THE TOPOGRAPHY OF PYLOS AND SPHAKTERIA AND THUCYDIDES' MEASUREMENTS OF DISTANCE[*]

Abstract: This article has two purposes. First, it proposes a more satisfactory solution to an old problem: the apparently serious inaccuracy of Thucydides' measurements for the length of Sphakteria island and the width of the channels dividing it from the mainland. Second, it offers some more general observations on Thucydides' measures of distance and the light they can shed on an important aspect of his historiographic method.

The solution proposed by R. Bauslaugh ('The text of Thucydides IV 8.6 and the south channel at Pylos', *JHS* 99 (1979) 1-6) to the problem of measurements is rejected. Bauslaugh had emended two of the three figures on the ground that they were so seriously inaccurate as to require assumption of manuscript corruption. It is here contended that his argument is misconceived, and the emendations unnecessary. The counter-argument is based on a close study of Thucydides' idiom and practice in giving measurements of distance, particularly his use of qualifying expressions with numbers of this kind.

The second half of the article uses data compiled in an ongoing study of the use of numbers by Greek historians to make some comparisons between Thucydides' practice and that of several other historians in giving measurements of distance. It is suggested that careful attention to the nuances of Thucydides' practice, especially his use of different qualifying expressions with these numbers, may enable one to draw some interesting inferences about his sources of information and how he used them.

ἡ γὰρ νῆσος ἡ Σφακτηρία καλουμένη τόν τε λιμένα παρατείνουσα καὶ ἐγγὺς ἐπικειμένη ἐχυρὸν ποιεῖ καὶ τοὺς ἔσπλους στενούς, τῆι μὲν **δυοῖν νεοῖν διάπλουν** κατὰ τὸ τείχισμα τῶν Ἀθηναίων καὶ τὴν Πύλον, τῆι δὲ πρὸς τὴν ἄλλην ἤπειρον **ὀκτὼ ἢ ἐννέα**· ὑλώδης τε καὶ ἀτριβὴς πᾶσα ὑπ᾽ ἐρημίας ἦν καὶ **μέγεθος περὶ πέντε καὶ δέκα σταδίους μάλιστα**.

For the island of Sphacteria, stretching along in a line close in front of the harbour, at once makes it safe and narrows its entrances, leaving **a passage for two ships** on the side nearest Pylos and the Athenian fortifications, and **for eight or nine** on that next the rest of the mainland: for the rest, the island was entirely covered with wood, and without paths through not being inhabited, and **about one mile and five furlongs [fifteen stades] in length**.

Thucydides 4.8.6, trans. R. Crawley

THUCYDIDES' measurements for the length of Sphakteria island and the width of the two channels dividing it from the mainland have worried generations of commentators. In fact, this passage has recently been stigmatized as possibly the 'worst topographical error in the entire work'.[1] My purpose in this article is twofold: first, to propose a solution to that notorious problem which may be deemed more satisfactory than the one that currently holds the field, and second, to look in more detail at the whole body of evidence concerning Thucydides' measures of distance, so as to offer some more general observations on this important aspect of his historiographic method.

---

[1] The quotation is from Hornblower (1996) 17. See also the notes *ad loc.* of Hornblower (1996) 158-60 and Gomme (1956) 442-4 and, outlining in more detail the history of scholarship on the topography, 482-6.

THUCYDIDES ON PYLOS AND SPHAKTERIA

The problem with the text quoted above is that two of the three measurements given – those for the width of the south channel and for the length of the island – appear to be significantly too small. These discrepancies have been variously dealt with by modern scholars. The history of scholarship on the problem has been complicated by both changes in the physical terrain of the area and misunderstandings of Thucydides' description of the strategy attributed to the Peloponnesian forces. As far as physical changes in the landscape are concerned, the most obvious is the status of the lagoon which now borders the rocky outcrop of Pylos on the east. Modern scholars are divided about whether this existed in Thucydides' time or not, but the evidence offered by Pritchett of Hellenistic and Roman settlement traces in this area seems decisive proof that the lagoon did not exist in antiquity.[2] An additional problem is the evidence of change in the sea-level: Pritchett has described and photographed traces of ancient buildings on the southeast edge of Pylos, now under water, whose construction presumes a lower sea-level in antiquity.[3] The most serious misunderstanding of the strategy outlined by Thucydides was that of A.W. Gomme, who jumped to the conclusion that the Peloponnesians intended to sink ships in order to block the channels, and was therefore distressed by the fact that the depth of the south channel would have made this impracticable.[4]

I think it is fair to say that, although there is still no definitive solution to the problems of reconstructing the ancient topography of the Pylos peninsula, most scholars would now accept that the Bay of Navarino is indeed the harbour mentioned by Thucydides, and that there is no topographical impediment to accepting his description of the respective strategies of the two sides in the campaign: the Peloponnesians intended to station ships in each channel facing outwards towards the open sea, so as to contest any attempt by the Athenian fleet to sail into the bay, while at a later stage the Athenians kept the enemy garrison imprisoned on the island of Sphakteria by maintaining a continuous circuit of triremes rowing on guard duty.

The current agreement on the general interpretation of Thucydides' topographic and strategic description has led, however – perhaps not surprisingly – to a heightened degree of concern about the inaccuracy of his measurements for the length of the island and the width of the south channel. This can be seen in Bauslaugh's article (1979), which examined the measurement problem most thoroughly. While recognizing that the measurements of distance given by all ancient historians fall considerably short of modern standards of precision and accuracy, Bauslaugh argued that these two figures (περὶ πέντε καὶ δέκα σταδίους μάλιστα for the length of the island, and [διάπλουν] ὀκτὼ ἢ ἐννέα [ναυσί] for the width of the channel) were so seriously inaccurate that manuscript corruption must be assumed. The emendations he favoured were the following: περὶ πέντε καὶ εἴκοσι σταδίους μάλιστα for the length of the island, and [διάπλουν] ὀκτὼ ἢ ἐννέα ⟨σταδίων⟩ for the width of the channel.[5] The motivation for this strong desire to emend the received text seems to have been strengthened by the belief that Thucydides must

---

[2] Pritchett (1965) 6-29, reasserted in (1994a) 154-61; noted by Hornblower (1996) 159.

[3] Pritchett (1965) 12-15 and (1994a) 154-61.

[4] Gomme (1956) 443-4, ad 4.8.6: '[T]he southern [entrance] is not only some 1,400 yards wide, but, what is more important, about 200 feet deep and could not have been blocked even by the whole Peloponnesian fleet'; and also ad 4.8.7: 'The Peloponnesians intended to sink their ships in order to block the entrance.' Hornblower (1996) 160 refers to 'Gomme's strange theories'.

[5] Bauslaugh spends little time discussing the problem with the figure for the length of the island. He merely comments briefly that the 'inaccurate estimate for the length of Sphakteria ... has been previously explained as nothing more than a simple numeral corruption', and then reviews with approval two earlier proposals for the emendation of πέντε καὶ δέκα to πέντε καὶ εἴκοσι (Bauslaugh (1979) 1 and n.2).

have visited Pylos and Sphakteria and checked out the topography himself.[6] This assumption makes the inaccurate numbers in the topographic description totally unacceptable. Hence the need to emend. Bauslaugh's proposed emendations have now been endorsed both by Pritchett and (more hesitantly) by Hornblower, and incorporated into the text by P.J. Rhodes in his recent edition of Thucydides 4.1–5.24.[7]

I believe this argument to be misconceived, and the emendations unnecessary. I shall make three points in support of this view: (i) the proposed emendation of the figure for the width of the south channel results in a text that violates Thucydides' idiom and practice in giving measurements of distance; (ii) the arguments in favour of both emendations are considerably weakened if due attention is paid to the fact that both numbers are qualified by expressions suggesting some reservations about their precision and/or accuracy; (iii) there is no valid reason for assuming that Thucydides' topographic description rests on autopsy of the area.

