

# Sun, Sea, and Sky: On Translating Directions (and Other Terms) in the Greek Geographers



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## 1 Introduction

The terms which a language community employs to denote natural phenomena (such as the astronomical or the atmospheric), and to express the relationships between them, raise particular issues when they are to be rendered meaningful in another cultural frame of reference.<sup>1</sup>

The present paper arises from the author's role as editor of a collection of over thirty geographical writings translated from ancient Greek, ranging from the early archaic period (late eighth century BC) to late antiquity (sixth century AD or later).<sup>2</sup> Most of them are incomplete; many are anonymous or are attributed to an author about whom nothing is known.<sup>3</sup> Despite a chronological range of some 1200 years

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<sup>1</sup> It is a pleasure to offer this study to my colleague of 30 years Clive Ruggles, whose pioneering work, combining mathematics, ethnography, and archaeology, has radically altered our understanding of how past cultures endow the landscapes around and above them with distinctive schemes of meaning. I thank the editors of the volume, the anonymous readers, Prof. Dr. Kai Brodersen, Dr. Dorothea Stavrou, and for overall guidance Prof. Richard Talbert. Translations are mine unless otherwise indicated.

<sup>2</sup> Shipley forthcoming.

<sup>3</sup> At the time of writing the following authors and texts are included, in approximate date order (\* indicates verse, † a Latin version of a Greek work). **Archaic:** Homeric *Catalogue of Ships* (from *Iliad*, book 2); Aristeas; Skylax; Hekataios; Hanno. **Classical:** Hippokrates, *Airs, Waters, and Places*; Pseudo-Skylax. **Hellenistic:** Pytheas; Dikaiarchos; Herakleides Kritikos; Timosthenes; Eratosthenes; Mnaseas; Skymnos; Agatharchides; Hipparchos; \*anon., *Iambics for King Nikomedes* ('Pseudo-Skymnos'); Artemidoros; Poseidonios; \*Dionysios son of Kalliphon. **Roman:** Menippos; Isidoros; Pseudo-Aristotle, *On the Cosmos*; anon., *Circumnavigation of the*

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and a wide variation in their scientific or literary aims, they display a remarkable degree of consistency in how they use terms related to directions of the compass.

It is good practice when translating that, as far as possible, different words in the original language should be rendered by different words in the new language; and that a given word should be represented always, when practicable, by the same word. The translator needs to establish carefully how sets of related terms are to be handled; and the juxtaposition of multiple sources in one volume gives an opportunity to formulate ‘rules of engagement’ to ensure consistency and give readers a true basis for comparison. Such sets of terms include those for harbours and other stopping-points for ships, and those for seas and oceans; in considering both of which we shall see that it is no simple matter to match Greek terms to English, particularly when, as in the latter case, modern British English offers no rich store of familiar alternatives.

Particular problems arise, however, with the cardinal directions. (1) First, Greek has two words in common use for each, whereas English has only one. Accordingly, translators generally employ each of the four terms ‘north’, ‘east’, ‘south’, and ‘west’ to represent two Greek words, usually without indicating which one stands in the passage being translated. Is it possible to indicate in some way which term has been translated? (2) Second, unlike the four English terms, the eight Greek terms also have non-directional meanings in their own right, and can keep those original meanings in non-directional contexts. Is it unavoidable that we should conceal the alternative senses of a Greek word by silently using two different words to represent it in English: sometimes a directional term, sometimes not?

The second problem is perhaps less serious than the first; translators are used to judging when to represent one foreign word by different English words depending on the context, as very often the semantic range of a term does not exactly coincide with that of a single English word. The first problem is more thorny. We may make a text seem artificially familiar if, in so crucial an aspect as this, we translate different Greek words by the same English word without indicating that we have done so. Yet that is the practice of most translators of Classical works when faced with two Greek words that mean the same thing in English. This paper explores the extent to which a more nuanced response to the sources is possible.<sup>4</sup>

## 2 Anchoring the Past

Direction terms are not the only area in which ancient Greek possesses a larger set of terms than current British English.

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*Erythraian Sea*; Pseudo-Plutarch, *On Rivers*; Arrian, *Circumnavigation of the Black Sea*; \*Dionysios Periegetes; Agathemerios; Dionysios of Byzantion; anon., *Stadiasmos*. **Late antique:** \*†Avienus, *Ora maritima*; †anon., *Expositio*; Markianos, *Circumnavigation of the Outer Sea*; †anon., *Hypotyposis*; Pseudo-Arrian, *Circumnavigation of the Black Sea*.

<sup>4</sup>The focus of this brief investigation is exclusively upon translation into English.

For example, a place where a ship can pause its journey may be designated by a range of different terms, of which the most common in geographical writings are (1) λιμὴν (*limēn*), (2) ὄρμος (*hormos*), (3) σάλος (*salos*), and (4) ὑφορμος (*hyphormos*). The last two will be less familiar to readers of ancient Greek than the first two, occurring as they do almost exclusively in texts concerned with navigation or maritime geography.

1. *Limēn* (plural *limenes*) is conventionally rendered ‘harbour’, as it is in the formerly standard Greek lexicon ‘LSJ’ (Liddell–Scott–Jones)<sup>5</sup> and in the new *Brill Dictionary* edited by Montanari<sup>6</sup>; appropriately so, for in the geographical texts it seems to cover enclosed embayments of significant size (whether natural or artificial) with a settlement adjacent or nearby.
2. *Hormos* (pl. *hormoi*), derived from the verb εἶρω (*eirō*), ‘fasten’, connotes safety, so ‘anchorage’ is one common rendering. Yet LSJ gives a wider definition: ‘roadstead, anchorage, esp. the inner part of a harbour or basin, where ships lie’. First, it must be observed that *hormos* is not used specifically of the ‘inner parts’ of harbours, at least in geographical writings, though it is more flexible than *limēn*.<sup>7</sup>

Next, ‘roadstead’ is a surprising translation: it is defined in the latest edition of the *Concise Oxford Dictionary*<sup>8</sup> as equivalent to ‘road’, sense 3: ‘a partly sheltered stretch of water near the shore in which ships can ride at anchor’. This will be familiar to those who visit the Roseland peninsula in southern Cornwall (a favourite destination of our honorand’s family and mine), separated from the ancient Royal Navy port of Falmouth by a complex of deep-water sea inlets known as the Carrick Roads. It does not, however, seem to overlap with *hormos*, which from its use in geographical texts appears to refer not to offshore water but to a coastal feature offering accommodation for vessels, often without an adjacent settlement or any manmade facilities.

