ated with fillets, and in the disposition of these ribbons (see Plate 14b) the artist took on a challenge that he was able to meet only through stepwise registration of a sequential displacement that, in fact, constitutes projection. Plate 14c illustrates the necessary and sufficient observations by which the artist traced the linear trajectory, both horizontally and vertically. Since the artistic/intellectual achievement is trivial to us, this analytic break-down may seem cumbersome, but we must bear in mind that the conscious realization of the process was new for its time. Still at an embryonic stage, this painstaking adventure went through the same motions that Alberti much later would prescribe under the term costruzione legittima: the vertical coordinates (the elevation, c 1) and the horizontal coordinates (the plan, c 2 ) are combined on the picture plane (c 3).
We recognize the same three steps in Vitruvius' description of the categories of architectural design, significantly cast in Greek terms: iconographia (ground plan), orthographia (elevation), and scaenographia (perspective rendition). ${ }^{24}$ Although the concept was not without precedents (cf. innumerable vase-paintings showing undulating seams of draperies indicating layers in depth), the sharp, point-by-point reduction of the artistic process was new for its time.
The scene in Plate 14 was painted by the so-called Iliupersis Painter, an inquisitive and inventive artist who contributed significantly to the break-down of such outdated perspectival conventions as the use of registers to indicate depth (low register meaning 'in front', high register meaning 'behind'). This standard device of Classical art (used in the lost murals by Polygnotos, and familiar from Greek vases) was still employed by the vase-painters of Apulia, but by the middle of the fourth century it was becoming obsolete, and vase-painters increasingly tried to correlate fictitious registers with actual points of view. Mostly inconsistent and often selfcontradictory, these transitional works reveal the awareness of the surface of a picture as a projection plane. ${ }^{25}$

It seems relevant, at this point, to recall Anaxagoras and his lost treatise on the optical implications of vanishing point perspective, for his famous explanation of solar eclipses was, ultimately, projection applied on a cosmic scale: the projection of the moon's shape onto the surface of the earth.

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## The Meaning of Arrian, Anabasis 7.9.5

This passage forms the climax of the first part of Alexander's speech at Opis in which he described the achievements of Philip. In the next sentence Alexander began to compare 'these achievements of my father' with his own services.
The first part is carefully structured. It begins with Philip's achievements in Upper Macedonia, which over many years had suffered from raids by its neighbours. It then proceeds to Thrace, Thessaly, Phocis, Athens-andThebes, and the Peloponnese. This sequence is not temporal, but geographical. Then comes the climax, the command against Persia which was entrusted to Philip. As the manuscript is without punctuation, I print our passage without punctuation:




 М $\alpha \kappa \varepsilon \delta \sigma \nu \omega \nu \pi \rho о \sigma \varepsilon \theta \eta \kappa \varepsilon \nu$.
'provide] and entering Peloponnese he organised things there in turn and being appointed commander with full powers of all the rest of Hellas he conferred this glory of the campaign against the Persian no more at all upon himself than upon the community of the Macedonians' (7.9.5).

I have translated $\alpha$ v̉ as 'in turn' because it looks back and marks the conclusion of Philip's arrangements. It is made emphatic by the harsh hiatus $\varepsilon \kappa \varepsilon \varepsilon \imath \alpha 0$. The word $\tau \eta \vee \delta \varepsilon$, rather like our colloquial 'this here', brings the glory up to date. ${ }^{2}$ It was appropriate because the army was now back in Persian territory. The lack of punctuation does not impair our understanding of the text. For each stage in the sequence from Thrace onwards is marked by a verb at the end of the clausula: $\pi \alpha \rho \varepsilon \sigma \chi \varepsilon$, $\alpha \pi \varepsilon \phi \eta \nu \varepsilon, \quad \varepsilon \pi о \uparrow \eta \sigma \varepsilon \nu, \quad \varepsilon \tau \alpha \pi \varepsilon \uparrow \nu \omega \sigma \varepsilon \nu, \quad \varepsilon \kappa \sigma \sigma \mu \eta \sigma \varepsilon$ and $\pi \rho \circ \sigma \varepsilon \theta \eta \kappa \varepsilon v$. It is the same with the participial phrases; for the participle comes at the end of the phrase: $\kappa \alpha \tau \alpha \lambda \alpha \beta \sigma \mu \varepsilon v \circ \varsigma, \tau \alpha \pi \varepsilon \imath \nu \omega \sigma \alpha \varsigma, \xi v \mu \pi о v o \delta v-$ $\tau \omega v, \pi \alpha \rho \varepsilon \lambda \theta \omega v, \alpha \pi 0 \delta \varepsilon \iota \chi \theta \varepsilon \tau \varsigma$.
There are two editions of the Loeb text of Arrian, Anabasis. In 1933 E.I. Robson translated 7.9.5 as follows:
'Then he passed into the Peloponnese, and put all in due order there; and now being declared overlord of all the rest of Greece for the expedition against Persia, he won this new prestige not so much for himself as for all Macedonia'.