(i) Thucydides' estimate of the width of the south channel is given not in terms of conventional units of distance measurement, such as stades or plethra, but in a more practically descriptive way: he says the channel on that side of the island constituted a [διάπλους] ὀκτὼ ἢ ἐννέα [ναυσί]. Unfortunately, the sentence in question is highly elliptical, so that the words διάπλους and ναυσί have to be supplied by analogy with the parallel phrase describing the north channel. Standard translations, such as those of Crawley and de Romilly, clearly indicate, however, that the supplements I have suggested are those that have been understood by most other interpreters of the passage.[8] But since δυοῖν νεοῖν is a dual form, it is impossible to tell whether Thucydides

---

[6] There seem to be two points underlying this belief: first, the general feeling that Thucydides' reputation for care and accuracy requires him both to have visited any place he wrote about, and to have made an accurate estimate of the shape and size of its physical features; and second, some more specific elements in the narrative which some scholars have seen as evidence of autopsy. The first point is implicit in many modern discussions, though not explicitly stated. The second is most vehemently advocated by Pritchett (1994a) 174: 'My belief is that Thucydides was employed at the time not in Thrake, but was engaged in the affair at Pylos ... The record is filled with details. Such phrases as "the dust from the newly burned forest rose in clouds to the sky" (4.32.2) strongly suggest his presence. If not in the original expedition, it would seem highly probable that he was in the second ...'

[7] See Pritchett (1994a) 168–76 and Hornblower (1996) 160: 'I accept [Bauslaugh's theory] as the best way out'. In the introduction to this volume of his new commentary ((1996) 17), Hornblower explains this hesitation as follows: '[A]t present the emendation made by Bauslaugh in 1979 seems to hold the field, having been approved by Pritchett in 1994. But it is not altogether satisfactory to hold that an emendation which had not occurred to anyone in the 1960s is now to be treated as self-evidently right. The better attitude, I suggest, is to agree to an emendation if it removes a difficulty, but never to forget that unless the text is disturbed we are carrying out the emendation in deference to and in accordance with a *hypothesis* [author's emphasis], a hypothesis that is about the rightness and truthfulness of Thucydides, a hypothesis which is usually good and sound but which is surely not necessarily and not automatically true in every instance. That is, we should

sometimes be willing to entertain the possibility that for artistic or other motives Thucydides might have bent the truth.' It will be apparent that the solution I am proposing to this problem does not involve an explanation of the type adumbrated in the final sentence of this quotation.

Rhodes (1998) 44–5 prints the text including the two emendations championed by Bauslaugh, translating as follows: 'For the island called Sphacteria, which stretches along the harbour and lies near, makes the harbour safe and the entrances narrow: the one by the Athenian fortification and Pylos leaves **a passage for two ships**, and the other, towards the mainland on the other side, is **eight or nine stades**. The whole island was wooded and, since it was uninhabited, lacking in paths and its length was *about* **twenty-five stades** [my emphasis].' He comments (212–13): 'since in general Thucydides is well informed on the topography of this campaign, it is more likely that an early scribe made a copying error than that Thucydides seriously underestimated the width of the southern passage, and we should therefore insert "stades" with the "eight or nine" on which all our manu/scripts agree', and further, '... emendation from "fifteen" to "twenty-five" stades, implying a stade of 176 m., in the middle of Thucydides' range, has been widely accepted'.

[8] Crawley's translation ((1951) 212) runs as follows: 'For the island of Sphacteria, stretching along in a line close in front of the harbour, at once makes it safe and narrows its entrances, leaving **a passage for two ships** on the side nearest Pylos and the Athenian fortifications, and **for eight or nine** on that next the rest of the mainland: for the rest, the island was entirely covered with wood, and without paths through not being inhabited, and *about* **one mile and five furlongs [fifteen stades] in length** [my emphasis].' (I have inserted Thucydides' actual measurement for the length of the island alongside Crawley's

meant it as a genitive or a dative. Bauslaugh takes it not as a dative ('a passage *for* two ships' –
the interpretation of both Crawley and de Romilly) but as a genitive ('a passage *of* two ships'),
as though 'ships' could take the place of a more standard unit of measurement, such as stades.[9]
But a search of the TLG databank on the word διάπλους turns up no parallels to this. There are
passages where διάπλους is used with the genitive of a common unit of measurement ('stades'
in Strabo 17.3.16; 'days and nights' in Procopius, *De bellis* 1.19.18),[10] but none in which it
appears with the genitive of an unconventional unit such as 'ships'. The closest parallel to Thuc.
4.8.6 is a passage where Strabo uses διάπλους with the dative of στόλοι: '[Eratosthenes] says
that Demetrius attempted to cut through the Isthmus of Corinth in order to provide a passage for
his fleets' (Strabo 1.3.11).[11] Thucydides, like some other Greek historians, does use informal and
experiential ways of measuring things on occasion, but he does not simply substitute those terms
into a grammatical construction that would be appropriate for stades or plethra. There is also no
parallel in Thucydides for such a pairing of unconventional with conventional units of measure-
ment as would be generated by Bauslaugh's proposed insertion of 'stades' after the figure for the
south channel.[12]

I suspect that an additional cause of the problem of interpretation that has troubled many
scholars has been the assumption that the description of the width of the two channels as (respec-
tively) 'a passage for two ships' and '[a passage] for eight or nine' was intended to refer speci-
fically to the plan of campaign attributed to the Peloponnesians, of blocking the two entrances
with ships placed with prows facing outwards; that is, that the number of ships mentioned was

conversion of it into furlongs.) De Romilly's rendering
of the passage ((1967) 5) is similar: '[E]n effet, l'île de
Sphactérie, qui s'allonge devant le port, à courte distance,
le rend sûr et en réduit les passes: de celles-ci, l'une
donne **voie à deux navires** du côté du fortin athénien et
de Pylos; l'autre, vers le reste du rivage, **à huit ou neuf**;
l'île, étant inhabitée, se trouvait entièrement boisée et
sans chemins tracés; comme dimension elle mesurait,
autant que l'on puisse dire, une **quinzaine** *de* stades
[my emphasis].' A similar interpretation is evident in the
German translation of Landmann ((1960) 280-1):
'... breit genug zur **Durchfahrt für zwei Schiffe**, ... **für
acht oder neun** [my emphasis]'.

9 Here is Bauslaugh's translation ((1979) 1): 'For the
island that is called Sphakteria, extending along and lying
close by the harbour, makes it safe and the entrances nar-
row, there being toward the fortification of the Athenians
and Pylos **a passage of two ships** and in the direction of
the other mainland **a passage of eight or nine**. The
whole island was wooded and pathless from lack of habi-
tation, and in length *roughly* **fifteen stades** [my empha-
sis].' Hornblower's translation ((1996) 159-60; I have
reunited sentences printed in the commentary as separate
lemmata) implies that he follows the interpretation of
Crawley and de Romilly (above, n.8), even though his
comment (quoted above, n.7) endorses that of Bauslaugh:
'The island which is called Sphakteria stretches along the
land and is quite close to it, making the harbour safe and
the entrances narrow. There is **a passage for two ships** at
the one end, which was opposite Pylos and the Athenian
fort, while at the other **the gap** between the island and the
mainland **is wide enough for eight or nine**. The island is
about **fifteen stades** long [my emphasis].'

