HERODOTUS AND THE DATING OF THE BATTLE OF THERMOPYLAE*

I. *Three Important Factors*

The battle of Salamis can be dated with a high degree of certainty. Probably about the time of that battle, Cleombrotus was at the Isthmus, constructing the defences there (Hdt. 8. 71. 1). At some point while building the wall, he considered giving chase to the Persian army. When his sacrifice was answered by a solar eclipse, he took this as a bad omen and immediately returned to Lacedaemon (9. 10. 2–3). The eclipse visible to Cleombrotus could only have been that of 2 October 480.[1] Now it is generally supposed that Cleombrotus would not have thought to abandon the construction of the wall and pursue Xerxes unless the latter had just begun his retreat from Athens.[2] Thus, as Herodotus says that a few days (ὀλίγας ἡμέρας) after the battle of Salamis Xerxes withdrew from Attica (8. 113. 1), the battle of Salamis probably occurred ὀλίγας ἡμέρας before 2 October 480.

Aeschylus, a participant in the action,[3] describes the night preceding the battle as very dark (*Persae* 357, 364, and 428). Busolt pointed out that on the mornings of 25 and 26 September, the moon rose at 12:01 a.m.; on the morning of the 27th, at 12:58 a.m.; and on that of the 28th, at 1:55 a.m., the darkest night by far.[4] So 28 September appeared to be the best candidate for the day of the battle. The events which transpired between the battle and Xerxes' withdrawal could fit into the four days between 28 September and 2 October.[5]

So far, so good; but there is more evidence. Plutarch at one point (*Cam.* 19. 3) dates the battle to περὶ τὰς εἰκάδας (τοῦ βοηδρομιῶνος). On another occasion (*Them.* 15. 1), he agrees with Polyaenus (*Stratagems* 3. 11. 2) that the battle occurred on the day of the Iacchus procession, either 19 or 20 Boedromion.[6] Now the dating of the battle to around 20 Boedromion and its connection with the Iacchus procession may reflect independent evidence. Or it may be based upon one or more traditions resulting directly or indirectly from a quick, careless reading of Herodotus 8. 65, a passage which might be understood to suggest,

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The original version of this paper was presented orally in the Herodotus Seminar at the University of California, Berkeley, offered in winter 1972, by Professor W. Kendrick Pritchett and benefited much by his comments. As I also acquired my reading knowledge of Herodotus in his undergraduate course of the previous year, it is perhaps especially fitting that I dedicate this article to him on the occasion of his formal retirement. It is hoped that Professor Pritchett will enjoy continued years of good health and of interest in all things Greek.

[1] F. K. Ginzel, *Handbuch der mathematischen und technischen Chronologie* (Leipzig, 1911—hereafter, Ginzel), ii. 526.

[2] C. Hignett, *Xerxes' Invasion of Greece*, p. 274 (hereafter, Hignett).

[3] F. Jacoby, *FGrHist* 392 F 7 and his commentary, note 62.

[4] Georg Busolt, *Griechische Geschichte*[2] ii. 702, n. 2.

[5] Hdt. 8. 97. Xerxes begins building a mole over to Salamis and prepares his fleet; both are feints to permit his escape. On the historicity of the mole, see Hignett, pp. 415–17.

[6] The procession began on 19 Boedromion (*IG* ii[2]. 1078 and schol. to Aristoph. *Vespae*, 324), but Busolt (*Gr. Gesch.*[2] ii. 359, n. 2) explains that the ritual lasted through the night into the next day (so Plut. *Cam.* 19. 6 and *Phoc.* 28. 1).

but in fact does not state, a temporal relationship between the procession and the battle.[7] Beloch, arguing for the former, believed that this was good evidence for dating the battle to 20 Boedromion, which he equated with 24 September (the month, for him, beginning a few days after the sighting of the new moon of 2 September).[8] He therefore had to stretch the ὀλίγας ἡμέρας in Herodotus to eight days and settle for a night not particularly dark. Most, however, have followed Busolt in ignoring the inference in Plutarch and Polyaenus and have accepted 28 September as the date of the battle.[9]

Yet, two additional points may be considered. First, as the new moon for the next month did not occur until 2 October,[10] the morning of the 29th would naturally be still darker than that of the 28th. Thus 29 September might be an even stronger candidate for the date of the engagement at Salamis. (30 September is also possible; though for Cleombrotus to hear about Xerxes' retreat and to consider giving chase on 2 October, Xerxes would probably have had to withdraw on the day before, which in this case would be the very day after the battle. This allows perhaps too little time for Persian movements between the battle and the retreat (see note 5).)

Second, while preference must be given to the statements of Herodotus and Aeschylus, there is no need to dismiss the possibility, slim though it may be, that Plutarch and Polyaenus have reported a valid, independent tradition. We now know that the Athenian festival calendar often fell behind the absolute lunar month, as officials frequently intercalated days κατ' ἄρχοντα for a variety of reasons.[11] Thus while the evidence for 20 Boedromion as a date for the battle of Salamis is of questionable value, it is not irreconcilable with the date of 28 or 29 September.[12]

There are also firm indications that the battles of Thermopylae and Artemisium took place around the time of the Olympic and Carnean festivals. Herodotus states that the Spartans could not send their full force to Thermopylae because of the Carnea, but intended to do so afterwards (7. 206. 1). The other Greeks also planned to send complete contingents after the Olympia, ἦν γὰρ κατὰ τὠυτὸ Ὀλυμπιὰς τούτοισι τοῖσι πρήγμασι συμπεσοῦσα, but were prevented as the battle occurred much earlier than anticipated (7. 206. 2). The Olympic festival at this time lasted four days (Paus. 5. 9. 3), culminating on the full moon.[13] The Carnea, nine-days long (Athen. 4. 141 F), possibly also culminated on the full moon.[14] It is doubtful whether the Peloponnesian detachment was dispatched during the actual celebration of the Olympic games. That would make unhistorical the claim

[7] Busolt, *Gr. Gesch.*[2] ii. 703, n. 3.

[8] Karl Julius Beloch, *Griechische Geschichte*[2] ii:2, 47.

[9] *Gr. Gesch.*[2] ii. 702, n. 2; 703, n. 3; cf. Hignett, 452.

[10] Ginzel, i. 551.

[11] See (most recently) W. Kendrick Pritchett, *Ancient Athenian Calendars on Stone* (Berkeley, 1963), pp. 330–45. Moreover, the festival calendar did not necessarily even begin on the new moon: Pritchett, 'Calendars of Athens Again', *BCH* 81 (1957), 273–4.

[12] 16 Mounichion, mentioned twice by Plutarch as the day of the battle (*Mor.* 349F and *Lys.* 15. 1), is only the date of its commemoration. For its rationale, see Hermann Sorge, 'Der Mond auf den Münzen von Athen', *Jahrbüch für Numismatik und Geldgeschichte* 2 (1950–1), 7–13. For an entirely new explanation, see now: E. Badian and J. Buckler, 'The Wrong Salamis?', *Rh. Mus.* 118 (1975), 226–37.

[13] e.g. Schol. to Pindar *Ol.* 3. 35 and *Ol.* 3. 90; Bacchylides 7. 2–3.