Perhaps surprisingly, LSJ does not include ‘mooring’ among the possible meanings of *hormos*, despite its derivation from *eirō*; but ‘mooring’ suggests attaching a vessel to a permanent manmade structure (such as a jetty) or to a buoy (something the ancients did not use, as far as I am aware),<sup>9</sup> while as a noun it further connotes the space a single vessel may occupy. In both respects *hormos* clearly has a wider field of meaning than ‘mooring’. Nor is ‘mooring’ used as part of English place-names, whereas ‘anchorage’ is: not only, for example, the

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<sup>5</sup>Liddell and Scott 1940.

<sup>6</sup>Montanari 2015.

<sup>7</sup>For *hormos* Brill gives ‘harbor, cove, port, anchorage basin, anchorage, moorage’, which indicates the spread of meaning.

<sup>8</sup>Stevenson and Waite 2011.

<sup>9</sup>Stevenson and Waite 2011, s.v. moor<sup>2</sup>: ‘make fast (a boat) by attaching by cable or rope to the shore or to an anchor’. Wikipedia s.v. Mooring (9/5/20): A mooring is any permanent structure to which a vessel may be secured. Examples include quays, wharfs, jetties, piers, anchor buoys, and mooring buoys.’

state capital of Alaska but also in historians' renderings of ancient place-names such as Myos Hormos, 'Mussel Anchorage' (also the name of the accompanying settlement).

Although a phrase such as 'small harbour' might do justice to some instances of *hormos*, we do not know that places called *hormoi* necessarily accommodated fewer ships than those referred to as *limenes*. Accordingly, 'anchorage' is a good compromise, as long as we let readers know that it does not necessarily imply that a ship would need to drop anchor there rather than be tied up. (In later sources, such as the anonymous *Stadiasmos*, section 45, we encounter terms such as ἀγκυροβολία, *ankyrobolia*, 'place to cast anchor'.)

3. The terms 'road' and 'roadstead', already introduced, better suit *salos* (hardly ever used in the plural and then mostly metaphorically), which is related to the verb σαλεύω (*saleuō*), 'undergo a tossing motion', often a violent one. More appropriately than in the case of *hormos*, the dictionaries concur in making *salos* a piece of open but safely sheltered water.<sup>10</sup> Since 'roads' in this sense will probably be unfamiliar to readers who do not sail, and would need explaining in a translation, *salos* had better have 'roadstead' reserved for it. It is less familiar than some terms, but a quotation from the first paragraph one of the most famous novels in English, *Frenchman's Creek* by Daphne Du Maurier (perhaps not coincidentally set near Falmouth), justifies its adoption: 'When the east wind blows up Helford river the shining waters become troubled and disturbed and the little waves beat angrily upon the sandy shores. [...] The open roadstead is deserted, for an east wind makes uneasy anchorage'.
4. That leaves *hyphormos* (pl. *hyphormoi*), a compound of *hypo-*, 'under', and *hormos*: a 'sub-anchorage', then. In practice, what? Once more we need to modify the dictionaries' recommendations: LSJ simply gives 'anchorage', obscuring the distinction between *hormos* and *hyphormos*, while Brill offers 'place of anchorage, port', even though in geographical texts a *hyphormos* is clearly a minor locality whereas 'port' implies some degree of organization. On this occasion a phrase of two words may be the best solution: 'minor anchorage'.

This cluster of words may serve to highlight several issues: the tendency of lexicons not always to define terms adequately in relation to one another; the need to consider whether or not to employ familiar English words in an unfamiliar sense (such as 'road') or to employ unfamiliar terms at all ('roadstead'); and the desirability of following lexical distinctions present in Greek, as far as possible, when choosing words in a translation.

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<sup>10</sup>LSJ offers 'open roadstead, roads, [as] opp[osed to]. a harbour'; Brill 'anchorage, mooring, *usu.* *Opp. to λιμήν harbor*'.

### 3 Down to the Sea in Ships

Another such cluster raises similar problems, with the additional complexity that it indicates the poverty of contemporary English as well as the overlapping denotations of certain Greek terms.

Geographical sources normally refer to large bodies of water (other than inland lakes) by one of three terms: *θάλασσα* (*thalassa*),<sup>11</sup> *πέλαγος* (*pelagos*), and *πόντος* (*pontos*). The same body of water may be defined by a different term in different contexts. For example, the ‘Sicilian sea’ is sometimes a *pelagos*,<sup>12</sup> sometimes a *thalassa*.<sup>13</sup> The Black sea, properly the *euxeinós* (‘hospitable’) *pontos*, can also be the ‘Pontic *thalatta*’.<sup>14</sup> Today’s Arab–Persian gulf is usually the *Persikós kolpos*<sup>15</sup> but sometimes the *Persikē thalassa*.<sup>16</sup>

A fourth term, *ὠκεανός* (*ōkeanos*), is reserved for the outer Ocean that surrounds all of Europe, Asia, and Africa. It would be bizarre not to employ ‘ocean’ (or Okeanos or Ocean) to translate it; but this, if unavoidable, deprives us of a familiar term for large bodies of salt water such as those we call the Atlantic and Indian Oceans (in Greek, these are not ‘oceans’ but subdivisions of the one and only Okeanos).