10 Strabo, *Geogr.* 17.3.16: **Διάπλους** δ' ἐστὶν ἐκ
Καρχηδόνος **ἐξήκοντα σταδίων** εἰς τὴν προσεχῆ

περαίαν .... ('The **voyage** from Carthage across to the
nearest point of the opposite mainland is **sixty stadia** ... '
Loeb translation by J.L. Jones). Procopius, *Hist., De bel-
lis* 1.19.18: καὶ θάλασσα, ἣ ἐν μέσωι ἐστίν, ἀνέμου
μετρίως ἐπιφόρου ἐπιπεσόντος ἐς **πέντε ἡμερῶν τε
καὶ νυκτῶν διάπλουν** διήκει ('And the expanse of
sea which lies between is crossed in **a voyage of five
days and nights** when a moderately favouring wind
blows.' Loeb translation by H.B. Dewing).

11 Strabo, *Geogr.* 1.3.11: φησὶ γὰρ καὶ Δημήτριον
διακόπτειν ἐπιχειρῆσαι τὸν τῶν Πελοποννησίων
ἰσθμὸν πρὸς τὸ παρασχεῖν **διάπλουν τοῖς
στόλοις**... . The translation in the text is that of J.L.
Jones in the Loeb edition (1959).

12 Bauslaugh is quite right in saying that there is no
exact parallel for this kind of informal and experiential
measurement of a distance as large as the width of the
south channel at Sphakteria: the examples he cites (one
from another section of Thucydides and four from
Herodotus: Thuc. 1.93.5; Hdt. 1.179, 2.158, 7.24, and
7.176; cited in Bauslaugh (1979) 2 and n.7) all involve
numbers no greater than two. He has to admit, however,
that '[h]aving both ships and stades dependent upon διά-
πλουν is surprising' ((1979) 3). He produces, in fact, no
parallel to this strained linguistic usage, but has to fall
back on 'the assumption that Thucydides preferred to
vary the construction for stylistic effect'. I would attri-
bute the unusual occurrence of an experiential measure-
ment with a number higher than two to the influence of
the immediately preceding description of the north chan-
nel as 'a passage for two ships'. Thuc. 1.93.5 is the only
case besides 4.8.6 in which a distance measurement is
given in an unconventional unit of measurement. The
wording of that passage too is far from that of a standard
statement concerning a measurement of distance.

the number required to block each channel.[13] But Thucydides does not say this, and I think we should take him at his word: his informant chose to give a rough estimate of the width of the channels in terms of how much room they provided for ships sailing (or rowing) through them. An estimate of the sailing space required for eight or nine triremes would surely be less finely calculated than one of how many ships' widths would be required to block a channel effectively.[14]

(ii) A further noteworthy factor is that the figure given in Thucydides' text is not a single number but an alternative number ('eight or nine [ships]'). This is a form of words commonly used, in Greek as in English, when the speaker or writer is not sure of the exact figure. Writers frequently use such 'alternative numbers' when giving an approximate estimate concerning a relatively small figure. Thucydides does this fourteen times, all of these involving numbers under ten.[15] No one, in a modern context, would expect an estimate of a certain distance as 'eight or nine kilometres' to be accurate or precise in the same degree as a single figure given absolutely. Thucydides is a writer much admired for his ability to mould the Greek language into an instrument equal to the demands of his subtle and nuanced thoughts. We should surely pay him the compliment of noticing that he marked this figure as something other than a precise measurement. If we do this, then the compulsion to emend should seem less urgent.

Similarly, discussion of the figure Thucydides gives for the length of the island has usually focused exclusively on the number (15 stades), paying no attention to the qualifying expressions attached to it. This ignores the fact that in ancient Greek, no less than modern English, writers use a wide range of qualifying expressions to indicate that the numbers they are giving are something other than the absolute results of a precise exercise in quantification.[16] We are all accustomed to dealing with this method of qualifying numbers in modern English usage. Expressions such as 'about', 'around', 'approximately' are commonly used to indicate some degree of imprecision or uncertainty in the number thus qualified. Greek historians use a very similar repertoire of expressions to indicate this kind of 'approximating qualification'. In trying to interpret the numbers in an ancient text, of course, we usually do not know enough about where the historian obtained his information to be able to decide exactly what nuance of uncertainty and/or imprecision he was trying to convey by an approximating qualification. But if we can place a particular case in the context of this particular writer's general practice with measurements of distance as well as in the wider context of how ancient historians in general qualified measurements of distance, we may be better equipped to deal with the interpretation of any particular qualified number.

In this case not just one but two qualifying expressions are attached to the measurement for the length of the island: Thucydides wrote: ἦν καὶ μέγεθος *περὶ πέντε καὶ δέκα σταδίους μάλιστα*. Few modern translators have attempted to represent the double qualification.[17] I sus-

---

[13] This is particularly clear in Pritchett (1994a) 169-72.

[14] Bauslaugh (1979) 2 n.9 comes close to realizing this.

[15] The fourteen cases of alternative numbers in Thucydides are listed in Appendix I.

[16] More detailed discussion of the vocabulary of numeral qualification in both Greek and English and how it is used may be found in Rubincam (1979) 78, and Rubincam (1991).

[17] The translation of Rhodes is printed in n.7, those of Crawley and de Romilly in n.8, and those of Bauslaugh and Hornblower in n.9. Pritchett (1994a) 176 n.46 notices only περί. Of the translators listed above, de Romilly alone gives an appropriate value to both qualifying expressions, combining a general expression of hesi-

tation ('autant que l'on puisse dire') with a more informal and imprecise form of the number ('une quinzaine'). The old school edition of C.E. Graves (1888; reprinted 1982) translates the double qualification '**about** 15 stades **pretty nearly** [my emphasis]', and comments, '[B]oth περί and μάλιστα are used in the sense of "about" to give dimensions roughly'. Wilson ((1979) 52) also makes an attempt to interpret the double qualification. He comments, '[Thucydides'] use of περί and μάλιστα ... is further evidence, not of general vagueness, but of the caution of one who is certain of his basic facts. It is as if one were to write, "**about** 15 stades, **in round figures** [my emphasis]" – showing certainty that it was not 5 or 25, but being careful to say that it was not necessarily exactly 15 stades.' He offers no evidence in support of this interpretation. The evidence presented in Appendix

pect that this is at least partly because to give them both due weight would require a change in the common practice of translating each of these qualifying expressions by one of the same range of approximating terms ('about', 'around', 'approximately'), which cannot be doubled up in the modern languages concerned. Such double approximating qualification is used seven times in all by Thucydides, but the other six instances are all estimates of numbers of people (mostly casualties, either military or civilian).[18] The Sphakteria passage is the only case of double approximating qualification used with a measure of distance. While we have not sufficient evidence to establish exactly what led Thucydides to compound the qualification of these numbers, it is surely a fair inference that in each case he had some reason for thus expressing an extra degree of hesitation. One might conjecture here that he got variant estimates from several informants, or that his single informant said, 'Well, I'm not sure, but I think the island was about 15 stades long.' In any case, I would submit that the unusual double qualification should alleviate some of our distress at discovering that the figure does not match our measurements.

(iii) The impulse to emend these numbers derives in part also from the belief that Thucydides' topographic description must be based on autopsy of the area. I do not think there is any cogent evidence to support this. It is salutary to look back at Gomme's comments on this section of Thucydides' narrative. His discussion of the topographic details is long and thorough, and includes frequent references to the researches of previous scholars such as Leake and Grundy. He concluded ((1956) 484):

> It is clear that while Thucydides had gathered as much detail about the topography as possible when collecting information about the events of the campaign, he had not been to Pylos himself, and blunders, due primarily to a misunderstanding of what he had been told, were therefore left uncorrected. It is not surprising that he had little opportunity for going there; for, even if he travelled freely, after his exile, in the Peloponnese, so long as Athens held Pylos (till 409 B.C.), he could not reach it or Sphakteria, and it would have been dangerous to go very near.