[^1]Apart from failing to translate $\alpha \delta, \tau u$ and $\tau \omega t$ кovv $\omega t$ and adding 'new', Robson made the cardinal error of
 $\alpha \sigma \eta \varsigma \tau \eta \varsigma \alpha \lambda \lambda \eta \varsigma{ }^{\prime} E \lambda \lambda \alpha \delta \circ \varsigma$; for the one genitive cannot depend upon the other genitive. He fell into this error partly because he failed to realise that the participle $\dot{\alpha} \pi 0 \delta \varepsilon \iota \chi \theta \varepsilon\{\varsigma$ marked the end of the participial phrase and that the words $\tau \cap \varsigma \varepsilon \pi i \quad \tau \delta \nu \Pi \varepsilon \rho \sigma \eta \nu$ $\sigma \tau \rho \alpha \pi \tau \alpha \varsigma$ belonged to the passage ending with $\pi \rho o \sigma \varepsilon-$ Өŋкєv.
In 1983 P.A. Brunt gave his 'revised translation' ${ }^{3}$ as follows:
'He entered the Peloponnese and there too he settled affairs, and his recognition as leader with full powers over the whole of the rest of Greece in the expedition against the Persians did not perhaps confer more glory on himself than on the commonwealth of the Macedonians'.

Apart from translating $\alpha 0$ as 'too', adding 'perhaps' and omitting translations of $\tau \tau$ and $\tau \eta v \delta \varepsilon$, Brunt repeated the error of Robson in attaching the two genitive phrases to one another.
The differences between my translation and the translations of Robson and Brunt are of some importance when we go on to explain the implication of the phrase 'appointed commander with full powers of all the rest of Hellas'. As I understand it, Alexander was referring to the climax of Philip's achievements, namely his appointment as Hegemon of what has usually been called 'The League of Corinth' or 'The Hellenic League', and his glorious position as commander of the expedition against Persia. The two were separate in time, as the aorist participle indicates. ${ }^{4}$ The correctness of Alexander's words is clear from other sources of information. 'Hegemon' is the mot juste, as we see in the inscription which recorded the undertakings of the members of Common Peace at the formation of the League; for these included the undertaking to go to war 'as the Common Council may decide and as the
 $\sigma \cup v \varepsilon \delta] \rho i \omega 1 ~ \kappa \alpha i ~ o ̀ ~ \grave{\eta} \gamma \varepsilon \mu ळ \nu \quad \pi \alpha \rho \alpha \gamma \gamma \varepsilon \lambda \lambda \eta l$ (Tod, GHI 177 lines 20-2). At the time of the inscription the offices of the League had been created but the League was at peace. Any decision to go to war was to be made 'in accordance with a decree of the Common Council' and the war was to be conducted 'on the orders of the Hegemon'. Those orders were not qualified. The Hegemon was evidently to be 'commander with full powers'. ${ }^{5}$ In 332 during the war against Persia 'the

