλεισθένους κατασταθῆναι, τὴν αὐτὴν ἔχοντας ἐπιμέλειαν τοῖς πρότερον ναυκράροις, ὅτι δὲ ἠνεχυρίαζον οἱ δήμαρχοι δημοῖ Ἀριστοφάνης ἐν Σκηνάς καταλαμβανούσαις.

Harrocration s.v. ναυκραρικά, ν 211: ... εἶπ' ἂν τὰ τῶν ἀρχόντων ναυκράρους γὰρ τὸ παλαιὸν τοὺς ἄρχοντας ἔλεγον, ὡς καὶ ἐν τῇ ε' Ἡρόδοτος δημοῖ. Ἀριστοτέλης δ' ἐν Ἀθηναίων πολιτεία φησὶ “κατέστησαν δὲ δημάρχους τὴν αὐτὴν ἔχοντας ἐπιμέλειαν ταῖς “πρότερον ναυκράροις.” [δῆμους ἀντὶ τῶν ναυκραριῶν ἐποίησαν.]

Herodotus 5.71.2: τούτους [the Kylonians] ἀνιστάσι μὲν οἱ πρυτάνιες τῶν ναυκράρων, οἳ περ ἔνεμον τότε τὰς Ἀθήνας, ὑπεγγύους πλὴν θανάτου· φονεῦσαι δὲ αὐτοὺς αἰτίη ἔχει Ἀλκμεωνίδας, ταῦτα πρὸ τῆς Πεισιστράτου ἡλικίης ἐγένετο.

Hesychius s.v. δήμαρχοι, δ B24 Latte: οἱ πρότερον καλούμενοι ναύκραροι· ἄρχοντες δὲ ἦσαν καὶ ἠνεχύραζαν αὐτοὶ τοὺς ὀφείλοντας

Hesychius s.v. ναύκλαροι, ν 118 Latte: δήμαρχοι. [ἐπηρέται. “ναύκληροι” δὲ ἐρέται.] τινὲς δὲ ἀφ' ἐκάστης φυλῆς δώδεκα, οἵτινες ἀφ' ἐκάστης χώρας τὰς εἰσφοράς ἐξέλεγον. ὕστερον δὲ δήμαρχοι ἐκλήθησαν.

Kleidemos FGH 323 F 8: ὁ Κλειθῆμος ἐν τῇ τρίτῃ φησὶν, ὅτι Κλεισθένους δέκα φυλάς ποιήσαντος, ἀντὶ τῶν τεσσάρων, συνέβη καὶ εἰς πεντήκοντα μέρη διαταγῆναι αὐτοὺς δὲ ἐκάλουν ναυκράρια· ὡσπερ νῦν εἰς τὰ ἑκατὸν μέρη διαιρεθέντα καλοῦσι συμμορίας.

Lex.Seguer. s.v. Κωλιάς [κ, *Anec. Bekkeri* 1.275]: τόπος Ἀττικὸς, ὁμοῖος ἀνθρώπου κώλω, ἐν ᾧ ἱερὸν Ἀφροδίτης Κωλιάδος. ἦν δὲ καὶ ναυκαρία.

Lex.Seguer. s.v. ναύκραροι [ν, *Anec. Bekkeri* 1.283]: οἱ τὰς ναῦς παρασκευάζοντες, καὶ τριηραρχοῦντες, καὶ τῷ πολεμάρχῳ ὑποτεταγμένοι.

Photius s.v. ναυκαρία [ν, 287-88]: ... ναυκράρους γὰρ τὸ παλαιὸν τοὺς ἄρχοντας ἔλεγον· ὡς καὶ Ἡρόδοτος ἐν ε' ἱστοριῶν.

Photius s.v. ναυκράροι [ν, 288]: τὸ παλαιὸν Ἀθηναίων οἱ νῦν δήμαρχοι· καὶ οἱ ἐκμισθοῦντες τὰ δημόσια.