‘Sea’ is an extremely scalable word in English: it can denote a relatively small enclosed body of water (Aral sea, Black sea, Caspian sea), a division thereof (sea of Azov), an inlet of the outer ocean (Baltic sea), a marginal segment of the outer ocean (North sea, Irish sea, Weddell sea), or even the largest enclosed sea in the world, the Mediterranean sea. In several of the cases just mentioned, the word ‘sea’ is often omitted in English when the body of water is named (e.g. the Caspian, the Baltic, the Mediterranean).<sup>17</sup>

Unfortunately, ‘sea’ is also effectively the only familiar English term available with which to translate the other three words. The famous thesaurus of Roget in modernized versions is of little help.<sup>18</sup> Accordingly, it is usual to find *thalassa*,

<sup>11</sup> Or *θάλαττα*, *thalatta*, in Attic (Athenian) Greek.

<sup>12</sup> e.g. Ps.-Aristotle, 3; Strabo, 6. 2. 1.

<sup>13</sup> Dionysios Periegetes, 401 (poetic).

<sup>14</sup> Strabo, 1. 3. 4.

<sup>15</sup> e.g. Strabo, 16. 3. 2, *kolpos* meaning ‘gulf’, ‘bay’.

<sup>16</sup> e.g. Agathemerus, 3. 12.

<sup>17</sup> LSJ and Brill both translate *θάλασσα* (*thalassa*) as ‘sea’. For *πόντος* (*pontos*) Brill gives ‘sea, open sea’, replicating LSJ’s ‘sea, esp. open sea’, after Homer ‘chiefly used of special seas [. . .] but Hdt. has also ὁ πόντος’ [*ho pontos*] ‘for the sea, 4.99, 177’; at those places Herodotos describes peninsulas as projecting *ἐς τὸν πόντον*, *es ton ponton*, ‘into the open sea’. For *πέλαγος* (*pelagos*) LSJ gives ‘the sea, esp. high sea, open sea’, Brill ‘sea, usu. Open sea, deep sea’, which illustrates the difficulty of distinguishing the last two in translation.

<sup>18</sup> In the edition by Dutch (Roget and Dutch 1962), §343 Ocean includes ‘sea, blue water, salt w., brine, briny; waters, billows, waves, tide, wave; [. . .] main, deep, deep sea; high seas’, but otherwise contains mostly poetic, jocular, or technical terms. The shorter edition by Browning (Roget and Browning 1982), §341 Ocean, offers a subset of the above.

*pelagos*, and *pontos* all rendered as ‘sea’ in translation, without further comment. Can we do better, such as by reserving ‘sea’ for one of the three and devising phrases for the others, or by reviving less familiar English terms?

*Thalassa* is by far the commonest word, and is used differently from the others. One may say in Greek, for example, that imperial Athens was powerful ‘by land and by *thalassa*’ but not ‘by land and by *pontos*’ or ‘by *pelagos*’. Likewise, while Herodotos once refers to ‘the *thalassa* of the Euxeinos Pontos’ (2. 33. 4) and the poet Apollonios of Rhodes uses the phrase ‘*pelagos* of the *thalassa*’ (*Argonautika*, 2. 608), neither of those phrases would work the other way round. Perhaps significantly, *thalassa* is commonly derived from ἅλς (*hals*), ‘salt’, suggesting a mass of a particular substance.

*Pelagos*, the second most common term for ‘sea’, is etymologically linked by LSJ to Latin *plaga* in the sense of ‘region, quarter, tract’. So ‘open sea’ or ‘wide sea’ would make sense (rather as in the modern term ‘pelagic’, meaning belonging to the deep or open sea). Whereas ‘wide’ is sometimes applied in Greek to *pontos*, ‘open sea’ would be a distinctively English usage. It is a little awkward when a specific place-name stands before it, such as the *Sikelikon* (Sicilian) or *Ikarikon* (Icarian) *pelagos*; but the phrase could in these cases be hyphenated if necessary, as in ‘the Sicilian open-sea’.

In contrast, the Brill dictionary links *pontos* to Latin *pons*, ‘bridge’, and Sanskrit *pánthāh*, ‘path’, ‘way’, ‘means’; it seems that, at least originally, it connoted passage or movement. The term ‘seaway’ might thus be used, but its meaning in modern English is sometimes too specific (equivalent to ‘sea lane’), alternatively denoting a rough sea or the space one vessel in motion must allow to another (cf. ‘leeway’, ‘sea room’). There is the additional complication that our Black sea<sup>19</sup> is the Greeks’ ‘Euxeinos Pontos’, also called simply ‘Pontos’ or indeed ‘Euxeinos’ (Euxine in English), which it would seem strange to designate a ‘seaway’. In default of ready alternatives, the practical compromise may thus be to use ‘main’, which despite its old-fashioned overtones is listed in the two modern editions of Roget cited above.<sup>20</sup> I have previously employed ‘main’ for *pelagos* in my edition of Ps.-Skylax’s *Periplus (Circumnavigation)*.<sup>21</sup> It happens that *pontos* as a common noun is often (among the geographers) employed in poetry (Homeric *Catalogue of Ships*; Dionysios Periegetes), as ‘main’ has been in English verse (originally as an abbreviation of ‘main sea’).<sup>22</sup>

<sup>19</sup>In not capitalizing ‘sea’ in names of this kind, I follow the practice of the revisers of Pliny the Elder’s books on geography in the Loeb Classical Library, as set out in Talbert 2020.

<sup>20</sup>*COD*<sup>11</sup> (Stevenson and Waite 2011) defines main<sup>1</sup>, sense 3, thus: ‘(the main) ARCHAIC OR LITERARY the open ocean’. Despite a common assumption, the meaning does not necessarily derive from the phrase ‘the Spanish Main’, where ‘main’ in fact appears to be short for ‘mainland’, denoting the former Spanish imperial territories in the western Atlantic.