[^2]decree of the Hellenes' enjoined the exile of Chian rebels and the orders of Alexander, then being Hegemon,
 ' $\mathrm{E} \lambda \lambda \eta \nu \omega v$ ).
The expression $\eta \gamma \varepsilon \mu ळ \nu \alpha \cup \dot{\tau} о \kappa \rho \alpha \tau \omega \rho$ calls for some comment. According to Diodorus 16.89.1 Philip wished to become $\pi \alpha \sigma \eta \varsigma \tau \eta \varsigma{ }^{\text {' }} \mathrm{E} \lambda \lambda \alpha \delta \delta \varsigma \varsigma \eta \gamma \mu \mu \omega v$. He was duly appointed $\sigma \tau \rho \alpha \tau \eta \gamma 0 \varsigma \propto \cup \cup \tau 0 \kappa \rho \alpha \tau \omega \rho \tau \eta \varsigma$ ' $E \lambda \lambda$ $\alpha \delta 0 \varsigma$ according to Diodorus 16.89.3 and FGrH 255 (5) from the Oxyr. Pap. 12; and Alexander had the same title in Diod. 17.4.9. In these passages the standard Greek word $\sigma \tau \rho \alpha \tau \eta \gamma \sigma \varsigma$ was used instead of $\eta \gamma \varepsilon \mu \omega v$. 'Hellas' has many meanings in our sources. ${ }^{6}$ They range from a small area in Thessaly to all lands occupied by Hellenes, and even lands to be occupied in the future thanks to Philip (Isoc. 5.122 fin.). It was used to mean Central Greece as opposed to the Peloponnese in the speech at Opis (Arrian 7.9.4-5; cf. D.19.303 ' E $\lambda \lambda \alpha \delta \alpha \alpha$ к $\alpha 亢$ Пع $\lambda о \pi \sigma v \nu \eta \sigma o v)$.
When Philip was appointed Hegemon of 'the rest of Hellas', $\tau \eta \varsigma ~ \otimes \lambda \lambda \eta \varsigma{ }^{\prime} E \lambda \lambda \alpha \delta O \varsigma$, the excluded part of Hellas has to be his own kingdom, Macedonia. This interpretation is true to the facts; for he was Hegemon of all the Hellenes of the Common Peace (these included islands in the Ionian Sea and in the Aegean Sea in Tod, GHI 177 lines 25-36), and he was King of Macedonia which was not a member of the Common Peace. ${ }^{7}$ As an analogy we may note a passage in Aeschines 2. 2, which described the voting in a conference of 'the Lacedaemonians and their allies and the other Greeks' in 371. Amyntas III, the father of Philip, not in person but through a deputy, voted 'with the other Greeks' ( $\mu \varepsilon \tau \alpha$ $\tau \omega v \nu \lambda \lambda \omega v{ }^{'} E \lambda \lambda \eta \nu \omega v$ ) in favour of Athens recovering Amphipolis. Here Macedonia was a Greek state, part of Hellas. ${ }^{8}$ So too in his reply to Darius III Alexander wrote that Darius' ancestors came 'into Macedonia and into the rest of Hellas' (Arrian 2.14.4 عiऽ Maкع $\delta$ ov$\left.\mathfrak{i} \alpha \nu \kappa \alpha i \quad \tau \eta \nu \alpha \lambda \lambda \eta \nu{ }^{\prime} E \lambda \lambda \alpha \delta \alpha\right) .{ }^{9}$
My explanation of Arrian 7.9.5 differs from the explanations which are proposed by those who rely upon what I believe to be mistaken translations. For instance, the excluded part of the phrase $\sigma v \mu \pi \alpha \sigma \eta \varsigma \tau \eta \varsigma ~ \alpha \lambda \lambda \eta \varsigma$ ' $E \lambda \lambda \alpha \delta O \varsigma$ has been taken to be 'the Peloponnese'. While this is implicit in Brunt's punctuation and translation, it has been made explicit by Bosworth. 'As the text stands, the contrast is with the Peloponnese, explicitly named in the previous clause, ${ }^{10}$ But the exclusion of the Peloponnese from the Hellenic League, whether in its original formation or in the deployment of its forces in Asia, is an absurdity ${ }^{11}$-as Bosworth himself observed.

[^3]We need not follow his explanation of how this phrase came into the text as 'an incompetent abridgement of a longer account'. For, as we have seen, 'the Peloponnese' is the last of the geographical areas in which Philip operated and has nothing to do with his appointment as Hegemon.