Photius s.v. ναυκραρία [v, 288]: τὸ πρότερον οὕτως ἐκάλουν ναυκραρία καὶ ναύκραρος· ναυκραρία μὲν ὅποιον τι ἢ συμμορία καὶ ὁ δήμος· ναύκραρος δὲ ὅποιον τί ὁ δήμαρχος, Σόλωνος οὕτως ὀνομάσαντος· ὡς καὶ Ἀριστοτέλης φησὶ [fr. 387 Rose]· καὶ ἐν τοῖς νόμοις δὲ ἂν τις ναυκραρίας ἀμφισβητῆ· καὶ τοὺς ναυκράρους τοὺς κατὰ ναυκραρίαν· ὕστερον δὲ ἀπὸ Κλεισθένους δῆμοι εἰσιν· καὶ δῆμαρχοι ἐκλήθησαν· ἐκ τῆς Ἀριστοτέλους Πολιτείας, ὃν τρόπον διέταξε τὴν πόλιν ὁ Σόλων· φυλαὶ δὲ ἦσαν τέσσαρες καθάπερ πρότερον καὶ φυλοβασιλεῖς τέσσαρες· ἐκ δὲ τῆς φυλῆς ἐκάστης ἦσαν νενεμημένοι, τριττύες μὲν τρεῖς, ναυκραρίαι δὲ δώδεκα καθ' ἐκάστην [citation of Kleidemos].

Pollux *Onomasticon* 8.108-109: δῆμαρχοι οἱ κατὰ δῆμους ἄρχοντες, ἐκαλοῦντο δὲ τέως ναύκραροι ὅτε καὶ οἱ δῆμοι ναυκραρίαι, ναυκραρία δ' ἦν τέως φυλῆς δωδέκατον μέρος, καὶ ναύκραροι ἦσαν δώδεκα, τέτταρες κατὰ τριττὴν ἐκάστην, τὰς δ' εἰσφοράς τὰς κατὰ δῆμους διεχειροτόνουν οὗτοι, καὶ τὰ ἐξ αὐτῶν ἀναλώματα, ναυκραρία δ' ἐκάστη δύο ἰπέας [109] παρῆχε καὶ ναὸν μίαν, ἀφ' ἧς ἴσως ὠνόμαστο, τῆς τριττύος μέντοι ὁ ἄρχων τριττύαρχος ἐκαλεῖτο, τριττύος δ' ἐκάστης νένη τριάκοντο, καὶ αἱ φυλαὶ τέως μὲν ἐπὶ Κέκροπος ἦσαν τέτταρες, Κεκροπὶς Ἀυτόχθων Ἀκταία Παραλία, ἐπὶ δὲ Κραναοῦ μετωνομάσθησαν Κραναῖς Ἀθίς Μεσογαῖα Διακρίς ...

Ptolemaeus *De differentia vocabulorum* 402.18-21: ναύκληροι μὲν οἱ ναὺς κεκτημένοι· ναύκραροι δὲ οἱ εἰς πρᾶσσόμενοι τὰ δημόσια κτήματα· ναυκράρια οἱ τόποι ἐν οἷς ἀνέκειτο τὰ κτήματα· ἐλέγοντο δὲ ὁμοίως ναύκληροι καὶ οἱ μισθωτοὶ τῶν συνσικιῶν.

Suda s.v. ναυκραρικά, v 57 Adler: ... ναυκράρους γὰρ το παλαιὸν τοὺς ἄρχοντας ἔλεγον, ὡς καὶ Ἡρόδοτος ἐν εἰ ιστοριῶν δηλοῖ, ἴσως παρὰ τὴν τῆς νηὸς κραίραν εἴρηται τὸ ναυκραρικά.

Suda s.v. δῆμαρχοι, δ 421 Adler: ... ὄνομα δὲ πολιτείας αἱ δῆμαρχοι παρὰ τοῖς Ἀθηναίοις, οἱ πρῶην ναύκραροι καλούμενοι· οἷς ἐξῆν ἐνεχυράζειν, καὶ Φερεκράτης· ὑπέλυσε δῆμαρχός τις ἐλθὼν εἰς χορόν, οἱ κατὰ δῆμον.

Notes

¹¹ Overviews: HOMMEL, 1988; HIGNETT, 1952: 67-74; JORDAN, 1970: 153-161; GABRIELSEN, 1965 (with h. 1, pp. 21-22, helpful on earlier bibliography); GABRIELSEN, 1994: 19-24; SCHUBERT, 2006. There has been a tendency in the scholarship to favor schematization over actual attestation.

⁹⁰ I build on research published in FIGUEIRA, 1986, 1990. My research on maritime history also appears in FIGUEIRA forthcoming(a); forthcoming(b).

⁹¹ See SOLMSEN, 1898; HOMMEL, 1935, cols. 1938-1940 (1988, 32-33); CHANTRAINF, 1988-90, 3,736-37; FRISK, 1960-72, 3,291-92. Solmsen offers the name [A]νακραπίδας, «son of a leader of the people», attested at Thespiai (IG VII 1931), which stands as a probative analogy.