[14] Euripides, *Alc.* 445 f., but the interpretation of this passage is far from certain: see the commentary by A. M. Dale (Oxford, 1954), pp. 90–1. In any case, the Carnea and Olympia of 480 appear to coincide: Hdt. 7. 206.

that the Peloponnesians intended to send reinforcements as soon as the festivals were over: there could then be at most a three-day difference between the departure of Leonidas and the end of the festivals, and since he was at Thermopylae several days before the battle began (Hdt. 7. 177–210. 1), reinforcements would have arrived in time. It is therefore more probable that Leonidas set out while the festivals were impending. Perhaps, to do justice to the aorist participle, *συμπεσοῦσα*, Herodotus was referring to the period of the truce which preceded the games.[15]

Two other statements in Herodotus tie the dating of the battle of Thermopylae to the Olympia. Soon after his victory at the Gates, Xerxes inquired into what the Greeks were doing. He was told that they were celebrating the Olympia (8. 26; see below, p. 246). Again, Herodotus mentions that the Olympic and Carnean festivals already had been completed when the Isthmian wall was being built and the battles of Thermopylae and Artemisium were over (8. 71–2; cf. 8. 40. 2).

With the strong connection between the battle of Thermopylae and the Olympic games, it would be of great help to know when the festival usually fell.[16] Unfortunately, the evidence for this is both scanty and difficult to interpret. The key testimonia are:

T 1: Schol. to Pindar, *Ol.* 3. 33a (= Jacoby, *FGrHist.* 410 T 1):
περὶ τοῦ χρόνου καθ' ὃν ἄγεται τὰ Ὀλύμπια καθ' ἑκάστην ὀλυμπιάδα, καὶ Κὼ (μαρχος) ὁ τὰ περὶ Ἠλείων συντάξας φησὶν οὕτως· << πρῶτον μὲν οὖν παντὸς περίοδον συνέθηκεν † ἐν τῇι ἡμέραι ἄρχειν νουμηνίαν μηνὸς ὃς † Θωσυθιὰς ἐν Ἠλιδι ὀνομάζεται, περὶ ὃν τροπαὶ ἡλίου γίνονται χειμεριναί· καὶ πᾶ Ὀλύμπια ἄγεται η̄ μηνί· ἐνὸς δὲ ὄντος † διαφερόντων τῇι ὥραι, τὰ μὲν ἀρχομέν(ης) τῆς ὀπώρας, τὰ δὲ ὑπ' αὐτὸν τὸν ἀρκτοῦρον >> . ὅτι δὲ κα<τὰ πεντετηρίδα> ἄγεται ὁ ἀγών, καὶ αὐτὸς ὁ Πίνδαρος μαρτυρεῖ.

7 Κώμαρχος M. Schmidt *κὼ* A Πολέμων Sybel Ἀριστόδημος Unger *περὶ* Ἠλείων συντάξας Boeckh *περικλείων συγκατάξας* A *περὶ <τῶν Θήβησιν* Ἡρα*>κλείων* Sybel 8–9 *ἐν τῇι ἡμέραι* κτλ.: *π̄ῡ ἡμερῶν, ἧς ἄρχειν* C. F. Herrmann *ϻ̄η̄ῡ̄μ̄ ἡμερῶν* Mommsen *ἔτη η̄ μῆνας q̄θ̄, ἀρχὴν δὲ* Bornemann *ἐτῶν η̄, ἡμερῶν β̄λ̄κ̄β̄* (Gemin. *Isag.* 6), *<ταύτης δὲ> ἄρχειν* Schroeder, Drachmann *πεντετηρίδα· ἄ. νουμ.* Weniger 9 Θωσυθιὰς: Διόσθυος Boeckh Θῦος ἢ Θυῖος Latysheff Βωθύσιος Schroeder 10 *περὶ ἣν*? Schroeder *πᾶ: πρῶτα* Boeckh *πᾶσα* Ὀλυμπιὰς? Drachmann *τὰ μὲν πρῶτα ἄγεται η̄ μηνί <τὰ δὲ δεύτερα θ̄ μηνί>* Schroeder 11 *διαφέροντων* (so!) A *διαφέρετον* Boeckh *διαφερόντως* Mommsen *ἐνὸς δέοντος διαφερόντων* Weniger 'locus corruptus' Drachmann 12 *ἀρχομέν(ης)* Mommsen *ἀρχόμεν(α)* Boeckh 13 *κα<τὰ πεντετηρίδα>* Weniger *καὶ* A *πανσελήνωι* Schroeder

T 2: Schol. to Pindar *Ol.* 3. 35a: *διχόμηνις <ὅτι> περὶ τὴν ις' πανσελήνου οὔσης ἄγεται τὰ Ὀλύμπια, τουτέστι διχομηνίᾳ Παρθενίου ἢ Ἀπολλωνίου μηνός, παρ' Αἰγυπτίοις Θὼθ ἢ Μεσωρί.*

[15] Cf. Stephen G. Miller, 'The Date of Olympic Festivals', *Ath. Mitt.* 90 (1975), 228. I wish to thank Dr. Miller for kindly allowing me the use of his galley proofs.

[16] For the possible dating of the Carnea, see the Appendix.

T 3: Schol. to Pindar *Ol.* 3. 35g: *γίνεται δὲ ὁ ἀγὼν ποτὲ μὲν διὰ μθ′ μηνῶν, ποτὲ δὲ διὰ ν′, ὅθεν καὶ ποτὲ μὲν τῷ Ἀπολλωνίῳ μηνὶ, ποτὲ δὲ τῷ Παρθενίῳ ἐπιτελεῖται.*

T 4: Porphyrius to *Iliad* 10. 252: *καὶ τῶν Ὀλυμπίων δὲ ἐναλλὰξ ἀγομένων διὰ ν′ μηνῶν καὶ μθ′, οἱ ποιηταὶ πεντηκοντάμηνόν φασι τὴν πανήγυριν εἶναι.*

From the above four statements some agreement can be reached. The Olympia occurred every four years and fell alternately in the forty-ninth and fiftieth month after the preceding festival. TT 2 and 3 give the Elean names for these months, Apollonius and Parthenius, and T 2 supplies their Egyptian equivalents, Mesori and Thoth. It is well known that the Egyptian calendar was solar, but until the time of Augustus (most likely in 30 B.C.[17]) it failed to take into account the quadrennial leap day and thus gradually fell behind the absolute solar year. The scholion probably was written after the calendar was stabilized, or else the scholiast would be giving an equation which obviously would soon be invalid. On the fixed Egyptian calendar, Mesori lasted from 25 July to 23 August and Thoth from 29 August to 27 September, with a five-day intercalation in between.[18]

This period of late July to late September is apparently confirmed by T 1. The meaning of lines 12–13 is not completely clear, but they seem to state the outer limits within which the festival could occur: the earliest time was the beginning of *ὀπώρα*, which starts with the heliacal rising of Sirius, and the latest around the time of (the heliacal rising of) Arcturus. Throughout antiquity, Arcturus continued to rise at a later time: from 19 September in 500 B.C. to 25 September in A.D. 300; Sirius rose on 28 July during the entire period.[19] The independent testimony of these two scholia should effectively establish the limits of the festival at late July to late September.

Problems arise, however, with the attempts to pin down the Olympia even further. Nissen, Mommsen, Weniger, and others have tried to equate the forty-nine-/fifty-month cycle stated in TT 3 and 4 with the little-understood *octaeteris* discussed by ancient astronomers.[20] (Simply stated, an *octaeteris* is an eight-year period in which three lunar months are methodically intercalated in order to keep it synchronized with the solar year; thus it would contain ninety-nine lunar months. At what points during the *octaeteris* these three months were added is a source of much debate.) To make this equation, they have restored the first part of T 1 in such a way, especially by reading *πᾶ* as *πρῶτα* in line 10, that the first festival (and all subsequent ones of odd-numbered Olympiads) fell in the eighth month (*η̄*) after the winter solstice, or in August; while the second

[17] Walter F. Snyder, 'When was the Alexandrian Calendar Established?', *AJP* 64 (1943), 385–98.