<sup>21</sup>Shipley 2011 ~ <sup>2</sup>Shipley 2019; e.g. at §15 ‘the Tyrrhenian main’, §58. 4 ‘the Aigaion (*Aegean*) main’, §66. 3 ‘stretching up into the main’ (of a peninsula).

<sup>22</sup>*Oxford English Dictionary* (3rd edition, 2000; consulted on line 5 July 2020), ‘main’, sense I.5.a, citing i.a. Tennyson, *The Princess* (1847), ‘to gaze O’er land and main’.

There is the additional problem of metonymy, as when ἅλς (*hals*), ‘salt’, is used in poetry to denote the sea, in an echo of Homeric usage such as ‘the *hals* of the *pontos*’. This, too, occurs, for example, in the poem of Dionysios Periegetes. We might replace *hals* with ‘salt sea’ (rather than, for example, the ‘briny’ of older UK speech and folk-song), though if a metrical version is desired this may not always fit. Dionysios’ repeated use of the nymph’s name Amphitrite as another synonym for the sea leaves little alternative but to reproduce it as it is, with a note of explanation. Both solutions avoid obscuring the different terms under the catch-all term ‘sea’.

This second cluster of words, then, illustrates the fluidity of usage of certain Greek terms, and again raises the question of whether to adopt expressions that may be unfamiliar to the expected readers to a greater or lesser degree.

## 4 Cardinal Points

The problem of selection is slightly different in the case of directional terms. As already noted, Greek has two regular terms for each of the cardinal points of the compass. The resulting eight terms, as is well known, comprise one that refers to either or both of the polar constellations (‘bears’ referring, of course, to Ursa Major and Ursa Minor), two winds (north and south), three phases of the solar day (dawn, midday, evening), and two solar phenomena (rising, setting). (There is, of course, no solar event that could signify ‘north’ in the northern hemisphere.)<sup>23</sup> The eight terms are shown in Table 1, together with their literal meanings and the words usually substituted for them in English.<sup>24</sup>

A ninth term, and a third wind, also identifies the west: but Zephyros is hardly ever used as a directional term (see Appendices), even though it was one of the four cardinal winds in early literature.<sup>25</sup>

The non-exhaustive catalogue in Appendices 1–2 assembles illustrative examples of words and phrases from some of the geographical authors (and from a few others including major extant historians like Herodotos, Xenophon, and Polybios). The phrases frequently comprise a preposition followed by the cardinal signifier, though a given preposition cannot always be translated by the same word. Prepositions used include *apo* (‘from’), *eis* (‘to’, ‘into’), *en* (‘in’), *epi* (with a variety

<sup>23</sup> Except possibly ‘the place where the Sun sleeps’—the glow in the north during summer nights—which people in Britain pointed out to Pytheas (e.g. Geminus, *Introduction to Celestial Phenomena*, 6. 8–9).

<sup>24</sup> In the table, ‘pl.’ = plural. Macrons distinguish long vowels, represented by different letters from short vowels in Greek:  $\bar{e}$  = eta ( $\eta$ ),  $\bar{o}$  = omega ( $\omega$ ). Final *e* is never silent. There was no distinction between lower- and upper-case letters; writing was always in what we call capitals. Dialect variations affect some terms: e.g.  $\bar{e}\bar{o}s$  was *heōs* in Attic (Athenian) Greek, *mesēmbria* was *mesambriē* in the Ionic of Herodotos, Hekataios, etc.

<sup>25</sup> Cf. Hünemörder and Phillips 2006, §1a: Homer recognizes Boreas, Euros, Notos, and Zephyros.

**Table 1** Greek terms for cardinal directions

	Transliteration	Literal meaning	Usual translation
ἄρκτος, pl. ἄρκτοι	<i>arktos</i> , pl. <i>arktoi</i>	Bear(s) <sup>a</sup>	North
βορέας	<i>boreas</i>	North wind <sup>b</sup>	North
ἀνατολή, pl. ἄνατολαί	<i>anatolē</i> , pl. <i>anatolai</i>	Rising(s) <sup>c</sup>	East
ἠώς	<i>ēōs</i>	Dawn <sup>d</sup>	East
μεσημβρία	<i>mesēmbria</i>	Midday	South
νότος	<i>notos</i>	South wind <sup>e</sup>	South
δύσις, pl. δύσεις (or δυσμή, pl. δυσμαί)	<i>dysis</i> , pl. <i>dyseis</i> (or <i>dysmē</i> , pl. <i>dysmai</i> )	Sinking(s), setting(s) <sup>f</sup>	West
ἑσπέρα	<i>hespera</i>	Evening	West

<sup>a</sup>*Arktos* is both the common noun ‘bear’ and the proper noun for one of the mythological persons associated with Ursa Minor and Ursa Major. The plural *arktoi*, in the directional sense, is occasionally used in the singular form *arktos*; cf. Appendices.

<sup>b</sup>*Boreas* also occurs as a personification of the N wind. As a common noun, it is sometimes defined by ancient writers as a NNE rather than due north wind.

<sup>c</sup>*Anatolē* is often plural *anatolai*, ‘risings’. See Appendices.

<sup>d</sup>*Eos* is also a personification, Dawn.

<sup>e</sup>*Notos* is directly related to words for moisture: a season can be *notios*, ‘rainy’.