My explanation that the excluded part of 'Hellas' was Macedonia is unacceptable to those who hold that 'the Macedonians were not even Greek, they were as barbarous in Greek eyes as the Persians'. This is the view of Brunt, who based it mainly on some passages to which he refers in Arrian (2.7.4; 3.22.2; 5.27.4; and 5.27.8 in particular). ${ }^{12}$ In them Arrian inevitably contrasted the two main contingents in Alexander's army-the Macedonian Companion Cavalry and Phalanx infantry and the cavalry and infantry of the Hellenic League. There is one passage, to which Brunt refers, in which Arrian drew a contrast between the Macedonian Phalangites and the Greek mercenaries of Darius III (2.10.7). It too was an inevitable contrast. Arrian expressed it forcefully in the phrase $\tau 0 \hat{\imath} \varsigma \gamma \varepsilon v \varepsilon \sigma \tau \tau \omega \tau \tau \varepsilon$ ' $E \lambda \lambda \eta-$ $v ı \kappa \omega t ~ к \alpha i ~ \tau \omega t ~ M \alpha \kappa \varepsilon \delta o v ı \kappa \omega t ~ a s ~ a ~ r i v a l r y ~ b e t w e e n ~$ 'the tribes--the Hellenic tribe and the Macedonian tribe'. We may compare with Arrian's words the distinction which Herodotus drew between the Lacedaemonians and the Athenians: the Lacedaemonians were members of the Doric $\gamma \in v o \varsigma$ and the Athenians of the Ionic $\gamma \varepsilon v o s$, the one being a part of the Hellenic $\varepsilon \theta v o \varsigma$ and the other of the Pelasgic $\begin{gathered} \\ \theta \\ \text { vo } \\ \text { ¢ }\end{gathered}$ which we may translate as 'race' (1.56.2). ${ }^{13}$ In these passages the Mercenaries of Darius, the Macedonian Phalangites, the Lacedaemonians and the Athenians were all members of what we describe nowadays as 'the Greek race'. ${ }^{14}$
The last sentence of Arrian 7.9.5 invites a little comment. The glory of the campaign against the Persian which accrued to Philip was that of being appointed its Commander; for the actual conduct of the campaign was accredited to Alexander in the next part of the speech at Opis. It was that glory to which Philip referred as "the honours conferred upon himself of the overall com-
 $\delta \lambda \eta \varsigma ~ \eta \gamma \varepsilon \mu о v\{\alpha \varsigma \tau \mu \alpha \varsigma)$. Finally, the expression $\tau \omega \iota$ коıv $\omega t ~ \tau \omega v$ M $\alpha \kappa \varepsilon \delta \delta \nu \omega v$ means 'the community of the Macedones'. The discovery of inscriptions of the fourth and later centuries, especially in Epirus, has revealed the fact that $\tau 0$ kouvov is the usual title of a political group, however large or small, e.g. of the 'A $\tau \varepsilon \rho \alpha \rho \gamma o t$, $B \alpha \lambda \alpha l \varepsilon i ̂ \tau \alpha l$ and $\Delta o \sigma \tau \omega v \varepsilon i ̂ c$. In these cases there is no connotation of federalism. ${ }^{5}$ Alexander was evidently
using the mot juste. For in a dedication at Delos to
 (Philip V). ${ }^{16}$ The two parts-the king of the Macedones and the community of Macedones-made up the Macedonian State. ${ }^{17}$
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${ }^{16}$ See my article, 'The koina of Epirus and Macedonia', Illinois Classical Studies 16 (1991) 183-92, to which the 'Balaieitai' should be added from Illyrie Méridionale et l'Épire dans l'antiquité ii (Paris 1993, ed. P.Cabanes) 205. An act of the Molossian State as $\tau \delta$ Kouvov $\tau \omega v$ Mo $\alpha \sigma \sigma \sigma \omega v$ was recorded in an inscription $c$. 370-368 BC, for which see my account in Epirus (Oxford 1967) 528-31.
${ }^{17}$ See further in my book The Macedonian State (Oxford 1989) 58 'the government of the Macedonian state was vested in two parts: the king of the day ... and the Macedones'. So also Hatzopoulos 491 'the Macedonians were, as much as the King, a constituent part of the Macedonian state'. This is different from the view of Brunt (1. xxxix-xl) 'in principle the king was the state', and from his conclusion that 'Arrian 7.9.5 is anachronistic'.

## Triremes at rest: On the beach or in the water?*

We have been fortunate enough to witness in our own time the launching of a reconstruction of an ancient trireme. Questions about the trireme's architecture that had been debated for centuries were definitively resolved by the research that preceded the building of the reconstruction. ${ }^{1}$ However, certain aspects of the care and handling of triremes remain to be examined. Among them is the notion that triremes in commission were customarily hauled up onto the beach at night.