Gomme based this conclusion, that Thucydides relied for his topographic information not on autopsy but on reports gleaned from both Peloponnesian and Athenian participants in the campaign, on two major considerations. First, Thucydides' narrative suggests that he did not realize how very large the Bay of Navarino was – hence his description of it as a 'harbour' rather than a 'bay'; no eyewitness could have entertained such a misapprehension.[19] Second, his description is not written consistently from one perspective; this is most likely due to his having gathered his information from both Athenian and Spartan sources.[20] Gomme canvassed briefly the possibility of a manuscript error in the figure for the length of the island, but discarded it with the comment, '... in view of the other mistake [sc. about the width of the south channel] it is hardly proper to suggest it' (Gomme (1956) 443). In other words, he was not unduly distressed by the assumption that Thucydides never visited Pylos himself, and drew from his Athenian and Peloponnesian informants a slightly distorted picture of the topography, which did not, however, prevent him from writing a generally vivid and coherent account of the campaign.

II shows that 26 of the 30 numbers greater than 10 applied to measurements of distance by Thucydides are multiples of either 5 or 10. Half of these 30 numbers are qualified, including two of the four that are not multiples of 5 or 10. This surely suggests that Thucydides would not normally have bothered to use a qualifying expression simply to indicate that the number in question was a round figure.

[18] The seven instances of double approximating qualifiers used with numbers by Thucydides are listed in Appendix III.

[19] Gomme (1956) 482-3: 'Thucydides, though he knew the harbour was large (13.4), clearly did not realize how large it is – much the largest in Greek waters, including south Italy and Sicily – nor, what is more important, that it was a bay and could not properly be described as a harbour at all; for it is deep, apt to be very choppy with northerly or southerly winds, and only in its north-east corner offering suitable landing ground for triremes.'

[20] Gomme deals with this summarily in the commentary ((1956) 485), referring back to the detailed discussion in his earlier article on the subject (Gomme (1937)).

The champions of emendation have not produced, so far as I am aware, any cogent argument to undermine the foundations of this judgement of Gomme's.[21] What chiefly distinguishes their view from his seems to be an unspoken assumption that any historian worthy of the admiration usually given to Thucydides must have checked out for himself the detailed topography of any area in which the events he is narrating took place. This may be a reasonable expectation to apply to a scholar at a modern western university (although even in the modern world certain places are from time to time inaccessible for political or military reasons), but it is surely inappropriate to transfer it to an ancient historian.[22] As Gomme says, we do not know how freely Thucydides was able to travel during his exile, and there were significant political and military deterrents to his visiting Pylos. In these circumstances, and taking into consideration the standards of the time, I do not think we need to stigmatize a failure to check out the topography of Pylos for himself as criminal historiographic negligence on Thucydides' part. There is no reason to reject the judgement of Gomme, that the historian obtained the best information he could, probably from participants on both sides, concerning the Pylos campaign, but the measurements he gave, which were supplied by his informants, fell short of exactitude. We may add that the phraseology in which the measurements are embedded clearly shows that the historian knew those numbers were only imperfect estimates.

Thus if one pays due attention to the nuances of Thucydides' linguistic usage in supplying measurements of distance, it becomes very hard to believe either in the correctness of the emendation proposed by Bauslaugh and endorsed first by Pritchett and now by Hornblower in his commentary, or indeed in the necessity of emending the text at all.

THUCYDIDES' MEASUREMENTS OF DISTANCE

The table in Appendix II lists all the numbers applied to measures of distance by Thucydides, marked so as to show the presence or absence of the following variables: first, the presence or absence of qualification, the type of qualification, and the particular qualifying expression(s) used; second, whether the distance is between fixed and familiar termini; third, whether it is measured over land or sea; and finally, any particularly unusual features (e.g. is the measurement given in unconventional units or phraseology? is it an average?).

Qualification is clearly one of the most significant variables. If one compares Thucydides' rate of qualification of distance measurements with that of a sample of other Greek historians, one finds that he is one of four who qualify more than half the numbers in this category.[23] All but

---

[21] Pritchett ((1994a) 174, quoted above, n.7) appealed first to the vividness of some details in the description and then to the argument that Thucydides' election to the *strategia* for the following year required the assumption of distinguished military service in 425. The former argument cannot stand against Gomme's much more thorough examination of the whole campaign narrative, which found evidence that the historian obtained information from participants on both sides. The latter is not at all conclusive.

[22] I think it significant that Gomme, who belonged to a generation of modern scholars less well endowed with travel funds, and who was working in a period throughout much of which political conditions made travel in Greece difficult or impossible – the first volume of his commentary was published in 1945, and the second and third in 1956 – did not make this assumption. Hornblower, in his appraisal of the strengths and weak-

nesses of Gomme's commentary, expresses astonishment that Gomme did not take the trouble to check a disputed reading in a manuscript in the British Museum, nor visit the Epigraphical Museum in Athens to inspect the *stele* of the Tribute Lists (Hornblower (1996) 4 and 6).

[23] The figures I have compiled for the rate of qualification of measures of distance in different historians are the following: Arr. *Anab.* 82%, Polyb. 72%, Xen. *Hell.* 71%, Thuc. 63%, Dion.Hal. 41%, App. 25%, Xen. *Anab.* 18%, Hdt. and Diod.Sic. 14%. My database comprises: the whole of Thucydides and of Xenophon's *Anabasis* and *Hellenika*; about half of Herodotus (Books 1.1-130, 3 [all], 4.1-87, 5.1-88, 6.1-140, 7.1-144); four books of Polybius (1-4); five books of Diodorus (1, 11, 14, 17, 20 – a sample chosen to span as many different source traditions as possible); one book of Dionysius of Halicarnassus (7); four books of Arrian's *Anabasis* (1, 2, 7, 8); and one book of Appian (6).

one of Thucydides' qualified distance numbers have approximating, rather than comparative or alternative, qualifiers. This is a very low rate of comparative qualification for this category of numbers.[24] What can this tell us about Thucydides' expectations of precision and/or accuracy regarding distance numbers? Any measure of distance given by a Greek historian is likely to fall considerably short of the accuracy and precision of those achievable in a modern context. However, Thucydides did not qualify all his measures of distance, but only 63 per cent of them. I would assume, therefore, that he had in all these cases some reason(s) – not necessarily always the same one(s) – for expressing a degree of hesitation about their accuracy or precision.[25] The fact that he used a comparative qualifier only once with a number in this category I take to indicate that he did not usually choose to place rhetorical emphasis on measures of distance. An examination of the one case in which he does qualify a distance measurement by a comparative expression (6.97.3) tends to confirm this. The tendency of this section of narrative is highly dramatic, describing as it does the repeated attempts by Athenians and Syracusans to establish control over Epipolai. At 6.97.3 Thucydides is striving to magnify all the difficulties that hampered the Syracusans so as to explain their failure to beat the Athenians to the summit. The large distance which their forces had to traverse in order to make contact with the Athenians is one of these difficulties. The rarity of rhetorical emphasis on measures of distance in Thucydides stands out particularly by contrast with the situation in some other historical works, where measurements of distance more often serve the author's rhetorical purpose.[26]

Historians differ in their preference for using particular qualifying expressions with different categories of numerical information. For Thucydides μάλιστα is by far the most common qualifying expression used with measures of distance. The other expressions he uses (ὡς, ὅσον, οἷον, περί) occur rarely (seven cases altogether).[27] Of these seven cases it is noteworthy that all except the one case of περί (at 4.8.6) concern 'non-fixed' distances, which would have had to be supplied by participants in the action as part of their narrative. In other words, these distances are not such as a historian could have easily checked for himself after the fact. If we leave aside the measurement of Sphakteria island for the moment, the other six figures in this group of unusual qualifiers occur in the narrative of campaigns in which Thucydides could not have participated: three of the four cases of ὡς and the one case of ὅσον relate to the Sicilian expedition, the fourth case of ὡς concerns an action in the Corinthian Gulf, also in 413, while the single occurrence of οἷον relates to the Delion campaign.[28] It is tempting to suggest that the qualifying

---

[24] Rates of comparative qualification of measures of distance are as follows: Xen. *Hell.* 22.5%, App. 17%, Polyb. 16%, Arr. *Anab.* 9%, Xen. *Anab.* 6%, Hdt. 4.5%, Thuc. and Diod.Sic. 2%, Dion.Hal. 0%.