⁹² *Miletos*: Plut. *Mor.* 296C (CG 32), cf. Hsch. Mil. s.v. ἀεινάουσαι, a 1292 Latte; also *et Eretria*: IG XII 9 809-823. See FIGUEIRA forthcoming(b).

⁹³ *Harprocratēr* s.v. ναυκρατικά; Hsch. Mil. s.v. δῆμαρχοι; Phot. s.v. ναυκοποία; *Suda* s.v. ναυκραρικό. Some caution is needed because the lexicographical tradition of *naukraroí* asarchs may in part derive from Herodotus.

⁹⁴ BILLIGMEIER/DUSING, 1981, which fails to cite earlier linguistic analyses (e.g., SOLMSEN; CHANTRAINF); also JORDAN, 1979: 56-59 (with n. 74; cf. JORDAN, 1975: 9-11); 1992: 66-67; GABRIELSEN, 1985: 47-49; 1994: 24 (with reservations). Cf. LAMBERT, 1986: 111 (with n. 26); HOMMEL, 1988: 41-42; OSTWALD, 1995: 371 (with note 9). RHILL, 1987, objects because the term ναυκράρια would hence become incomprehensible, preferring a derivation from ναῦν «dwell» and κλήρος «lot» so that ναυκράρια would mean «allotted land», and the ναυκράρια would connote the settlements of Attica. The Athenians, however, would hardly have had a unique (and non-hierarchical) vocabulary to express levels of habitation that deviated from the terms *dēmoi* and *kōmai* used elsewhere.

⁹⁵ For Attica: OSBORNE/BRYNE, 1994: 325-27; TRAILL, 1994-2010: 13.12-43.

⁹⁶ FIGUEIRA, 1993: 231-235. See also HIGNETT, 1952: 69-70, who summarizes earlier scholarship assigning origin of the *naukraroí* to the Peisistratid period on grounds of their relevance to a centralized administration (also GS866 [n. 6]). My treatment presents the institution as clearly pre-monetary. The watershed in monetization was in any case post-Peisistratid.

⁹⁷ *Lex. Seguer* s.v. ναύκραροι; Poll. 8.108.

⁹⁸ GLOTZ, 1900: 146-147 hypothesized that a *páramos* ship was one kept on the beach, so ready for immediate use.

⁹⁹ *Solon* 8.4-6; cf. *Polyaen.* 1.20.1-2; *Ael.* VH 7.16. *Solon* 9.1-4; cf. *Aen. Tact. Strat.* 4.8-11; *Front. Strat.* 2.9.9; *Just.* 2.8.1-6. See FIGUEIRA, 1985: 280-285.

¹⁰⁰ HOMMEL, 1988: 33-34 (RE 16.2 1939-40); HIGNETT, 1952: 72-74; THOMSEN, 1964: 120-133; JORDAN, 1975: 11-15; GABRIELSEN, 1988: 29-32.

¹⁰¹ *ΣAristoph.* *Nubes* 37c; *Ath. Pol.* 21.5; *Harprocratēr* s.v. δῆμαρχοι; *Harprocratēr* s.v. ναυκραρικά; Hsch. Mil. s.v. δῆμαρχοι, s.v. ναύκλαροι; Phot. s.v. ναυκράροι; Phot. s.v. ναυκραρία; Poll. 8.108, *Suda* s.v. δῆμαρχοι.

¹⁰² GS 881-82; WHITEHEAD, 1986: 33-34; cf. COZZOLI, 1977: 101-3; RHODES, 1981: 21, 257; GABRIELSEN, 1985: 28-29, 32-33. Some accept a conflict, but prefer Kleidemos (BELOCH, 1926: 1.2.321; HIGNETT, 1952: 22).

¹⁰³ GLOTZ 1900: 137-52, explains the 48 *naukraroí* by noting the conformity of early naval contingents (thinking especially of the *Nisidic Catalogue of Ships*) to the tribal system of their community – hence a multiple of the four Ionian tribes – and by supposing situations where each *naukraria* provided one rower for a *pentekontor* (with the *polimarch* and his attendants?).

¹⁰⁴ See HIGNETT, 1952: 71-73; THOMSEN, 1964: 129-31.

¹⁰⁵ FIGUEIRA, 1984: 465-466; also WÜST, 1957: 181-182. Cf. LAMBERT, 1986: 111 for a military unit.