[18] Ginzel, i. 200. If the scholion was written before the Egyptian calendar was fixed, then the scholiast would have later dates in mind for the Olympia. As the earlier Egyptian calendar lost one day every four years, Mesori and Thoth moved slowly backwards through the autumn, until they reached the position at which they were fixed; cf. Beloch, *Gr. Gesch.*[2] i:2, 139. For the Julian equivalents of the months before then, see E. Lundsgaard, *Aegyptischer Kalendar der Jahre 3000–200 v. Chr.* (Copenhagen, 1942).

[19] Ginzel, ii. 521(at 38° latitude, since it is an Elean chronicle). The ancients have varying dates for the two risings: see Joannes Lydus, *De Ostendis et Calendaria Graeca Omnia* (ed. by Kurt Wachsmuth, 2nd edn., 1897), p. 348, s.v. *κύων*, and p. 346, s.v. *ἀρκτοῦρος*.

[20] H. Nissen, 'Ueber Tempel Orientirung', *Rh.Mus.* 40 (1885), 349–63; A. Mommsen, *Über die Zeit der Olympien* (Leipzig, 1891); Ludwig Weniger, 'Das Hochfest des Zeus in Olympia', *Klio* 5 (1905), 1–22.

(and all subsequent ones of even-numbered Olympiads) fell in the ninth month, or in September. Their readings have often, and rightly, been challenged.[21] In its place, however, Beloch has installed his own alternating odd/even rule, in which the festivals of odd-numbered Olympiads fell in the seventh month (July) and those of even-numbered ones in the eighth (August).[22] But any system whose latest festival would fall in August explicitly contradicts TT 1 and 2, which specifically include most, if not all, of September.

Recently, Dr. Stephen G. Miller has proposed a third theory. He doubts the validity of any interpretation of the highly corrupt T 1, lines 8–11,[23] and once more points out the futility of trying to explain the Olympic cycle by theoretical and not necessarily employed calendric systems.[24] Moreover, he supports (to my mind, again correctly) Fotheringham's argument that TT 3 and 4 do not specify a cycle with precise alternation between forty-nine and fifty months, but rather one which generally proceeded in such a manner.[25]

While Miller does emphasize the unsuitability of the traditional interpretations, his own proposal raises additional problems with the evidence. He argues that the Olympic games were fixed not by a local Elean calendar, but by a universal constant: the festivals culminated on the second full moon after the summer solstice.[26] Miller demonstrates that such a principle actually yields a pattern which closely approximates a forty-nine-/fifty-month alternation. This would at least explain how much later Censorinus, greatly knowledgeable about calendars, could mistakenly assume that the Olympic games adhered to a sophisticated *octaeteris* (*De die natali* 18. 4).

Yet while it is possible that Censorinus might have observed the phenomenon of nearly perfect *octaeterides* and mistakenly described them as such, the scholiasts, of course, would not be capable of nor concerned with these insights. Had there been a simple constant known to all, surely we should expect them to state it. Then too, if the constant was universal and based only on the moon, and not on the peculiarities of the Elean calendar, why do TT 2 and 3 specifically mention the Elean months, the former scholion even giving the (local) Egyptian equivalents. Moreover, none of Miller's festivals falls later than 28 August (Ol. 123), and therefore none approaches the rising of Arcturus, nor is any in Thoth.

The authors of the three systems, Nissen, Beloch, and Miller, attempt to prove the validity of their dating methods by the select group of Olympic festivals about which there is some literary evidence. All argue that these festivals fell precisely at the time predicted by their respective formulae. That each can appeal to the same examples, despite the fact that each argues for different dates, suffices to

[21] e.g. Ziehen, in *RE* 18.1, col. 2, points out that ἄγεται cannot be a historical present (as it must be if πᾶ is read πρῶτα), because of the tense of συνέθηκεν.

[22] Beloch, *Gr. Gesch.*[2] 1:2, 139–43.

[23] *Ath. Mitt.* 90 (1975), 217, following the caveat of Raphael Sealey, 'The Olympic Festival of 324 B.C.', *CR* 74 (1960), 186.

[24] For further statements on the non-use of the *octaeteris*, see E. J. Bickerman, *Chronology of the Ancient World* (London, 1968), p.29, and W. Kendrick Pritchett, *The Greek State at War* (Berkeley, 1974: a reprint of *Ancient Greek Military Practices*, Berkeley, 1971), i. 117.

[25] J. K. Fotheringham, 'Cleostratus', *JHS* 39 (1919), 177, and 'Cleostratus (III)', *JHS* 45 (1925), 83.

[26] Originally suggested by G. F. Unger, 'Der Olympienmonat', *Philologus* 33 (1874), 227–48, in order to understand Polybius' dating methods, and followed by Paul Pédech, *La Méthode historique de Polybe* (Paris, 1964) pp. 449 ff. But see (most recently) R. M. Errington, 'The Chronology of Polybius' Histories, Books I and II', *JRS* 57 (1967), 96–108, especially 99, and (for bibliography) F. W. Walbank, *Polybius* (Berkeley, 1972), pp. 101 ff.

establish the inadvisability of using this evidence.[27]

It would appear, then, that with the present knowledge of Greek calendars, no satisfactory solution has yet been offered. Indeed, perhaps none is possible because of the irregularities in the Elean calendar. The Greek world might have known that the festivals fell according to a general pattern, corresponding to certain Elean months and one which everyone could calculate: that is, the Eleans, on the average, intercalated some three months (or about eighty-nine days) every eight years in order to keep their calendar in approximate agreement with the solar year. But occasionally, for reasons no doubt similar to those which caused the Athenians, Argives, and others to tamper with their own festivals, the Eleans too were forced to intercalate at odd times; and as the Olympia had to culminate on a full moon, this meant that it was postponed or hastened by up to a month. Ultimately, therefore, all Greeks probably had to depend on the *σπονδοφόροι* for confirmation of the Olympic dates.[28] Yet whether even this analysis is valid or not, all that can be said with certainty is that by late Hellenistic times, and very probably earlier, the limits of the Olympia were late July to late September[29].

In describing the great storm which occurred during the battle of Artemisium, Herodotus writes, *ὡς δὲ εὐφρόνη ἐγεγόνεε, ἦν μὲν τῆς ὥρης μέσον θέρος, ἐγίνετο δὲ ὕδωρ τε ἄπλετον διὰ πάσης τῆς νυκτός . . . κτλ.* (8. 12. 1). Though the phrase is rather general, Beloch followed Hesiod's definition of *μέσον θέρος*, the fifty days after the summer solstice (*Op.* 663 f.), in arguing for a battle of Thermopylae in July.[30] Hignett correctly pointed out that 'when Herodotus wrote this he was not necessarily thinking of the definition of midsummer given by Hesiod' and believed that an August battle was still acceptable.[31] The limits, however, might be stretched even further.