[25] Uncertainty, inaccuracy, and imprecision are not, of course, exactly the same thing, but it is often impossible to tell which is the major motivation for an approximating qualifier. See Rubincam (1979) esp. 82 and n.26. One of the journal's referees has suggested to me that the striking difference between the rates of qualification of measures of distance in the two works of Xenophon (71% in the *Hellenika*; 18% in the *Anabasis*, see above, n.25), which differ significantly in the degree of autopsy enjoyed by the author, may indicate that Xenophon felt more confidence in his own estimates of distance than in those of other informants, and that he used qualifiers, at least in part, to indicate his reservations about the accuracy of other people's estimates.

[26] Two clear examples are Polyb. 2.14.11 (giving the length of the Po valley, in a passage full of hyperbolic comment, as '**over** 2,500 stades' and its perimeter as '**not**

much less than 10,000 stades') and Xen. *Anab.* 5.6.9 (describing how a Sinopean informant scared the remnants of the 10,000 Greeks with the report that the physical hazards lying ahead of them in Paphlagonia included three rivers: the Thermodon, three plethra wide, the Iris, also three plethra wide, and the Halys, '**not less than** two stades wide').

[27] Two of these qualifiers, περί and ὡς, are common enough in other categories, especially those involving numbers of people. The other two, ὅσον and οἷον, are very rare as numeral qualifiers in Thucydides, οἷον being thus used only once (4.90.4), and ὅσον twice (7.38.3 and 6.67.2). I have wondered whether Thucydides' apparent reluctance to use περί with distance numbers might be due to a desire to avoid juxtaposing the metaphorical sense of the word with its use in a basic physical sense.

[28] There has been no agreement on whether Thucydides himself visited Sicily or whether he had to depend for his description of the terrain there on veterans of the campaign (see Gomme, Andrewes and Dover (1970) 466-9). But that argument concerns more speci-

words used by his informants influenced the historian's choice of words, whether or not he was aware of this.[29]

In the light of these observations, the doubly qualified measurement given by Thucydides for the length of Sphakteria island takes on a new significance. When we find that, in addition to being the only doubly qualified measurement of distance in the whole work, it is also the only case of περί being used to qualify a distance measurement, the obvious question is surely whether this unique choice of qualifying expression should not be taken as *prima facie* evidence that someone else supplied this figure to the historian, and that he either reproduced exactly the qualifying expressions that informant used, or chose a unique combination of expressions to communicate in summary form the hesitations expressed by that informant concerning the precision or accuracy of that figure.

It may seem that to attempt to discover the rationale that underlies an ancient historian's use of qualification with numbers of a particular kind is an enterprise unlikely to succeed, since we cannot interrogate a long-dead individual about his practice, and there is so much that we do not know about his method of work. Nor is it a simple matter of trying to decide exactly what is the most appropriate equivalent in any given modern language for each of the various qualifying expressions used by an ancient author. Human linguistic habit is too flexible to be restricted by the fixed bounds of a dictionary definition.[30] But it is striking that the unqualified distance numbers in Thucydides relate mostly to distances between fixed and familiar termini in Attica or immediately adjacent areas (Boeotia and Corinth) or in the Amphipolis area – areas, in other words, of which he certainly had personal knowledge. Furthermore, the only distance number larger than 20 in Thucydides which is neither qualified nor a multiple of five is the length of Athens' city wall (2.13.7).[31] Measures of distance across water, which are notoriously hard to estimate, are all qualified except the measurement for the (very narrow) north channel at Sphakteria (4.8.6).[32] It is hard to believe that these patterns are accidental.

Finally, we need to look at Thucydides' units of measurement. The vast majority of his distance measurements are in stades, although a few smaller distances are expressed in feet or cubits or plethra.[33] Bauslaugh correctly observes that the measurements of the Sphakteria channels are two of the three cases of highly unconventional measurement units, the other being the width of the Themistoclean wall at 1.93.5. But, as I have stated above, it is important to note that not only

---

fically measurements of fixed distances between familiar termini, which the historian might have checked out for himself when preparing to compose his narrative of events. The measurements qualified by ὡς rather concern stages in journeys undertaken by troops in the campaign, which the historian could hardly have obtained from anyone other than participants. The Corinthian Gulf incident concerns the location of a trophy, likewise a 'non-fixed' distance. As for Delion, Thucydides' own service in Thrace at this time would have made him necessarily dependent on the testimony of others for measurements of non-fixed distances in this narrative.

[29] Dover (in Gomme, Andrewes and Dover (1970) 198-200 and 204-5) argued similarly that the unique use of ἐγγύς to qualify some of the dates in Thucydides' account of Sicilian history was probably due to his having taken over the qualifying expressions as well as the time intervals from Antiochus.

[30] See the article of Schwab (1893), which, though disposing very sensibly of many over-rigid interpretative proposals by earlier scholars, still appears to make the basically mistaken assumption that the only reason why a writer would choose to give something other than a precise figure must be that he did not know it.

[31] I owe this observation to one of the journal's referees.

[32] Bauslaugh (1979) 3 tabulated all Thucydides' measurements of distance across water, in order to calculate the length of the stade which each one presupposed. He paid no attention to the qualifying expressions.

[33] Bauslaugh's appendix ((1979) 5-6) lists all the distances measured in stades. Smaller distances are: 1.93.5 – 2 wagons going in opposite directions brought up the stones for the Themistoclean wall; 3.21.1 – the siege walls encircling Plataea were 16 feet μάλιστα apart; 3.68.3 – the lodging house built to house visitors to the Heraion after the razing of Plataea was of 200 feet on each side; 4.8.6 – the north channel at Sphakteria was a passage for 2 ships; 4.8.6 – the south channel at Sphakteria was a passage for 8 or 9 ships; 7.36.2 – the Syracusans inserted struts to reinforce the bows of their triremes ὡς ἐπί 6 cubits inside and outside; 7.38.3 – Nicias moored merchant ships in front of the Athenian camp at intervals of ὅσον 2 plethra from one another.

are the units of measurement unconventional, but also the whole description in which they are embedded. Comparison of Thucydides with other historians in this respect suggests that this vivid and informal type of descriptive measurement was more characteristic of early historians.[34]

CONCLUSION

The general methodological point that emerges from the discussion of this particular set of numbers has, of course, a wider application. I would argue that we need to be more careful not to transfer unthinkingly to ancient writers assumptions that apply in the modern western academic world. Ancient historians had great difficulty in obtaining accurate measurements of distance, and modern interpreters need to develop a more sensitive awareness of the degrees of imprecision they and their informants and readers took for granted, and of the means they used to indicate how they meant those numbers to be understood. Approaching numbers such as those in Thucydides' description of Sphakteria from this perspective, we may find it possible to believe that the degree of error in these numbers is neither so serious nor so extraordinary as to demand extermination by emendation so as to save the historian's credit!