¹⁰⁶ *Lex. Seguer* s.v. Κωλιός; PAUS 1.5.1; cf. *Hdt.* 8.96; Plur. *Solon* 8.4.

¹¹⁹ See JORDAN, 1975: 13; RHODES, 1981: 151-152.

¹²⁰ BELOCH, 1926 1.2.323-24; THOMSEN, 1964: 126-127.

¹²¹ I surmise that our knowledge of Kōlias as a *naukrarchis* may derive from its appearance in a tradition about Solon's capture of Salamis (Plut. *Solon* 8.4; Ptolemaios 1.20.1-2).

¹²² Kleidemos *FGH* 323 F 17 (*apud* Plut. *Thes.*19.5). See FIGUEIRA forthcoming[a]; cf. JACOBY *FGH* 3b, 1.74-75.

¹²³ Fifty *naukrarhai* the size of Kōlias or Halimous would constitute 100-150 or 20-30% of the *Boule*. Taking into account non-maritime economic activity in *naukrarchic* centers, an even smaller proportion of the Attic population lived from seafaring, perhaps <10-15%.

¹²⁴ There has been notable speculation on this phrase without demonstrative results. See GABRIELSEN, 1985: 38-40.

¹²⁵ See, e.g., HOMMEL, 1968: 34-35 (1935 cols. 1941-43); KAHRESTEDT, 1934: 245-249.

¹²⁶ Figueira forthcoming[a] discusses the evolution of these navies. Cf. HAAS, 1985; PAPALAS, 2000a, 2000b.

¹²⁷ Cf., e.g., GLOTZ, 1900: 152 (with n. 2); GS 818, 840; COZZOLI, 1977: 97-103; WALLINGA, 1993: 17-19; SCHUBERT, 2008: 51-52. Note the skepticism of the 50-ship fleet of GABRIELSEN, 1994: 29-30.

¹²⁸ Kleidemos, *FGH* 323 F 8; cf. *Ath. Pol.* 8.3; Hsch. *Mil.* s.v. ναύκλαροι; Phot. s.v. ναυκράροι; *Pol.* 8.108.

¹²⁹ BELOCH, 1928 1.2.323 saw this problem, but was willing to lower the number of earlier *naukrarchai*.

¹³⁰ See also KAHRESTEDT, 1934: 248.

¹³¹ WILAMOWITZ-MOELLENDORFF, 1893: 2.163-64 (n. 48) sensed the problem and suggested amending to δάκκα.

¹³² See, e.g., GS 1.689; HOMMEL, 1968: 35-36 (1935, cols. 1943-45).

¹³³ See JACOBY *FGH* 3b (Supp.) 1.147-48, 2.134, who suggests that the ultimate source was a sacred calendar containing cult instructions.

¹³⁴ *Ath. Pol.* 21.5; Harpocration s.v. δημαρχος, ναυκραρικά; cf. Aristoph. *Nubes* 37b-c; Hsch. *Mil.* s.v. ναύκλαροι; Phot. s.v. ναυκράροι; *Pol.* 8.108; *Suda* s.v. δημαρχοί.

¹³⁵ JORDAN, 1970: 161-172; 1992: 61-62. cf. JORDAN, 1992: 61, 68-76 for acceptance of the active form. Cf. FIGUEIRA, 1986: 271 (n. 62) ~ 1993: 164; LAMBERT, 1986: 106; HOMMEL, 1988: 42, who objects rightly to Ἀθήνας as the object of ἐνέμενον.

¹³⁶ RHODES, 1981: 152; FIGUEIRA, 1986: 164 (n. 62) ~ 1986: 271. Note that νέμεσθαι, «to derive revenue from», is used epexegetical y. twice with δίδωμι (3.160.2; 8.136.1; cf. 5.95.2) or with an object like μέταλλα (4.165.2; 5.45.2; 7.112, 9.118.8). The object of the verb in the middle voice is only once a *polis*, non-Greek Kamikos (7.170.1), and thrice Greek *polis*-islands, Lesbos and Lemnos (1.151.2, 6.81.1; 6.138.1), but in these cases it means «to inhabit».