Herodotus uses the word *θέρος* twenty-three times.[32] Twice it is merely a personification (2. 121. 1(bis)) and once a time when cattle are led out to pasture

[27] Beloch, *Gr. Gesch.*[2] i:2, 139–43; for the latest defender of Nissen's chronology, see Weniger, *Klio* 5 (1905), 8–14; Miller, *Ath. Mitt.* 90 (1975), 227–31. They all in turn dispute the inferences from the evidence for the following Olympic festivals: Ol. 75 (480 B.C.), Ol. 88 (428 B.C.), Ol. 90 (420 B.C.), Ol. 106 (356 B.C.), Ol. 143 (208 B.C.), and Ol. 184 (44 B.C.). Miller, p. 230 produces another date: Ol. 114 (324 B.C.). But this is merely suggested by Sealey *CR* 74 (1960), 186–7), and tentatively accepted by E. Badian (*JHS* 81 (1961) 42–3), through the employment of Beloch's Olympic cycle.

[28] Evidence for the *σπονδοφόροι* and *ἐκεχειρία* collected and analysed by A. Giovannini, *Étude historique sur les origines du catalogue des vaisseaux* (Berne, 1969), pp. 55 ff.

[29] It was only after this paper was in its final form that I gained access to Alan E. Samuel's *Greek and Roman Chronology (Handbuch der Altertumswissenschaft,* vii:1 (Munich, 1972)). We appear to be in general agreement on most of the important issues surrounding the dating of Olympic festivals (pp. 191–4), but one difference should be brought out. Samuel, ignoring the argument that the scholiasts were only speaking of approximate alternation between forty-nine- and fifty-month periods, believes that the contradiction between the information given by them and the theoretical models of *octaeterides* indicates that the scholiasts themselves were confused. Just as likely, however, is the possibility that they did not intend their information to be construed as describing perfect *octaeterides.* Parenthetically, Samuel treats the information found in TT 1 and 3 as written by one scholiast. But we are here presented with two sources of evidence, for the scholiast is quoting another author in T1. Thus we have testimony from an Alexandrian scholiast and an Elean chronicler.

[30] Beloch, *Gr. Gesch.*[2] i:2, 140; cf. ii:2, 148–9.

[31] Hignett, p. 449.

[32] J. E. Powell, *A Lexicon to Herodotus*[2] (1966), s.v., *θέρος*. The analyses of *χειμών*, *ἔαρ*, and *φθινόπωρον* are also based upon Powell.

(4. 172. 1). The other twenty times it distinctly describes the climate: a period of hot and dry. Herodotus' statement concerning the storm at Artemisium is included in this group, for he is obviously giving concessive force to the fact that the storm arose in the summer: 'though it was midsummer, yet there fell . . .'[33] Similarly, Herodotus employs χειμών to mean winter (as distinct from its meaning 'storm') twenty-seven times. Once it is used with summer as a personification (above), and on another occasion Herodotus uses it temporally, as the period before spring (1. 77. 3). Otherwise, it always refers to cold, wet weather. Thus Herodotus employs summer and winter almost exclusively in opposition to one another, describing their contrasting climatical conditions. They have no direct relationship to military operations. That is reserved for spring: aside from two inconsequential uses (2. 75. 3; 7. 162. 1), ἔαρ in the remaining eleven instances indicates the beginning of the campaigning season. On the other hand, φθινόπωρον is used but twice: once as a time to plant crops (4. 42. 3) and once as the time of year, in 479, when the Athenians besieging Sestos wished to return home (9. 117).

With summer and winter defined climatically, it would appear that Herodotus includes the other seasons of favourable weather, spring and autumn, within his summer. Thucydides does the same: his summer most likely begins with the true evening rising of Arcturus (6 March) and ends with the morning setting of the Pleiades (probably 8 November to him).[34] Now if Herodotus had been interested in dating events with precision, as was Thucydides, then he could perhaps be held to these or other termini, and μέσον θέρος could be determined arithmetically.[35] But because Herodotus uses summer as a climatic description only, θέρος admits of no specific time other than a period of weather when such a storm off Artemisium would be out of character. In this context, μέσον, rather then having a specific temporal force, may merely lend emphasis to the general situation. Herodotus, in fact, needs to draw attention to the unexpected behaviour of the weather, for he states next that it was the gods who brought down the storm in order to reduce the Persian advantages (8. 13).[36] It is possible, therefore, that in this instance μέσον θέρος refers to virtually any time during the summer (that is, spring to autumn) when sufficient good weather remained that would make such a storm a most unusual phenomenon.

II. *Difficulties with the Present Chronologies*

Currently, there are three distinct dates for the battle of Thermopylae, and each (to my mind) is irreconcilable with Herodotus. M. Jules Labarbe believes

[33] W. W. How and J. Wells, *A Commentary on Herodotus*, ii. 238.

[34] A. W. Gomme, *A Historical Commentary on Thucydides*, iii. 702 and 705; and W. K. Pritchett and B. C. van der Waerden, 'Thucydidean time-reckoning and Euctemon's seasonal calendar', *BCH* 85 (1961), 17–52. But the controversy concerning the specific dates continues. See (most recently) Pritchett, 'The Thucydidean Summer of 411 B.C.', *CPh* 60 (1965), 259–61 and *The Choiseul Marble* (Berkeley, 1970), 94–5; and for the opposing view: B. D. Merritt, 'A Persian Date in Thucydides,' *CPh* 61 (1966), 182–4, and A. Andrewes (with A. W. Gomme and K. J. Dover), *A Historical Commentary on Thucydides*, iv. 18–21.

[35] Or by interpreting θέρος as understood by Hesiod or Hippocrates: A. Deman, 'La Date de la bataille des Thermopyles', *RBPh* 36 (1958), 100, and Jules Labarbe, 'Léonidas et l'astre des tempêtes', *RBPh* 37 (1959), 84–6.

[36] Apostolos Dascalakis, *Problèmes historiques autour de la bataille des Thermopyles* (Paris, 1962–hereafter, Dascalakis), p. 130.

that an anecdote in Polyaenus can date the battle:[37]

Λεωνίδας μάχην συνάπτειν μέλλων ὁρῶν νεφέλας χειμερίους ἁλιζομένας πρὸς τοὺς ἡγεμόνας ἔφη, ὡς οὐ χρὴ θαυμάζειν ἀστραπῶν καὶ βροντῶν γιγνομένων· ἀνάγκη γὰρ αὐτὰ συμβαίνειν, ἄστρου κινουμένου. πολλῶν οὖν διοσημειῶν γιγνομένων οἱ μὲν τοῦ Λεωνίδου προϊδόντες τὸ μέλλον θαρροῦντες ἠπείγοντο. οἱ πολέμιοι δὲ ἐκπλαγέντες ἄθυμοι πρὸς τὸν κίνδυνον ἐγένοντο καὶ παρὰ τοῦτο ἡττήθησαν. (*Stratagems* 1. 32. 2)

Labarbe argues that the Leonidas in the passage is the Spartan king of 480 and that the events described took place at Thermopylae, right before the battle. A star so vaguely referred to could only be the star *par excellence*, Sirius, which, in 480, rose at Thermopylae on 30 or 31 July. Hence the battle took place at the very beginning of August, concluding some dozen days after a 21 July Olympia (according to Beloch's Olympic cycle).