CATHERINE RUBINCAM
University of Toronto

[34] This observation is based on a partial and impressionistic review of the data. Confirmation of this should be possible at a later stage of the expansion and development of my database.

Appendix I. Alternative numbers in Thucydides

The table below lists all the cases in Thucydides of alternative numbers. They are spread fairly evenly throughout the text; only Book 1 totally lacks examples of this kind of measurement. As indicated in the table, four of them involve measures of time, four measures of distance (all in stades except 4.8.6), two numbers of people (killed or arrested), one numbers of ships (sunk), and three a repetition of an action (in all cases two or three times).

Alternative numbers occur in some, but not all, other Greek historians: Herodotus and Xenophon both use them, the former apparently only in reference to time.

Ref.	Event	Category of referent
2.4.2	the Thebans repulsed the Plataeans **2 or 3 times**	adverb
2.86.5	the Peloponnesian and Athenian fleets remained at their moorings opposite each other for **6 or 7 days**	time
3.24.2	the Plataeans followed the road towards Thebes for **6 or 7 stades**	distance
3.76.1	the Peloponnesian ships from Cyllene arrived at Corcyra on the **4th or 5th day** after the men had been transferred to the island	time
4.8.6	the south channel at Sphakteria provided [a passage] for **8 or 9 [ships]**	distance
4.38.3	messages were carried backwards and forwards **2 or 3 times** between the Lacedaemonians on the mainland and those on the island	adverb
4.124.4	after setting up a trophy, Brasidas and Perdikkas waited for **2 or 3 days**	time
5.10.9	after Kleon's death, his companions warded off attacks from Klearidas **2 or 3 times**	adverb
6.97.1	the landing place of the Athenian force, called Leon, was **6 or 7 stades** distant from Epipolai	distance
6.101.5	Lamachos and **5 or 6 of his companions** died after being cut off on the other side of a ditch	military
7.2.4	Ietas arrived in Syracuse at a point when the Athenians had already completed a double wall of **7 or 8 stades**	distance
7.38.1	the two sides broke off the battle after continuing their attacks in vain for most of the day, neither having been able achieve anything noteworthy, except for the sinking of **1 or 2 Athenian ships** by the Syracusans	military
8.74.2	the Four Hundred arrested *some* **2 or 3 of the crew** of the *Paralos*	population
8.99.1	Mindaros stayed at Ikaros for **5 or 6 days** before reaching Chios	time

Appendix II. Measurements of distance in Thucydides

The table below lists all the measurements of distance in Thucydides. Of the total of 46, 29 (= 63 per cent) are qualified in some way, 23 having qualifying expressions of the approximating type, while five are alternative numbers, and one is qualified by an expression of the other major type ('comparative'; this typology is explained in Rubincam (1979)).

Slightly more than half of the qualified numbers (16 of 29) are ≤10. All but two of these either are qualified by approximating expressions or are alternative numbers. The two exceptions are: the width of the Themistoclean wall ('2 wagons going in opposite directions brought up the stones', 1.93.5) and the measurement of the north channel at Pylos ('a passage for 2 ships').

Of the 30 numbers >10 (= 65% of the whole group of numbers applied to measures of distance), 22 are multiples of 10, while four more are multiples of 5. Thus only four (1 x 12, 2 x 16, 1 x 43) are not multiples of 5 or 10. This is surely evidence that Thucydides and/or his informants habitually gave estimates of distance in terms of nodal numbers on the decimal scale or rounded their measurements up or down to nodal numbers on the decimal scale.

In the table below '...' is used to indicate places where the text runs on from one excerpt to another. The column headed 'Qualification' indicates: (i) whether the number is qualified, (ii) if so, by which kind of qualification (approximating, comparative, or alternative), and (iii) the use of a qualifying expression other than μάλιστα (by far the commonest such expression used by Thucydides with measurements of distance). Where the first figure in a series has a qualifier attached, which might be understood to carry over to the subsequent members of the series, this is indicated by the designation 'underst[ood]?'.

The column headed 'Type' contains an indication of: (i) whether or not the distance measured is between two fixed and easily identifiable points, (ii) whether it is over land or water, where this is relevant (cases where we cannot be sure which way the calculation was made are marked 'sea or land?'), (iii) any other noteworthy aspects of the case (e.g. if the number seems likely to represent an average measurement; if the unit of measurement is other than stades).