<sup>f</sup>*Dysis*, like *anatolē*, is often plural: *dyseis*, ‘settings’. See Appendices.

of meanings for which the all-purpose preposition ‘upon’ will usually serve), *kata* (‘against’, ‘opposite’), and *pros* (‘towards’, ‘on/from the side of’). The last three have different meanings depending on the grammatical case of the noun that follows them.<sup>26</sup>

There seems to be no significance in the variation between singular and plural in terms such as *anatolē* and *dysis*. The plural, as in ‘towards the settings of the sun’, does not appear to indicate a less definite commitment to an exact orientation. The following extract from Agatharchides (second century BC; preserved in a conscientious summary made for the Byzantine patriarch Photios in the ninth century) suggests that the variation has little if any significance, since Agatharchides uses two different words for ‘west’ and changes the number of ‘east’ and ‘north’ between singular and plural:

Ὅτι, φησί, τῆς ὅλης οἰκουμένης ἐν τέτταρσι κυκλιζομένης μέρεσιν, ἀνατολῆς λέγω, δύσεως, ἄρκτου καὶ μεσημβρίας, τὰ μὲν πρὸς ἑσπέραν ἐξείργασται Λύκος τε καὶ Τιμαῖος, τὰ δὲ πρὸς ἀνατολὰς Ἐκαταῖός τε καὶ Βασιλῖς, τὰ δὲ πρὸς τὰς ἄρκτους Διόφαντος καὶ Δημήτριος, τὰ δὲ πρὸς μεσημβρίαν, φορτικόν, φησί, τὸ ἀληθές, ἡμεῖς.

The whole inhabited world, as he (*Agatharchides*) says, is encircled in four parts—I mean east (*anatolē*), west (*dysis*), north (*arktos*), and south (*mesēmbria*). The westerly parts (*pros*

<sup>26</sup>A catalogue formulated with a primary focus on names of the winds, but including also other directional words, e.g. ‘dawn’, ‘left’, ‘beyond’, is offered in the wide-ranging study of Nielsen 1945. I am grateful to Astrid Möller and Paul Christesen for enabling me to access this paper. Note also the studies of Greek winds by Neuser 1982 and Coppola 2010, focused on iconography and mythology respectively.



*hesperan*) have been covered by Lykos and Timaios, the easterly (*pros anatolas*) by Hekataios and Basilis, the northerly (*pros tas arktous*) by Diophantos and Demetrios, and the southerly (*pros mesēmbrian*)—a burdensome task, as he rightly says—by ourselves.

The Appendices illustrate how the language of cardinal directions is varied with participial phrases such as ‘setting sun’ or verbal nouns as in ‘sun’s rising’. They also contain examples of how the nearest equivalents to our four ordinal directions (also known as intermediate or intercardinal; north-east, south-east, south-west, and north-west)<sup>27</sup> are indicated not, as in English, by combinations of two cardinals but in two different ways. The first alternative is to refer to a wind from a given direction, such as ‘towards the Euros’ (approximately a south-east wind). The second is to refer to equinoctial or solstitial sunrise or sunset, as in ‘the winter settings’ (approximately south-west), ‘the summer settings’ (approximately north-west), ‘the equidiurnal’ (i.e. equinoctial) ‘risings’ (due east), and ‘the equidiurnal settings’ (due west).

A famous passage, quoted from the early hellenistic admiral Timosthenes by the second-century AD geographer Agathemeros, is one of the classic definitions of the ‘wind rose’. It begins with a version of Aristotle’s scheme (*Meteorologica*, 2. 6) of eight cardinal and (approximately) ordinal winds (though Aristotle adds two intervening winds, leaves the SSW point blank, and identifies the name of the SSE wind as being no more than a local appellation); and moves on to Timosthenes’ own twelve-wind scheme (Fig. 1)<sup>28</sup>:

ἄνεμοι δὲ πνέουσιν ἀπὸ μὲν ἰσημερινῆς ἀνατολῆς ἀπληιώτης, ἀπὸ δὲ ἰσημερινῆς δύσεως ζέφυρος, ἀπὸ δὲ μεσημβρίας νότος, ἀπὸ δὲ ἄρκτου ἀπαρκτίας. <ἀνατολικοὶ οὗτοι> ἀπὸ δὲ τροπῆς θερινῆς καικίας, ἐξῆς δὲ ἀπὸ ἰσημερινῆς ἀνατολῆς ἀπληιώτης, καὶ ἀπὸ χειμερινῆς εὐρος· δυσμικοὶ δὲ ἀπὸ μὲν δύσεως χειμερινῆς λίψ, καὶ ἐξῆς πάλιν ἀπὸ δύσεως ἰσημερινῆς ζέφυρος, ἀπὸ δὲ δύσεως θερινῆς ἀργέστης ἦτοι ὀλυμπίας, ὁ καὶ ἰάπυξ· εἶτα νότος καὶ ἀπαρκτίας ἀντιπνέοντες ἀλλήλοισι, γίνονται οὖν ὀκτώ.

Τιμοσθένης δὲ, ὁ γράψας τοὺς περίπλους, δώδεκά φησι, προστιθεὶς μέσον ἀπαρκτίου καὶ καικίου βορέαν, εὐρου δὲ καὶ νότου φοῖνικα τὸν καὶ εὐρόνοτον, μέσον δὲ νότου καὶ λιβὸς τὸν λευκόνοτον ἦτοι λιβόνοτον, μέσον δὲ ἀπαρκτίου καὶ ἀργέστου θρασκίαν ἦτοι κίρκιον ὑπὸ τῶν περιοίκων ὀνομαζόμενον.

ἔθνη δὲ οἰκεῖν τὰ πέρατα κατ’ ἀπληιώτην Βακτριανούς, κατ’ εὐρον Ἰνδούς, κατὰ φοῖνικα Ἐρυθρὰν θάλασσαν καὶ Ἀραβίαν, κατὰ νότον τὴν ὑπὲρ Αἴγυπτον Αἰθιοπίαν, κατὰ λευκόνοτον τοὺς ὑπὲρ Σύρτεις Γαράμαντας, κατὰ λίβα Αἰθιοπας δυσμικοὺς <τοὺς> ὑπὲρ Μαύρους, κατὰ ζέφυρον Στήλας καὶ ἀρχὰς Λιβύης καὶ Εὐρώπης, κατὰ ἀργέστην Ἰβηρίαν τὴν νῦν Ἰσπανίαν, κατὰ θρασκίαν Κελτούς καὶ τὰ ὄμορα, κατὰ δ’

<sup>27</sup>The summer and winter sunrises and sunsets mark the ordinal points only approximately. On 21 June at the latitude of Athens (c.38.0° N), the sun rises at a bearing of c.60° (taking north as zero), which is closer to ENE (67½°) than to NE (45°); and sets at c.299°, closer to WNW (292½°) than to NW (315°). On 21 Dec. it rises at c.120° (SE is 135°) and sets at c.240° (SW is 225°). (Measurements from the Sky View Café app, 19/5/20.) Nielsen 1945, 11, gives slightly different figures with a range of 61° 24’ between the extreme sunrises (and likewise sunsets) at Athens.