Most scholars have not followed Labarbe's interpretation. Despite his extensive analysis of the phrase *ἄστρου κινουμένου*, there remained sufficient doubt whether *ἄστρου* refers specifically to the Dog Star, Sirius, and whether *κινουμένου* means the rising of a star.[38] But probably the most important criticism raised against the passage involves the fundamental differences between this story and the other evidence for the battle: the Leonidas in Polyaenus is about to take the offensive, rather than receive the attack, and for his effort emerges victorious. These variations, in fact, have suggested that the story concerns a different King Leonidas and a different battle.[39]

There is, however, previously unnoticed evidence which tends to prove some of Labarbe's interpretations. Eunapius of Sardis, a fourth-century A.D. Neoplatonic historian, begins his History by discussing the work of his predecessor, Dexippus of Athens.[40] Eunapius disagrees with Dexippus' preoccupations with chronology and questions the value of dating events with precision: *Τίς οὖν λόγος πρὸς ἱστορίας τέλος εἰδέναι καὶ γινώσκειν, ὅτι τὴν ἐν Σαλαμῖνι ναυμαχίαν ἐνίκων οἱ Ἕλληνες κυνὸς ἐπιτέλλοντος*; (Eunapius, in C. Müller, *FHG* iv. 11 = Dexippus, in F. Jacoby, *FGrHist* 100 F 1, 6. 25–8).

Thus Dexippus, via Eunapius, would seem to corroborate Labarbe's assertion that the moving star in Polyaenus is Sirius, and that the movement itself is its rising.[41] But there is, of course, an important distinction between the passages. Polyaenus uses the astral movement to date the battle of Thermopylae, Dexippus the battle of Salamis. This difference cannot be explained as a mere slip on the part of Eunapius in copying out the passage, for his very next sentence is:

Τί δ' ὄφελος ἦν τοῖς ἐντυγχάνουσιν εἰς ὠφέλειαν ἱστορικῆς χρείας, εἰ κατὰ ταύτην ἐτέχθη τὴν ἡμέραν ὁ δεῖνα, καὶ μελοποιὸς ἀνέσχεν ἢ τραγῳδὸς ἄριστος;

[37] Jules Labarbe, 'Un Témoignage capital de Polyen sur la bataille de Thermopyles', *BCH* 78 (1954), 1–21; *RBPh* 37 (1959), 69–91.

[38] Deman, *RBPh* 36 (1958), 96–102; Dascalakis, pp. 111–40; Hignett, pp. 450–1; A. R. Burn, *Persia and the Greeks* (1962), pp. 403–4; and J. A. S. Evans, 'Notes on Thermopylae and Artemisium', *Historia* 18 (1969), 400, n. 65.

[39] 'Leonidas no. 3' in *RE* 12, col. 2018 f.

[40] On Dexippus, see (most recently): Fergus Millar, 'P. Herennius Dexippus, the Greek World and the Third-Century Invasions', *JRS* 59 (1969), 12–29.

[41] Eunapius' use of *ἐπιτέλλω* in the active voice makes no sense, but in the passive the verb means precisely the rising of a star (LSJ s.v. (B)). Eunapius' misuse of the verb is not troublesome: even in antiquity, he was known for his idiosyncratic vocabulary (Photius, no. 77, 159 (54a. 13–16)), and LSJ often records his unique usage of standard vocabulary: e.g. *κατασείω*, no. 2.

As an apparently independent tradition has Euripides being born on the day of the battle of Salamis (Plut. *Mor.* 717C), it would appear that Dexippus did argue for the association of both the astral movement and the birth of Euripides with the battle of Salamis.[42] There must, therefore, have been two different traditions concerning which battle was fought around the rising of Sirius. Of the two versions, it is likely that the one followed by Dexippus is superior. Dexippus wrote a Χρονικὴ Ἱστορία; hence he was probably more interested in chronology than was Polyaenus and may have consulted better sources.

Nevertheless, this association of the dog star with Salamis would still appear unhistorical. Our eye-witness, Aeschylus, does not mention such an obvious portent; not does Herodotus, who cites whatever omens he can about the event (7. 140–4; 8. 65). Most importantly, of course, a dating of the battle of Salamis to late July would contradict the chronological evidence set forth at the beginning of this paper. But such a tradition, even if false, still requires an explanation. One may concern Euripides. The assignment of his birth to the day of the battle of Salamis is obviously artificial and intended to link him with Aeschylus, who was actually somehow involved in the battle and subsequently wrote the *Persae* to commemorate the triumph.[43] After the association of Euripides with Salamis, the rising of the brightest star in the heavens might also be added to announce the coming of the brightest star in Greek literature. Or, leaving aside the question of Euripides, another explanation offers itself. A key part of the action at Salamis took place on the island of the dog tail, Cynosura, thus fulfilling a prophecy concerning the Greek victory (Hdt. 8. 76–7). The association of the dog star, Σείριος κύων, with Κυνόσουρα would be readily obvious to a later historian wishing to find, or invent, additional portents. Of course, the considerations of Euripides and Cynosura may have worked together in creating the later tradition. But whatever its origin, once this tradition became established, it was a small step to dating the battle of Thermopylae by the same star.

Thus while the reference in Eunapius clears up some of the doubts concerning the meaning of Polyaenus' anecdote, we have seen that it does not lend to the account a greater historical veracity. On the contrary, the tradition involving Salamis, though patently false, probably precedes that concerning Thermopylae and gives Polyaenus' equally false statement its *raison d'être.* Yet, on the other hand, even if it is argued that Polyaenus' account correctly reflects the original tradition (and Dexippus' the modification), this does not increase the value of this evidence. The anecdote in Polyaenus contains serious factual errors concerning Leonidas' attack and the ultimate outcome of the battle. Just as these details are in direct contradiction to our best source, Herodotus, we shall see that Polyaenus' date for the battle of Thermopylae also directly contradicts the chronology which Herodotus sets forth.

Most historians date the battle about ten days after an Olympic festival culminating on the full moon of 19 August.[44] There is no specific evidence for such

[42] C. G. Cobet, 'Ad Eunapii Fragmenta', *Mnemosyne* 10 (1882), 26–7, believes that Eunapius was actually quoting Plutarch's statement in dating the battle of Salamis. But Eunapius' reference to the movement of a star is not found in Plutarch. Furthermore, as Eunapius in this passage is aiming his polemics directly at Dexippus, it must be supposed that these statements too are found in Dexippus. Jacoby (*FGrHist.* 100 F 1, 6. 25–8) records the sentences as direct quotations from Dexippus.

[43] On the value of dating Euripides' birth to the battle, see F. Jacoby, *Apollodorus Chronik* (Berlin, 1902), pp. 250–60.

[44] See the discussions in Hignett, pp. 448–9, and Dascalakis, pp. 140–69.

a scheme. Rather, it is an approximation which fits comfortably within the various limits of *μέσον θέρος* and in association with a reasonable date for the Olympia (and one consistent with Nissen's Olympic cycle). But in this later, and even more so in the earlier chronology indicated by Polyaenus, a serious gap in events exists. Herodotus states with precision—and it is generally accepted[45] —that the Persian fleet sailed into Phalerum nine days after the battle of Thermopylae (8. 23–5, 66. 1; see p. 243, that is, depending on which date is used for that battle, 10/11 August or 7 September. As we have seen, 28 or 29 September is the most likely date for the battle of Salamis. The Persian navy must then have been in Attica a full three or seven weeks before venturing out against the Greek fleet.[46] This, however, is in direct contradiction to Herodotus, who maintains that the battle of Salamis took place on the very next day after the arrival of the Persian fleet (8. 67 f.).