Ref.	Text of passage	Qualif'n	Type
1.63.2	ἀπέχει δὲ [ἡ Ὄλυνθος] **ἐξήκοντα μάλιστα σταδίους** [τῆς Ποτειδαίας]	approx.	fixed; land
1.93.5	**δύο** γὰρ **ἅμαξαι** ἐναντίαι ἀλλήλαις τοὺς λίθους ἐπῆγον		**wagons** fixed; land
2.5.2	ἀπέχει δὲ ἡ Πλάταια τῶν Θηβῶν **σταδίους ἑβδομήκοντα**		fixed; land
2.13.7	τοῦ τε γὰρ Φαληρικοῦ τείχους **στάδιοι** ἦσαν **πέντε καὶ τριάκοντα** πρὸς τὸν κύκλον τοῦ ἄστεως ...		fixed; land
2.13.7	... καὶ αὐτοῦ τοῦ κύκλου τὸ φυλασσόμενον **τρεῖς καὶ τεσσαράκοντα** (ἔστι δὲ αὐτοῦ ὃ καὶ ἀφύλακτον ἦν, τὸ μεταξὺ τοῦ τε μακροῦ καὶ τοῦ Φαληρικοῦ) ...		fixed; land
2.13.7	...τὰ δὲ μακρὰ τείχη πρὸς τὸν Πειραιᾶ **τεσσαράκοντα σταδίων**, ὧν τὸ ἔξωθεν ἐτηρεῖτο ...		fixed; land
2.13.7	...καὶ τοῦ Πειραῶς ξὺν Μουνιχίαι **ἑξήκοντα μὲν σταδίων** ὁ ἅπας περίβολος, τὸ δ' ἐν φυλακῆι ὂν ἥμισυ τούτου		fixed; land
2.21.2	ἐπειδὴ δὲ περὶ Ἀχαρνὰς εἶδον τὸν στρατὸν **ἑξήκοντα σταδίους** τῆς πόλεως ἀπέχοντα, οὐκέτι ἀνασχετὸν ἐποιοῦντο		fixed; land
2.82.1	ἀναχωρήσας ὁ Κνῆμος τῆι στρατιᾶι κατὰ τάχος ἐπὶ τὸν Ἄναπον ποταμόν, ὃς ἀπέχει **σταδίους ὀγδοήκοντα** Στράτου		fixed; land
2.86.3	διέχετον δὲ ἀπ' ἀλλήλων [τὸ Ῥίον καὶ τὸ Ἀντίρριον] **σταδίους μάλιστα ἑπτὰ** τῆς θαλάσσης, τοῦ δὲ Κρισαίου κόλπου στόμα τοῦτο ἐστιν	approx.	fixed; sea
3.21.1	διεῖχον δὲ οἱ περίβολοι **ἑκκαίδεκα πόδας μάλιστα** ἀπ' ἀλλήλων	approx.	**feet** average? land
3.24.2	καὶ **ἐπὶ μὲν ἓξ ἢ ἑπτὰ σταδίους** οἱ Πλαταιῆς τὴν ἐπὶ τῶν Θηβῶν ἐχώρησαν	altern.	not fixed; land
3.68.3	ὕστερον δὲ καθελόντες αὐτὴν [τὴν τῶν Πλαταιῶν πόλιν] πᾶσαν ἐκ τῶν θεμελίων ὠικοδόμησαν πρὸς τῶι Ἡραίωι καταγώγιον **διακοσίων ποδῶν** πανταχῆι		**feet** fixed; land
3.92.6	καταστάντες δὲ ἐτείχισαν τὴν πόλιν ἐκ καινῆς, ἢ νῦν Ἡράκλεια καλεῖται, ἀπέχουσα Θερμοπυλῶν **σταδίους μάλιστα τεσσαράκοντα** ...	approx.	fixed; land
3.92.6	... τῆς δὲ θαλάσσης **εἴκοσι**	underst?	fixed; land
3.97.2	ἦν γὰρ [τὸ Αἰγίτιον] ἐφ' ὑψηλῶν χωρίων ἀπέχουσα τῆς θαλάσσης **ὀγδοήκοντα σταδίους μάλιστα**	approx.	fixed; land
3.105.1	ἀπέχει δὲ [αἱ Ὄλπαι] ἀπὸ τῆς Ἀργείων πόλεως ἐπιθαλασσίας οὔσης **πέντε καὶ εἴκοσι σταδίους μάλιστα**	approx.	fixed; sea or land?
4.3.2	ἀπέχει γὰρ **σταδίους μάλιστα** ἡ Πύλος τῆς Σπάρτης **τετρακοσίους**	approx.	fixed; land
4.8.6	ἡ γὰρ νῆσος ἡ Σφακτηρία καλουμένη ... ποιεῖ ... τοὺς ἐσπλοὺς στενούς, τῆι μὲν **δυοῖν νεοῖν** διάπλουν κατὰ τὸ τείχισμα τῶν Ἀθηναίων καὶ τὴν Πύλον, ...		**ships** fixed; sea
4.8.6	... τῆι δὲ πρὸς τὴν ἄλλην ἤπειρον **ὀκτὼ ἢ ἐννέα**	altern.	**ships** fixed; sea
4.8.6	... ὑλώδης τε καὶ ἀτριβὴς πᾶσα ὑπ' ἐρημίας ἦν καὶ μέγεθος **περὶ πέντε καὶ δέκα σταδίους μάλιστα**	double approx.	fixed; land
4.42.2	ἀπὸ δὲ τοῦ αἰγιαλοῦ τούτου ἔνθα αἱ νῆες κατέσχον ἡ μὲν κώμη αὕτη [Σολύγεια] **δώδεκα σταδίους** ἀπέχει ...		not fixed; land
4.42.2	... ἡ δὲ Κορινθίων πόλις **ἑξήκοντα**		fixed; land
4.42.2	... ὁ δὲ Ἰσθμὸς **εἴκοσι**		fixed; land
4.45.1	ἀπέχει δὲ [ὁ Κρομμυὼν] τῆς πόλεως **εἴκοσι καὶ ἑκατὸν σταδίους**		fixed; land
4.57.1	ἐς δὲ τὴν ἄνω πόλιν [τὴν Θυρέαν] ἐν ἧι ὤικουν, ἀπεχώρησαν [οἱ Αἰγινῆται], ἀπέχουσαν **σταδίους μάλιστα δέκα** τῆς θαλάσσης	approx.	fixed; land
4.66.3	ἦν δὲ [τὰ τῶν Μεγαρέων μακρὰ τείχη] **σταδίων μάλιστα ὀκτὼ** ἀπὸ τῆς πόλεως ἐπὶ τὴν Νίσαιαν τὸν λιμένα αὐτῶν	approx.	fixed; land
4.90.4	ἔπειτα ... τὸ μὲν στρατόπεδον προαπεχώρησεν ἀπὸ τοῦ Δηλίου **οἷον δέκα σταδίους** ὡς ἐπ' οἴκου πορευόμενοι	οἷον approx.	not fixed; land
4.102.3	ὡρμῶντο δὲ ἐκ τῆς Ἠιόνος, ἣν αὐτοὶ εἶχον ἐμπόριον ἐπὶ τῶι στόματι τοῦ ποταμοῦ ἐπιθαλάσσιον, **πέντε καὶ εἴκοσι σταδίους** ἀπέχον ἀπὸ τῆς νῦν πόλεως, ἣν Ἀμφίπολιν Ἅγνων ὠνόμασεν		fixed sea or land?

4.110.1	καὶ ἀφικόμενος [ὁ Βρασίδας] νυκτὸς ἔτι καὶ περὶ ὄρθρον τῶι στρατῶι ἐκαθέζετο πρὸς τὸ Διοσκόρειον, ὃ ἀπέχει τῆς πολεως [τῆς Τορώνης] **τρεῖς** *μάλιστα σταδίους*	approx.	fixed; land
5.3.3	Βρασίδας δὲ ἐβοήθει μὲν τῆι Τορώνηι, αἰσθόμενος δὲ καθ᾽ ὁδὸν ἑαλωκυῖαν ἀνεχώρησεν, ἀποσχὼν **τεσσαράκοντα** *μάλιστα σταδίους* μὴ φθάσαι ἐλθών	approx.	not fixed; land
6.97.1	οἱ δὲ ᾽Αθηναῖοι ... ἔλαθον αὐτοὺς παντὶ ἤδη τῶι στρατεύματι ἐκ τῆς Κατάνης σχόντες κατὰ τὸν Λέοντα καλούμενον, ὃς ἀπέχει τῶν ᾽Επιπολῶν **ἓξ ἢ ἑπτὰ** *σταδίους*	altern.	fixed; land
6.97.3	**στάδιοι** δὲ πρὶν προσμεῖξαι ἐκ τοῦ λειμῶνος ἐγίγνοντο αὐτοῖς [τοῖς Συρακοσίοις] *οὐκ ἔλασσον ἢ πέντε καὶ εἴκοσι*	οὐκ ἔλασσον compar.	fixed; land
7.2.4	ἔτυχε δὲ κατὰ τοῦτο τοῦ καιροῦ ἐλθὼν [᾽Ιέτας] ἐν ὧι **ἑπτὰ μὲν ἢ ὀκτὼ σταδίων** ἤδη ἀπετετέλεστο τοῖς ᾽Αθηναίοις ἐς τὸν μέγαν λιμένα δίπλουν τεῖχος, πλὴν κατὰ βραχύ τι τὸ πρὸς τὴν θάλασσαν	altern.	not fixed; land
7.19.2	ἀπέχει δὲ ἡ Δεκέλεια **σταδίους** *μάλιστα* τῆς τῶν ᾽Αθηναίων πόλεως **εἴκοσι καὶ ἑκατόν**, παραπλήσιον δὲ καὶ οὐ πολλῶι πλέον καὶ ἀπὸ τῆς Βοιωτίας	approx.	fixed; land
7.29.3	καὶ τὴν μὲν νύκτα λαθὼν [Διειτρέφης] πρὸς τῶι ῾Ερμαίωι ηὐλίσατο (ἀπέχει δὲ τῆς Μυκαλησσοῦ **ἑκκαίδεκα** *μάλιστα σταδίους*)	approx.	fixed; land
7.34.8	ἀποπλευσάντων δὲ τῶν Πελοποννησίων καὶ τοῦ πέζου διαλυθέντος οἱ ᾽Αθηναῖοι ἔστησαν τροπαῖον καὶ αὐτοὶ ἐν τῆι ᾽Αχαίαι ὡς νικήσαντες, ἀπέχον τοῦ ᾽Ερινεοῦ, ἐν ὧι οἱ Κορίνθιοι ὥρμουν, **ὡς εἴκοσι σταδίους**	ὡς approx.	not fixed; land
7.36.2	καὶ ἀντηρίδας ἀπ᾽ αὐτῶν ὑπέτειναν [οἱ Συρακόσιοι] πρὸς τοὺς τοίχους **ὡς ἐπὶ ἓξ πήχεις** ἐντός τε καὶ ἔξωθεν	ὡς approx.	**cubits**
7.38.3	διαλειπούσας δὲ τὰς ὁλκάδας **ὅσον δύο πλέθρα** ἀπ᾽ ἀλλήλων κατέστησεν [ὁ Νικίας]	ὅσον approx.	**plethra** average? sea
7.59.3	ἔκληιον οὖν [οἱ Συρακόσιοι] τὸν τε λιμένα εὐθὺς τὸν μέγαν, ἔχοντα τὸ στόμα **ὀκτὼ σταδίων** *μάλιστα*	approx.	fixed; sea
7.78.4	καὶ ταύτηι μὲν τῆι ἡμέραι προελθόντες **σταδίους ὡς τεσσαράκοντα** ηὐλίσαντο πρὸς λόφωι τινὶ οἱ ᾽Αθηναῖοι ...	ὡς approx.	not fixed; land
7.78.4	... τῆι δ᾽ ὑστεραίαι πρωῒ ἐπορεύοντο καὶ προῆλθον **ὡς εἴκοσι σταδίους**	ὡς approx.	not fixed; land
7.79.6	ἔπειτα προελθόντες [οἱ ᾽Αθηναῖοι] **πέντε ἢ ἓξ σταδίους** ἀνεπαύοντο ἐν τῶι πεδίωι	altern.	not fixed; land
7.81.3	τὸ δὲ Νικίου στράτευμα ἀπεῖχεν ἐν τῶι πρόσθεν καὶ **πεντήκοντα σταδίους**		not fixed; land
8.67.2	ἔπειτα ἐπειδὴ ἡ ἡμέρα ἐφῆκε, ξυνέκλησαν [οἱ περὶ τὸν Πείσανδρον] τὴν ἐκκλησίαν ἐς τὸν Κολωνόν (ἔστι δὲ ἱερὸν Ποσειδῶνος ἔξω πόλεως ἀπέχον **σταδίους** *μάλιστα* **δέκα**)	approx.	fixed; land
8.95.3	ἀπέχει δὲ *μάλιστα* ὁ ῎Ωρωπὸς τῆς τῶν ᾽Ερετριῶν πόλεως θαλάσσης μέτρον **ἑξήκοντα σταδίους**	approx.	fixed; sea