¹³⁷ JORDAN, 1970: 173-174; 1979: 28, 58-62. Cf. GABRIELSEN, 1986: 41-42. Factors telling against are: i) the improbability that the terms *prutaneis* and *naukrarai* usurped the panhellenic terminology to which Athens itself later adhered, ii) the fact that the term *prutaneis* was used for various Attic officials, not just the *tamiai* (FIGUEIRA, 1993: 159-161; 1986: 265-267; cf. also [G] 1-4); iii) the unlikelihood that *prutaneis* would be necessary for so small a board of *naukrarai* (DEVELIN, 1986: 67-70, responds by suggesting that only those *naukrarai* present and active

on the Acropolis were *prutaneis*); ¹⁴⁷ the mystery over what empowered the *prutaneis* to negotiate (*n.b.*) with Kylonians (cf. LAMBERT, 1986: 107); ¹⁴⁸ finally, that IG I² 510 (LSAG² 72, 77) of c. 550 contains a dedication of the *familia* of Athena (cf. JORDAN, 1970: n. 78 [p. 61]).

¹⁴⁹ Cf. JORDAN, 1992: 62-66. An added improbability is that the *naukraria* of Kollas must become a *naukratic* district based on the cult center there. Not only would it be quite a coincidence that the only explicitly attested *naukraria* is a coastal harbor, but the existence of such districts would imply a consolidation of religious activity completely unbelievable in the 7th century, an administrative stage only reached during the Peloponnesian War with the Treasurers of the Other Gods.

¹⁵⁰ See THOMSEN, 1964: 129-130.

¹⁵¹ THOMSEN, 1964: 134.

¹⁵² THOMSEN, 1964: 138-139. OSTWALD, 1995: 373-377, who thinks that the question posed in the *dokimasia* of a prospective office holder εἰ τὰ τέλη τελεῖ, «if he fulfills his obligations» confirms this supposition (*Arch. Pol.* 55.3; *Din.* 2.17; Cratichus Junior fr. 9 [PG4.342-43]).

¹⁵³ Cf. GS 599; BELOCH, 1926: 1.2.327; GABRIELSEN, 1985: 42-43

¹⁵⁴ JORDAN, 1992: 64-65; VALDÉS GUÍA, 2002: 70.

¹⁵⁵ Cf. *Suda* s.v. Δρίμυρρον, δ 421 Adler, with Whitenead, 1986: 136-37.

¹⁵⁶ FIGUEIRA, 1981: 115-121; 1993: 288-292.

¹⁵⁷ WILAMOWITZ-MOELLENDORFF, 1893: 1.92-94; MEYER 1254: 3.324-25 (a council meeting in Prytaneion, not Areiopagos); BUSOLT-SWOBODA, GS 846 (with n. 1); VALDÉS GUÍA, 2002: 69-79. Cf. HIGNETT, 1952: 81-82; RHODES, 1981: 152.

¹⁵⁸ WÜS, 1957: 177-178, with *naukratic* council; cf. LAMBERT, 1986: 106-107.

¹⁵⁹ Hdt. 5.71.1-2; Th. 1.126.3-11; Plut. *Solon* 12.1-3; *ΣAnatoph. Ep.* 445a; *Aristal Heract. Lembus* fr. 143.2 Gigon; *Paus.* 7.25.3. On the complexity of the stratified polemics, see Jacoby, 1949: 186-88; JAMESON, 1965: 167-72; JORDAN, 1970; RHODES, 1981: 79-84; VALDÉS GUÍA, 2002: 81-83.

¹⁶⁰ Cf. JORDAN, 1992: 66-79. (or the idea that the *prutaneis* were mediators, a view which exceeds the evidence for parallel use of νέμω that supports the concept of «management».)

¹⁶¹ FIGUEIRA, 1986: 273-274 ~ 1993: 166-167; LAMBERT, 1986: 107-110. I would deem most improbable his hypothesis that the archaic archons, especially the eponymous and the *polemarch*, could be abroad at the Olympic games during their year of office.

¹⁶² See GABRIELSEN, 1994: 27-31, citing earlier scholarship.

¹⁶³ *Agora* 17.1065: Χάρων(ἰππιον τόδε) φασὶν ἀλειτερόν πρ[ο]μ[η]άνειον | ἰούριπ[ο]ν Ἀρρί[ο] ροφονός ποῖδ[α] μ[ε]τ[ε]ρ[ε]σ[τ] ἄδικεν «This ostrakon says that Xanthippos, the son of Ariphron, does injustice the most out of the accused *prutaneis*».

¹⁶⁴ Cf. OSTWALD, 1995: 371 (n. 11); BRENNÉ, 2001: 810-12; SCHUBERT, 2006: 41.

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