Yet supposing that Herodotus is wrong about the interval between the arrival of the Persian navy and the battle of Salamis, what could the Persians have been doing in Attica for three or seven weeks? One explanation, recently revived, is that they were occupied with breaking the Greek hold on the Acropolis.[47] Herodotus does say that a few (*ὀλίγοι*) Athenian poor and the treasurers, interpreting the oracular reference to a wooden wall as that of the Acropolis, remained behind (8. 51; cf. 8. 41–3).[48] When Xerxes entered Athens, he tried to storm the stronghold, but for a long time (*ἐπὶ χρόνον συχνόν*) could not. After the Acropolis finally was taken and burned, the Greek council at Salamis became greatly alarmed and began to abandon their current position, an action which they had already planned (8. 52–6). The battle of Salamis followed soon afterwards. Bury and Sealey emphasize that Xerxes was perplexed *ἐπὶ χρόνον συχνόν* and that the fall of the Acropolis effected a significant response from the Greek admirals. These are most easily explained if, contrary to the tradition in Herodotus, the Greeks had in fact defended the Acropolis with a hoplite force which was expected to and did hold its position for a considerable period of time. This then might have occupied Xerxes in Athens for three or seven weeks.

Yet it would seem that neither inference drawn from Herodotus is conclusive. Herodotus' phrase, *ἐπὶ χρόνον συχνόν*, as often as not suggests the space of a few hours.[49] This might be especially true here, since the duration of a siege of a few officials and impoverished persons, as Herodotus believed it to be, by the mighty Persian army could be described as a 'long time' even if it were just one day. Nor is his statement about the consequent panic necessarily significant. Herodotus is recording an emotion (fear) and a motive (for leaving Salamis). Emotions and

[45] Cf. Hignett, pp. 451–3; most recently: J. F. Lazenby, 'The Strategy of the Greeks in the Opening Campaign of the Persian Wars', *Hermes* 92 (1964), 265, and Raphael Sealey, 'Again the Siege of the Acropolis', *CSCA* 5 (1972), 191.

[46] Giulio Giannelli, *La spedizione di Serse da Terme a Salamina* (pubblicazioni della università cattolica del sacro cuore, serie quinta: scienze storiche, vol. v (Milan, 1924)—hereafter, Giannelli), p. 21, dates the battle of Thermopylae to 21 August and the arrival of the Persian fleet at Phalerum to 29 August. Thus he is left with a four-week hiatus in events.

[47] R. Sealey, 'A Note on the Supposed Themistocles-Decree', *Hermes* 91 (1963), 376–7, and more fully in *CSCA* 5 (1972), 183–94. Originally argued by J. B. Bury, 'Aristides at Salamis', *CR* 10 (1896), 414–18; supported by Munro, *CAH* v. 300, 303–4, G. B. Grundy, *The Great Persian War* (London, 1901), pp. 357–9, and Dascalakis, p. 147.

[48] Nothing is to be gained from the reference in the Themistocles Decree (Meiggs and Lewis, *GHI*, no. 23), lines 11–12; see Sealey, *CSCA* 5 (1972), 184–6.

[49] Discussed by Sealey, loc. cit., 188–9.

motives are, of course, greatly subject to interpretation, bias, and alteration as the tradition is passed on; and rather more so than a specific fact, such as a hoplite garrison holding its position for a considerable length of time. An event so similar to the battle of Thermopylae could hardly have dropped out of the oral tradition within one generation.[50] If anything, even in Herodotus' modest account we may suspect embellishment, especially as the Persians succeed only when they attack from the rear.

Instead of a protracted siege, perhaps Xerxes remained idle in Athens for another reason. It has been suggested that a three-week hiatus could be explained by a Persian attempt to pressure the Greek fleet into withdrawing from its position at Salamis.[51] Yet precisely such a counsel of waiting and forcing a Greek retreat was offered by Artemisia and rejected outright by Xerxes (8. 67–9)! The historicity of this speech is not at issue here.[52] It is only important to note that Herodotus is aware of such a possible action and the motive for it, yet treats it as an unfulfilled option.

The problem reduces itself to the fact that the dating of the battle of Thermopylae to either early or late August must perforce violate the chronology set forth by our best source. Herodotus unquestionably states that the Persion navy, having sailed into Phalerum nine days after the battle, engaged the Greek fleet at Salamis on the next day. As this is impossible by either of the systems stated above, Herodotus must have overlooked some significant long-lasting event between the Persian arrival in Attica and the battle of Salamis. But the solutions supplied for filling in the alleged lacuna in his narrative are either incompatible with or in direct contradiction to other statements in Herodotus; and, in any case, it is unlikely that Herodotus would have overlooked such an event at this critical point in his account.

Rather than abandoning Herodotus, some have suggested a later date for the battle of Thermopylae (around 12–13 September) and an earlier one for the battle of Salamis (22 September).[53] While this arrangement maintains Herodotus' chronology between the two battles, it does so at the expense of the best dates for the engagement at Salamis. The scheme, moreover, based upon an Olympia culminating on 19 August, contradicts the claim in Herodotus that the battle of Thermopylae took place earlier than anticipated, thus preventing the Peloponnesians from going out *en masse* after the festival (7. 206. 2).[54]

[50] Hignett, p. 213. In fact, conservative political elements in Athens were apparently inventing stories about feats of valour performed by hoplites during the battle of Salamis: Charles W. Fornara, 'The Hoplite Achievement at Psyttaleia', *JHS* 86 (1966), 51–4.

[51] Hignett, pp. 213–5.

[52] Cf. Hignett, p. 206, n. 4.

[53] Ernst Obst, *Der Feldzug des Xerxes*, *Klio* 12 (1914), *Beiheft* 164–6; apparently also Alb. Deman, *Miltiade et Themistocle, Recherches sur l'histoire politique, diplomatique et militaire d'Athènes, 500–480 av. J.-Chr.*, p. 281, cited in *RBPh* 36 (1958), 96 n. 1, and unavailable to me.

[54] Eugène Cavaignac, *Histoire de l'antiquité* (Paris, 1919), 1:2, 383–95, presents a somewhat different view. Herodotus states that an eclipse occurred at Salamis, in 480, when Xerxes began his march ἅμα τῷ ἔαρι (7. 37); but no eclipse is known to have been visible there that spring. Cavaignac believes it is actually the eclipse of 2 October and Xerxes was starting out, not from Sardis, but from Therma. This gives Cavaignac dates of 16–18 October for the battle of Thermopylae and 26 October for the battle of Salamis, with the Olympia culminating on 17 September. Furthermore, Cleombrotus saw that same eclipse, not when he was considering giving chase to Xerxes (9. 10. 3), but when he was bringing aid to Leonidas. If for no other reasons, Cavaignac's thesis fails, because Herodotus explains that the Peloponnesians did not have time to reinforce Leonidas

III. *Proposed Chronology*

Perhaps, instead of trying to make Herodotus' account fit an association with an arbitrary Olympic date, the reverse method might be employed. Herodotus, it will be shown, presents a chronology of events which is consistent throughout.[55] Though it has often been objected to on military grounds, that is nothing more than modern hindsight. If followed exactly, Herodotus' scheme will fit easily within the second half of September; and it will be so compatible with an Olympia culminating on the full moon of 18 September[56] as virtually to demand it.