<sup>28</sup>Nielsen 1945 traces the evolution of the Greek directional terms in detail, distinguishing traditional directional markers (e.g. ‘dawn’, ‘Boreas’) from ‘scientific’ ones (e.g. equinoctial sunrise or solstitial settings).

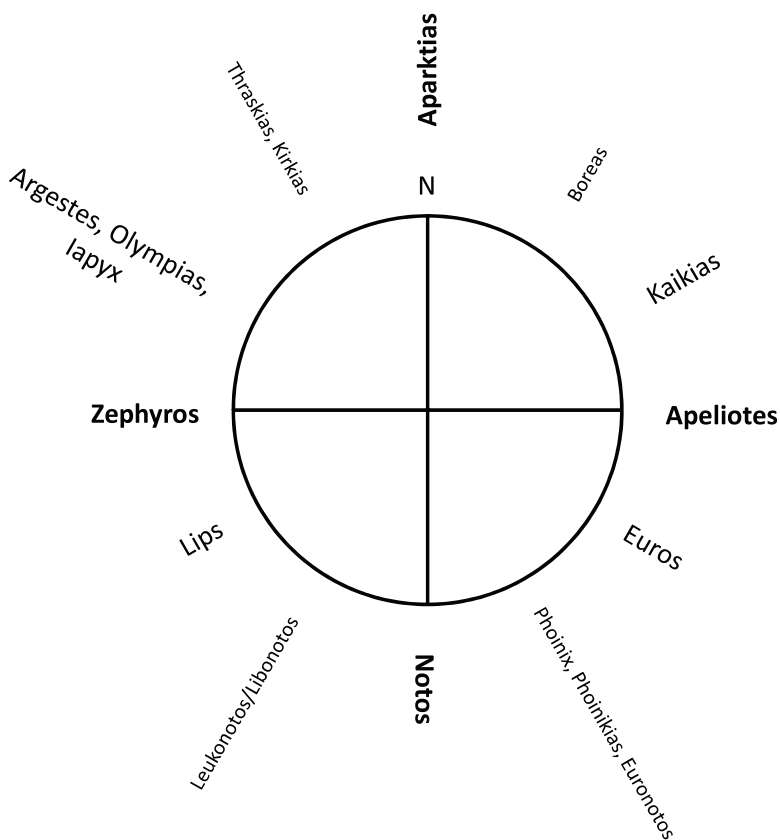


Fig. 1 Wind rose reconstructed according to Timosthenes' account

ἀπαρκτίαν τοὺς ὑπὲρ Θράκην Σκύθας, κατὰ δὲ βορρᾶν Πόντον, Μαιώτιν, Σαρμάτας· κατὰ καικίαν Κασπίαν θάλασσαν καὶ Σάκας.<sup>29</sup>

The winds that blow are: from the equidiurnal (*i.e. equinoctial*) rising (*of the sun; i.e. due east*) Apeliotes; from the equidiurnal setting (*due west*) Zephyros; from the midday (*due south*) Notos; and from the bear (*due north*) Aparktias. <The easterly winds:><sup>30</sup> From the summer turning-point (*solstice; approx. NE*) Kaikias; next, from the equidiurnal rising Apeliotes (*as above*); and from the winter one (*approx. SE*) Euros. The westerly winds: from the winter setting (*approx. SW*) Lips; from the equidiurnal setting Zephyros again; and from the summer setting (*approx. NW*) Argestes or Olympias, also known as Iapyx. Next Notos and Aparktias, blowing against one another. Thus there are eight.

<sup>29</sup>Fr. 3 Meyer = Agathemeros 2. 6–7 Leroy; I use Leroy's Greek text with one supplement by Meyer 2013. Angle brackets < > indicate words supplied by an editor where words are suspected of having dropped out during manuscript transmission.

<sup>30</sup>Meyer's supplement.

But Timosthenes, the author of the *Circumnavigations*, says there are twelve. Between the Aparktias and Kaikias he adds Boreas (*NNE*); between Euros and Notos, Phoinix (*approx. SSE*), also called Euronotos; between Notos and Lips, Leukonotos or Libonotos (*approx. SSW*); between Aparktias and Argestes, Thraskias (*approx. NNW*), also <named> Kirkias by those living around that area.

He states that the nations living at the furthest points towards Apeliotes are the Baktrians; towards Euros the Indians; towards Phoinix (*lie*) the Erythraian sea and Arabia; towards Notos the Aithiopia that is beyond Egypt; towards Leukonotos the Garamantes beyond the Syrteis; towards Lips the western (*dysmikoi*) Aithiopians, <those> beyond the Mauroi; towards Zephyros the Pillars (*of Herakles, i.e. strait of Gibraltar*) and the beginnings of Libyē<sup>31</sup> and Europe; towards Argestes Iberia, what is now Hispania; towards Thraskias <the Celts and their neighbours; towards the Aparktias> those Skythians that are beyond the Thracians; towards Boreas the Pontos, Maiotis (*sea of Azov*), and the Sarmatai; and towards Kaikias the Caspian sea and the Sakai.