Appendix III. Double approximating qualification in Thucydides

Classen-Steup (1919) noted the phenomenon of double qualification, and commented on some instances of it.

I use the category 'military' for people and groups in military situations, whereas 'population' denotes people and groups in non-military situations.

It is remarkable that apart from 4.8.6, this kind of double qualification is used only with numbers of people, and five of these six cases are of casualty figures. On Thucydides' casualty figures, see Rubincam (1991), where it was argued that Thucydides' casualty figures must be not the result of a final reconciliation of all available information but estimates made by participants shortly after the battle.

Three different pairs of qualifying expressions are found, μάλιστα being the second element in two of them (περὶ ... μάλιστα and ἐς ... μάλιστα), while the third pair is ἐς ... τινὰς.

Double qualification of numbers seems to be a regular part of the practice of many Greek historians: examples occur in Herodotus, Xenophon (both *Anabasis* and *Hellenica*), Polybius, Dionysius of Halicarnassus and Arrian.

Ref.	Text of passage	Category of referent
3.20.2	ἐς δὲ ἄνδρας διακοσίους καὶ εἴκοσι μάλιστα [τῶν Πλαταιῶν] ἐνέμειναν τῆι ἐξόδωι	military
3.98.4	ἀπέθανον δὲ τῶν τε ξυμμάχων πολλοὶ καὶ αὐτῶν ᾽Αθηναίων ὁπλῖται περὶ εἴκοσι μάλιστα καὶ ἑκάτον	military
3.111.4	καὶ ἐς διακοσίους μέν τινας αὐτῶν [τῶν ᾽Αμπρακιωτῶν] ἀπέκτειναν [οἱ ᾽Ακαρνᾶνες]	military
4.8.6	[Sphakteria island] ἦν καὶ μέγεθος περὶ πέντε καὶ δέκα σταδίους μάλιστα	distance
7.30.3	διέφθειραν δὲ καὶ τῶν Θηβαίων καὶ τῶν ἄλλων οἱ ξυνεβοήθησαν ἐς εἴκοσι μάλιστα ἱππέας τε καὶ ὁπλίτας	military
7.32.2	[a Sikel ambush] διέφθειραν ἐς ὀκτακοσίους μάλιστα [τῶν Σικελιωτῶν]	military
8.21.1	καὶ ὁ δῆμος ὁ Σαμίων ἐς διακοσίους μέν τινας τοὺς πάντας τῶν δυνατωτάτων ἀπέκτεινε	population

BIBLIOGRAPHY

Bauslaugh, R. (1979) 'The text of Thucydides IV 8.6 and the south channel at Pylos', *JHS* 99, 1-6

Gomme, A.W. (1937) 'Pylos and Sphakteria', in *idem, Essays in Greek History and Literature* (Oxford), ch.7 = *CQ* 17 (1923) 36-40

— (1945, 1956) *A Historical Commentary on Thucydides*, vols. 1 and 2-3 (Oxford)

— A. Andrewes and K.J. Dover (1970) *A Historical Commentary on Thucydides*, vol. 4 (Oxford)

Hornblower, S. (1991, 1996) *A Commentary on Thucydides*, vols. 1 and 2 (Oxford)

Pritchett, W.K. (1965, 1971) *Studies in Ancient Greek Topography*, Parts 1 and 4 (Berkeley)

— (1994a) *Essays in Greek History* (Amsterdam)

— (1994b) *Thucydides' Pentekontaetia and Other Essays* (Amsterdam)

Rubincam, C. Reid (1979) 'Qualification of numerals in Thucydides', *AJAH* 4, 77-95

— (1991) 'Casualty figures in Thucydides' descriptions of battle', *TAPA* 121, 181-98

Schwab, O. (1893) 'Über μάλιστα bei Zahlen und Maßbegriffen im classischen Sprachgebrauch', *Neue Jahrbücher für Philologie* 147, 585-92

Wilson, J.B. (1979) *Pylos 425 B.C.: A Historical and Topographical Study of Thucydides' Account of the Campaign* (Warminster)

Editions and translations of classical texts

Procopius, *Hist., De bellis*, vol. 1, tr. H.B. Dewing (Loeb Classical Library, London and Cambridge, MA 1961)

Strabo, *Geogr.*, vols. 1 and 8, tr. J.L. Jones (Loeb Classical Library, London and Cambridge, MA 1959 and 1960)

Thukydides, ed. J. Classen, 5th edn, revised by J. Steup (Berlin 1919)

Thucydides, *The Peloponnesian War*, tr. R. Crawley, ed. J.H. Finley (Modern Library, New York 1951)

Thucydides, vol. 2, tr. C.F. Smith (Loeb Classical Library, London and Cambridge, MA 1953)

Thukydides, *Geschichte des peloponnesischen Krieges*, tr. G.P. Landmann (Zürich and Stuttgart 1960)

Thucydide, *La guerre du Péloponnèse*, vol. 3, tr. J. de Romilly (Budé, Paris 1967)

Thucydides, Book 4, ed. C.E. Graves, introd. and bibliog. Thomas Wiedemann (Bristol 1982; originally published London 1888)

Thucydides, *History IV.1-V.24*, ed. with trans. and comm. by P.J. Rhodes (Warminster 1998)