The overnight beaching idea has been strongly influenced by Tarn's conjecture that triremes, like modern 'racing eights', were so lightly built they could easily be drawn up on shore. Tarn himself admitted that this was an exaggeration. Nevertheless, he cited the presumed lightness of the hull in an attempt to refute the theory that the trireme's oarsmen were seated at three levelsthe hull planking would have been too thin to sustain the oarports needed for this arrangement, he claimed. ${ }^{2}$ Once pictorial evidence for oarports in the hull had been accepted as a certainty, Tarn's views on the strength of the planking should have been reconsidered. ${ }^{3}$ By that

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[^0]:    ${ }^{24}$ Vitruvius i 2.2. D. Gioseffi, 'Continuità della prospettiva da Democrito a Brunelleschi', in C. Krause (n.19) 25-41, speculates that Brunelleschi's famous demonstration of exact perspective was fuelled by familiarity with Vitruvius.
    ${ }^{25}$ See Trendall (n.13) figs. 140 (by the Iliupersis Painter), 203, 204, 209 (a detail of which is my Plate 12a), 229. Also, White, Birth and rebirth (n. 6) pl. 60 a and b.
    Curious self-contradictions mark these early works, e.g., one by the Iliupersis Painter (Trendall fig. 138, the reverse of my Plate 14a), in which a character in the upper register sits on a stool that is shown from below-evidently not because he was meant to be above the characters in the lower ('frontal') register, but because the artist no longer accepted the registral convention at face value.

[^1]:    ${ }^{1}$ There is no need to emend $\sigma \tau \rho \alpha \tau \tau \alpha$ to $\sigma \tau \rho \alpha \tau \varepsilon\{\alpha$, as has been suggested. See LSJ s.v. $\sigma \tau \rho \alpha \tau \varepsilon\{\alpha 5$ and s.v. $\sigma \tau \rho \alpha \tau i \alpha$ $\mathrm{II}=\sigma \tau \rho \alpha \tau \varepsilon โ \alpha$. Both forms of the word occur in Arrian's text, presumably because during the transmission of the text the scribes varied in their spelling.
    ${ }^{2}$ So also at Arr. 3.8.2 $\kappa \alpha \tau \alpha \tau \eta \nu \sigma \tau \rho \alpha \tau i \alpha \nu \tau \alpha 0 \tau \eta \nu$. For the concept of $\delta 0 \xi \alpha$ we may compare Arr. 7.20.1 $\kappa \alpha \tau \alpha$ $\delta 0 \xi \alpha v \tau \uparrow \varsigma \varepsilon \varsigma{ }^{\prime} \operatorname{Iv\delta oo} \varsigma \sigma \tau \rho \alpha \tau \tau \alpha \varsigma$.

[^2]:    ${ }^{3}$ As he said in volume 1, xvi, 'Robson's translation was notoriously marred by frequent inaccuracies. None the less, I have found it a necessary economy of time to revise it rather than replace it'.
    ${ }^{4}$ The two stages are clear in Arr. 3.24.5 $\pi \rho \delta \tau \eta \varsigma \varepsilon i \rho \eta-$
     Diod. 17.4.9 and Just. 9.5.2 and 9.5.5.

    5 'The full powers' mean that Alexander did not have any colleague of equal authority, and that he gave orders at his discretion, without having to consult the Common Council. I have discussed the meaning of the term in my Studies in Greek History (Oxford 1973) 366 and 369.

[^3]:    ${ }^{6}$ LSJ s.v. $\quad$ E $\lambda \lambda \alpha \varsigma$ lists six geographical meanings.
    ${ }^{7}$ The Hellenes of the Common Peace were in alliance with Macedonia. See my account of their relationship in N.G.L. Hammond and F.W. Walbank, A History of Macedonia iii (Oxford 1988) 572-9.
    ${ }^{8}$ This significant passage is usually overlooked by those who maintain that the Macedones were not regarded as Greeks.
    ${ }^{9}$ Alexander mentioned the two parts of Hellas, because the Persian invasion of Macedonia preceded that of Attica by almost twenty years.
    ${ }^{10}$ A.B. Bosworth, From Arrian to Alexander (Oxford 1988) 111.
    ${ }^{11}$ For example, 'the Peloponnesians' were sent to the Troad and 'the Argives' to Sardis in 334 (Arr. 1.17.8).

[^4]:    * I am grateful to Professor A.J. Graham for encouraging me to write this paper and for his helpful suggestions.
    ${ }^{1}$ J.S. Morrison and J.F. Coates, The Athenian Trireme (Cambridge 1986) 1-24.
    ${ }^{2}$ W.W. Tarn, 'The Greek warship', JHS 25 (1905) 213, 223; Hellenistic Military and Naval Developments (Cambridge 1930) 124; 'The oarage of Greek warships', Mariner's Mirror 19 (1933) 62.
    ${ }^{3}$ J.S. Morrison, 'The Greek trireme', Mariner's Mirror 27 (1941) 27-38; see also J.S. Morrison and R.T. Williams, Greek Oared Ships 900-322 BC (Cambridge 1968) 169-70.