In the last paragraph (as divided here), I have retained the wind names rather than replace them with compass directions (which would give phrases such as ‘at the furthest points *to the east* are the Baktrians’); no consideration of intelligibility mandates such replacement, a point we shall return to later. In the first paragraph, however, a recent translator who preserves the wind names renders three of the directional terms and phrases literally, but inconsistently replaces the fourth with a conventional cardinal term:

vom Punkt des Sonnenaufgangs zur Zeit des Äquinoktiums der Apeliotes, vom Punkt des Sonnenuntergangs zur Zeit des Äquinoktiums der Zephyros, vom Mittagspunkt her der Notos, *vom Nordpunkt* her der Aparktias.<sup>32</sup> (italics added)

(from the point where the sun rises at the time of the equinox the Apeliotes, from the point where the sun sets at the time of the equinox the Zephyros, from the midday point the Notos, *from the north point* [rather than ‘from the Bear’] the Aparktias.)

For greater consistency, after making *mesēmbria* ‘the midday point’, we might render *arktos* here as ‘the bear’.

But is it right always to translate the eight words for the four cardinal points only by the four conventional words in English? Might it not be truer to the original author’s intentions to use the primary sense of each of the Greek terms: bear(s) and north wind; dawn and rising; south wind and midday; evening and setting?

<sup>31</sup> I use ‘Libyē’ rather than ‘Libya’ for Greek Λιβύη, as it denotes Africa as a whole.

<sup>32</sup> Meyer 2013, fr. 3.

**Table 2** Cardinal and ordinal terms in Herodotos

		Literal meaning	Primary (animal, atmospheric, temporal)	Secondary (directional)
N	<i>arktos</i> <sup>a</sup>	Bear	2	5
	<i>boreēs</i> <sup>b</sup>	North wind	10	38
E	<i>anatolē</i> (6) + verb <i>anatellō</i> (4) <sup>c</sup>	Rising, rise	–	10
	<i>ēōs</i> <sup>d</sup>	Dawn	5	37
S	<i>mesambriē</i>	Midday	5	19
	<i>notos</i>	South wind	6	20
W	<i>dysmē</i> <sup>e</sup>	Setting	1	4
	<i>hesperē</i>	Evening	–	49
	<i>zephyros</i>	West wind	2	3

<sup>a</sup>Both references to *arktoi* as bears are to the animals, not the constellations. In the directional sense, Hdt. always use the singular form.

<sup>b</sup>Not counting 7 references to the mythological figure Boreas (all at 7. 189).

<sup>c</sup>Hdt. uses *hēliou anatolai* ('risings of (the) sun') 4 times, always preceded by *πρὸς ἡῶ (τε) καὶ (pros ēō (te) kai, 'towards (the) dawn and')*. He almost always uses *anatolē* in the plural. He also uses forms of *ἀνατέλλω (anatellō, 'rise')* with *ἥλιος (hēlios, 'sun')* 4 times.

<sup>d</sup>Not including the remarkable adjectival phrase *τὸν ἔωρον στρατόν (ton ēōron straton, lit. 'the army of the dawn')*, to denote the Persian army (7. 157).

<sup>e</sup>Herodotos always uses the plural, *dysmai*. He does not use *dysis*.

## 5 Naming and Necessity

### 5.1 'The West Yet Glimmers with Some Streaks of Day': What's in a Name?

Proper names do not express essences, even if they have a definite etymology or are homonymous with meaningful words.<sup>33</sup> Trivially, when we see a mention of a person surnamed Redhead we do not for a moment suppose them to have red hair. More tellingly, a place called Newtown is not necessarily either new or a town even though, if it is not now, it probably was both of those at one time; the most we can say about its connotations is that on hearing its name we will probably assume it is a settlement. A weak application of this thesis to the present discussion would be that the four cardinal directions in English, even though their remote ancestries have been reconstructed—'north' being tentatively derived from roots meaning left or down, 'east' more confidently from dawn, 'south' from sun, and 'west' from dwelling or night<sup>34</sup>—cannot ever be thought to carry such connotations when used in discourse today.

<sup>33</sup> See e.g. the classic lectures of Kripke 1972, republished as Kripke 1980.

<sup>34</sup> Etymologies claimed for 'east', 'south', and 'west' are documented by Skeat 1888, who regards the origin of 'north' as unknown, though in the revised edition of his shorter dictionary (Skeat 1901) he notes that some link it to 'left' or 'lower'. See also Onions 1933; Onions 1936. Nielsen 1945, 4, broadly concurs with Skeat.

In Greek, however, as noted earlier, all the words for cardinal directions (not forgetting the ninth term, Zephyros, the west wind)<sup>35</sup> have original, literal meanings and are used in both their primary and their secondary senses.<sup>36</sup> Table 2 illustrates Herodotos' use of the terms in question (some in their Ionic forms).<sup>37</sup>

In this case, therefore, the application of the 'naming and necessity' principle would involve a stronger claim: that when one of these terms is used in a directional sense—for example, when *anatolē*, 'rising', is used to mean 'the east'—it is an example of metonymy (as when we use 'the Crown' to mean 'the monarch') and carries no connotations of its original meaning. Whether a word is being used in its primary or its secondary sense can be determined on the basis of the context in which it is used.

## 5.2 'Ce qu'a vu le vent d'ouest': Metonymy with Primary Meaning Suppressed

Among the terms listed selectively in the Appendices, the adjectives—especially in their comparative and superlative forms—are perhaps the most purely metonymic instances of these terms in use. We will never suppose that an author means to describe a people or place as 'more bearlike' than another, more 'dawnlike', or 'the one most characteristic of rising'. In his astrological work *Tetrabiblos* (3. 6. 3), Ptolemy contrasts people who are ἀπλιωτικώτεροι (*apēliōtikōteroi*), literally 'more characteristic of the Apeliotes' (east wind), with those who are λιβικώτεροι (*libikōteroi*), literally 'more characteristic of the Lips' (south-west wind). It would be perverse not to read these words as meaning 'located further east' and 'located further south-west' and translate accordingly.