On the day following the concluding battles of Thermopylae and Artemisium,[57] the Persian fleet captured Histiaea (8. 23. 2), and on the next day it visited the battle field at Thermopylae (8. 24–5).[58] The day after that, the Persian forces split up: the army marched south while the navy returned to Histiaea (25. 3). Herodotus says that the Persian fleet remained there for three days before setting sail for Phalerum, a voyage requiring an additional three days (8. 66. 1). Thus it is on the ninth day after the battles of Thermopylae and Artemisium that the Persian navy arrived at the Athenian port. It is correctly assumed by most scholars that Xerxes' army would have preceded his navy into Attica by at least one day in order to secure the harbour,[59] and Herodotus certainly has Xerxes there awaiting his fleet (67. 1). The army, therefore, must have been in Athens on the sixth day after its departure from Thermopylae. Many have been sceptical of Herodotus' account here, but despite the distance involved, such a forced march could be accomplished, as it was by Cyrus' army.[60] Furthermore, the vanguard of the army may have begun its journey during the first two days after the battle,[61] thereby scouting the way and securing provisions for the main body.

As soon as (ἐνθαῦτα) the Persian fleet arrived, Xerxes consulted with his admirals and decided to offer battle. It was late in the day, however, so the fleet merely moved into position. The next morning, the engagement at Salamis actually took place (8. 67 f.). This haste to do battle on the part of Xerxes has generally been rejected, as it is argued either that there was a protracted siege of the Acropolis or that there must have been extended intervals of waiting before

(7. 206) and if that was what Cleombrotus was intending, why does Herodotus say that he was at the Isthmus building the wall (8. 71. 1; 9. 10. 2–3)?

[55] Others have recognized that Herodotus' internal chronology is completely consistent, but their Julian dates appear to be in error: Obst and Deman (loc. cit.) and Cavaignac (loc. cit.); R. W. Macan, *Herodotus, the Seventh, Eighth, and Ninth Books* (London, 1908—hereafter, Macan), ii. 293, generally holds to Herodotus' chronology without supplying the Julian dates. Hignett, p. 211, believes that Giannelli, pp. 37–49, has proved Herodotus inconsistent in this matter; but this is not so, nor does Giannelli claim to have done such. He merely argues that Herodotus' chronology is *a priori* impossible on military grounds: the Persian army and fleet would need more time to take their positions (pp. 40–1). Giannelli's analysis could correspond to the presently proposed scheme: his day *Y1* = 27 September; *Y2* and *X1* = 28 September; and *X2* = 29 September.

[56] Ginzel, ii. 557.

[57] The battles most likely were concluded on the same day: Hdt. 8. 15. 1; cf Hignett, pp. 379 ff. In any case, as all alternative chronologies have the battle of Artemisium occurring before that at Thermopylae, the possibility of the two engagements not being simultaneous does not affect the present discussion.

[58] Cf. Macan, i:2, 390. The Persians did not take Histiaea until well after midday (8. 23. 2). Because the visit to Thermopylae took an entire day (8. 25. 3), it must have occurred on the day after the capture of Histiaea.

[59] e.g. Hignett, p. 193, Macan, ii. 292, and Giannelli, p. 38.

[60] Xen. *Anab.* 1. 2. 5–4. 11; cf. Obst (loc. cit.) 132 f. See Hignett, pp. 195 f., for the standard objections.

[61] Cf. Giannelli, note on pp. 42–4.

TABLE 1

GREEKS:	Councils I and II: hearing of capture of Acropolis, decision to abandon position (8. 56).	Council III: Greeks decide to remain and prepare for battle (8. 57–63).	Greeks intend to fight. Earthquake necessitates sending ship to Aegina (8. 64).	Council IV: ploy of Themistocles (8. 74 f.).	Greeks prepare for battle; return of ship from Aegina (8. 83).
	DAY	NIGHT	DAY	NIGHT	DAY OF BATTLE
PERSIANS:	Main army arrives; siege of Acropolis complete (8. 52–5). Xerxes dispatches messenger to Susa.	Assumption that army precedes fleet by one day.	Xerxes offers sacrifice on Acropolis* (8. 54); fleet arrives and decides to fight next day (8. 67–70).	Army advances towards Isthmus, causing panic in Greeks and necessitating Greek council IV (8.71).	

*Giannelli, 45, suggests that Xerxes' sacrifice, an attempt to propitiate the gods for having burnt the Acropolis, was brought about more by the earthquake (8. 64) than by the dream.

Xerxes' meeting with his admirals and then again afterwards, before the battle.[62] There is in fact, however, no need for such delays, except that *something* must fill the space created by the proposed chronologies. On the contrary, the forced march from Thermopylae indicates that at that time Xerxes was in a hurry: he no doubt wished both to create confusion and fear among the Greeks, who had just lost a land battle, and to take advantage of a campaigning season which was rapidly drawing to a close.[63] It is also probable that the Persian ships were refitted in the first six days after the battle of Artemisium, for they would not sail deep into enemy waters unprepared.[64] Thus there is no reason why Xerxes should not opt for an immediate engagement and some indication that this is what he did desire.

This chronology fits neatly with the supposed four Greek councils in Herodotus. (Though Herodotus mentions only three, the first is usually considered to be two distinct ones, separated by several days. For the sake of clarity, this first council is referred to here as 'councils I and II'.) During councils I and II, the Greek admirals, while urging a withdrawal to the Isthmus, received word that the Persians were in Attica (8. 49–50). Leaving the council apparently still in session, the narrative moves to a description of the siege of the Acropolis (8. 52–5), most likely begun the same day.[65] Herodotus reports next the effect which the fall of the Acropolis had on the admirals: the motion to sail to the Isthmus was carried (8. 56). Now if the siege lasted more than one day, then there had to be two separate councils, one receiving news of Xerxes' invasion of Attica (and the beginning of the siege), the other reacting to the fall of the Acropolis. It has been demonstrated above, however, that the siege need not have been especially long. Thus the two councils may have been one all-day meeting. (Alternatively, and still consistent with Herodotus' chronology, the Persian vanguard (see above) may have arrived in Athens a few days before the main body of troops. It could have completed the siege of the Acropolis about the time when the entire army entered Attica two days later. Councils I and II would then, of course, be two distinct meetings, but would be separated by only a few days.)

The remainder of the chronological indicators in Herodotus fits easily within the framework detailed above (see Table 1).

The major events in September would then have occurred as in Table 2.

TABLE 2

Carnea begins (if a full moon festival)	10 September
Olympia begins	15
Full moon: festivals completed	18
Battles of Thermopylae and Artemisium over	19
Persian army marches south	22
Persian fleet sails towards Attica	26
Persian army arrives in Attica	27
Persian fleet arrives in Phalerum	28
Battle of Salamis	29

[62] Especially by Hignett, p. 206, and Giannelli, pp. 37–49.

[63] On the length of the campaigning season as a consideration, see Evans, *Historia* 18 (1969), 388–406.

[64] *Contra*, Giannelli, p. 47. Similarly, Xerxes gave his main army two days' rest at Thermopylae before beginning the forced march.

[65] Cf. Hignett, p. 211.

It should be pointed out that this chronology is not absolute, but only relative to the battle of Salamis. If that battle is dated earlier, then all events (except, of course, the festivals) move down accordingly.

The present scheme, to the best of my knowledge, satisfies all internal allusions within Herodotus, except one. Xerxes and his army were apparently marching south, on at least the third day after the twin battles, when he inquired into what the Greeks were doing. The response suggests that the Olympics were being held at that time: *οἱ δέ σφι ἔλεγον ὡς Ὀλύμπια ἄγουσι καὶ θεωρέοιεν ἀγῶνα γυμνικὸν καὶ ἱππικόν* (8. 26. 2). In an attempt to save their chronologies, virtually all scholars have denied the historicity of this passage.[66] Taken literally, the statement also contradicts the present scheme, as there must be at least a four-day interval between the Olympia and this inquiry. Yet Herodotus' intention in including the story could not have been to synchronize Greek and Persian activity at this point, for the Olympia appears to be over: Herodotus says elsewhere that as soon as (*ὡς τάχιστα*) the Peloponnesians heard about the results at Thermopylae, they began building the Isthmian wall (8. 71. 1); and that occurred after the Olympia and Carnea had already been completed (*παροιχώκεε ἤδη*, 8. 72). Thus the dialogue should not be taken literally: concluding with the famous sentiment that the Greeks contest not for wealth but for *ἀρετή*, it serves rather to underscore their heroism at Thermopylae. Indeed, as Labarbe has pointed out, the present tense of *ἄγω* and *θεωρέω*, translated in the imperfect, need not indicate what the Greeks were doing at that specific moment, but may rather characterize a particular aspect of Greek activity throughout the preceding days.[67] There is, therefore, no unavoidable conflict here.

More importantly, the scheme adheres to Herodotus' picture of Xerxes marching quickly down from Thermopylae, discounting any suggestion of waiting in Athens, and hence offering battle at the earliest possible moment. In order to dismiss Herodotus' account here, very strong reasons must be given for believing that there exists a lacuna in his narrative. Yet while a battle of Thermopylae based upon a July or August Olympia would show that Herodotus is mistaken, the determination of such an Olympic festival is completely arbitrary. That the Persians would have required more time to march to Attica than Herodotus allows them is nearly as arbitrary: Herodotus' chronology is tight but by no means impossible. Finally, Herodotus' assertion that the battle of Salamis occurred the day after the Persian fleet arrived is entirely defensible.

On the other hand, had Xerxes remained in Attica for three weeks or more, surely we should expect to hear echoes of it in the kinds of anecdotes which Herodotus loved to include: raiding parties, espionage and counter-espionage, miraculous events, tales of bravery and cowardice, and other such *topoi*. Their absence indicates that events simply unfolded with rapid-fire precision, and Herodotus, faithful to his duty, portrayed them as such. Herodotus, of course, has never enjoyed a favourable reputation as a chronologist. But the events described here are: (i) those nearest to his own time and thus the least adulterated, (ii) those which have the most eye-witnesses with whom he could converse, and (iii) the culmination of his entire work: how Europe turned back the Asian threat.

The present chronology attempts to do justice to these considerations by

[66] See Hignett, p. 448.

[67] *BCH* 78 (1954), 19, n. 2. For the moods of *ἄγουσι* and *θεωρέοιεν*, which, in this construction, must have the same force, see Smyth, *Greek Grammar* (1966), § 2615; cf. 1862 a, 1863 a and b.

placing most importance on those things which Herodotus felt were most important. If there is a question of (say) the precise number of times that the Greek admirals met at Salamis, it is forgivable. Such specific details are easily confused, and they may not have been of much concern to Herodotus anyway. But if, contrary to Herodotus' belief that the battle of Salamis occurred soon after that at Thermopylae, there is in fact a hiatus of three or seven weeks at this juncture of his work, it would be unforgivable. It would mean that virtually all other chronological indicators in his history are at the very least highly suspect also and every possible date for the battle of Thermopylae equally ill founded. Thus it is necessary to begin by testing Herodotus' picture of the final dozen days before the battle of Salamis. If it is in any way plausible and in accordance with other comparable evidence, there appears to be little choice but to accept it.

Appendix: *Indefinite Chronological Indicators*

I. Herodotus mentions that the Carnean and Olympic festivals fell at the same time in 480 (7. 206. 1; cf. 8. 72). Now the Syracusan month of Carneius, which may well be the same as the Spartan month in which their Carnea was held, was equivalent to the Athenian month of Metageitnion (Plut. *Nic.* 28. 1; cf. 26. 1). Since it appears that the Attic month after Metageitnion, Boedromion, fell during at least part of September in 480,[68] it might be argued that the Carnean festival of that year took place in August. The problem is that the workings of the Spartan calendar appear to have been as irregular as the Athenian, with frequent intercalations. So while on the whole the Carnea may have occurred in Metageitnion, there is no way to determine if it did in 480.[69]

II. The Peloponnesians began construction of the Isthmian wall immediately upon hearing of the outcome at Thermopylae (Hdt. 8. 71. 1; cf. 40. 2) and apparently suspended work on 2 October (9. 10. 2). In 479, building began anew when the Peloponnesians learned of Mardonius' intentions (9. 8. 2), probably shortly after the beginning of spring.[70] The wall was within ten days of completion by the Hyacinthia (9. 7–8), a festival which cannot be dated with anything near certainty. At that same time, however, Mardonius was marching into Athens (9. 6), entering ten months (probably nine months counting inclusively) after Xerxes had initially done so (9. 3. 2).

Many have doubted Herodotus' statements concerning the length of time required to build the wall,[71] but because of variables inherent within the evidence, no date for the battle of Thermopylae lessens that length. Construction is halted from 2 October to a point in spring 479, when it is resumed. That total should be subtracted from *circa* nine months, seventeen days (the wall was begun about a week before Xerxes entered Athens in 480 and finished about ten days after

[68] See pp. 232–3. The present chronology has the main Persian army arriving in Athens two days before the battle and possibly the vanguard up to two days before that. As the anecdote concerning the Iacchus procession does indicate that the Persians were in Athens by the time of that celebration, 19/20 Boedromion must have occurred no more than four days before the battle of Salamis.

[69] Pritchett, *The Greek State at War*, i. 117; Gomme, Andrewes, and Dover, *A Historical Commentary on Thucydides*, iv. 74; and especially Bickerman, *Chronology of the Ancient World*, p. 32.

[70] Mardonius was still in winter quarters τὸ ἔαρ γιγνόμενον (8. 131. 1). After consulting the oracles (8. 133–5), he dispatched Alexander to Athens (8. 136 f.; cf. 9. 7a. 1); at which point the Peloponnesians probably began work again.

[71] e.g. Macan, i.2, 603, and Hignett, p. 282.

Mardonius recaptured the city) to determine the amount of the construction time. The only difference which the various chronologies produce is how much of the wall was completed by the battle of Salamis. Labarbe's dating, for instance, would result in about half the wall being built by then. The chronology proposed here would allow very little to have been completed, yet Herodotus does not say that much was done by the time of the battle. His statement at 8. 71. 2 has occasionally been taken to imply as much: *ἅτε δὲ ἐουσέων μυριάδων πολλέων καὶ παντὸς ἀνδρὸς ἐργαζομένου ἤνετο τὸ ἔργον*. But the imperfect of *ἀνύω* suggests only a continual action and a task in which the manpower and spirit were commensurate with the immensity of the project; so Powell: 'the work grew apace'.

III. Herodotus gives a general chronology for the invasion: the Persians took one month to cross the Hellespont and three more to march into Athens (8. 51. 1). He also says that the Persians had started out from Sardis *ἅμα τῷ ἔαρι* (7. 37. 1). This evidence can and has been made to fit every chronology offered thus far; the variables are: (i) dating the beginning of spring, (ii) determining the time it took Xerxes to go from Sardis to Abydos, and (iii) the fact that Herodotus' use of round figures suggests that the dates are only approximations. The outline can also, of course, be made to conform to the scheme proposed here.

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