Geographical writers did not write in a separate domain from historians (and were often the same men). Numerous examples can be found in Herodotos (above) and the other major historians of cardinal terms being used purely directionally, without any hint of their original denotations being evident. We must not forget that Greek writers wishing to indicate compass directions had no other terms that they could use, so it must have been possible for them to use these words in a purely directional sense. In many passages the cardinal direction is therefore the only reasonable meaning to impute to such terms. Their use, however, is uneven: there are remarkably few such directional terms in, for example, Thucydides' *Histories*<sup>38</sup> and

<sup>35</sup>Not a name with a meaning; possibly derived from the noun ζόφος, *zophos*, 'gloom', LSJ; cf. Nielsen 1945, 9.

<sup>36</sup>The same is true in Modern Greek, where derivatives from the Classical words operate similarly: for example, δύση (*dýsi*) usually means 'west' but also 'setting' or 'sinking', while ανατολή (*anatolí*) means 'east' and 'rise'.

<sup>37</sup>Data from Logeion, Perseus, and TLG (1 May 2020).

<sup>38</sup>Thucydides: no directional uses of *arktos*, *heōs*, *anatolē*, *zephyros*, or *dýsis* (26 of *heōs* and 1 of *dýsis* in temporal senses); (N) 5 directional expressions using *boreas*; (S) 3 cases of *pros noton*; 1

the *Hellenika* of Xenophon.<sup>39</sup> Let us focus on a couple of passages where the cardinal terms are used relatively often, to help determine how they should best be translated.

### 5.2.1 Polybios

Just over half of the 30 occasions on which the second-century BC historian Polybios uses *anatolē* are directional; he is also fond of *mesēmbria* to denote ‘south’ (29 occurrences; there are none of *notos* in a directional sense); and he prefers *dyseis* (plural; 22 uses) to other terms for ‘west’.<sup>40</sup> In two famous passages, he puts speeches into the mouths of protagonists in the affairs of Greece, in which in the word for a solar event is unmistakably used in a directional sense. In one, the speaker warns the king of Macedonia, Philip V, to remember ‘the scale of the war that has arisen towards the *dyseis*’, urging him ‘to look towards the *dyseis* ... and pay attention to the wars that have arisen in Italia’, and to consider ‘the clouds appearing now from the *hespera*’ (Polybios 5. 104. 2, 7, and 10).<sup>41</sup> A later speaker is made to reuse the last metonymy, warning Philip’s enemies the Aitolians that ‘they have failed to notice that they have drawn onto themselves such a great cloud from the *hespera* that ... shall subsequently be a cause of great evils for all Hellenes’ (7. 37. 10).<sup>42</sup> ‘Settings’ and ‘evening’ would make no sense here; the terms in these passages can only denote ‘the west’, the sphere of Roman power. In such contexts, which are ubiquitous in Greek writings, we are justified in using simple cardinal names in translation without elaborate explanation—though it would be prudent to tell the reader, especially in a book on geography, which term is being translated on each occasion (in the above examples *dyseis* or *hespera* would both be rendered as ‘west’).

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of τὰ μεσημβρινά, *ta mesēmbrina*, ‘the midday places’ (2 of *mesēmbria*, temporal); (W) 2 of *hespera* or the adjective *hesperios*, ‘western’ (3 temporal).

<sup>39</sup> Xenophon, *Hellenika*: no occurrences of *arktos*, *boreas*, *anatolē*, *notos*, *dysis*, *zephyros*, or cognate terms; (E) 3 of the adj. ἑφωσ (heōs, ‘of the dawn’) for the ‘eastern’ wall of a place, 1 of *ta pros heō* for ‘the eastward parts’ of a city; (W) 4 directional uses of *hespera* (10 temporal); 1 temporal of *dysmē*.

<sup>40</sup> Polybios uses *anatolai* (plural) as a simple direction 16 times, *anatolē* once; qualifies the term with ‘summer’ 5 times, with ‘winter’ and ‘equidiurnal’ once each, to refer to an ordinal direction; refers 3 times to sunrise as an event, once to moonrise; twice uses the term for the source of a river. (Data from Logeion and Perseus databases, 1 May 2020.) He uses *ēōs* in a directional sense 3 times; *notos* only of the wind; words related to *hespera* 11 times in directional sense (and twice temporal).

<sup>41</sup> (2) τὸ μέγεθος τοῦ πρὸς ταῖς δόδεσι πολέμου ... (7) πρὸς τὰς δύσεις βλέπειν ... καὶ τοῖς ἐν Ἰταλίᾳ συνεστῶσι πολέμοις προσέχειν ... (10) τὰ προφαινόμενα νῦν ἀπὸ τῆς ἐσπέρας νέφη.

<sup>42</sup> λελήθασιν αὐτοῖς ἐπιπασσάμενοι τηλικούτο νέφος ἀπὸ τῆς ἐσπέρας, ὃ κατὰ [...] τὸ συνεχὲς πᾶσιν ἔσται τοῖς Ἑλλησι μεγάλων κακῶν αἴτιον.

### 5.2.2 Markianos

Also telling are passages where a series of orientations are systematically enumerated in rapid succession, as when the late antique geographer Markianos, in his *Circumnavigation of the Outer Sea*, defines a series of regions in Asia by those surrounding each; the progress of his thought being perhaps too swift to allow any expectation that the reader should pick up on the original, non-directional meanings of the terms:

ἡ Σουσιανὴ κεῖται μὲν ἐν τῷ Περσικῷ κόλπῳ· περιορίζεται δὲ ἀπὸ μὲν ἄρκτων τῇ Ἀσσυρίᾳ, ἀπὸ δὲ δύσεως τῇ προειρημένῃ Βαβυλωνίᾳ παρὰ τὸ τοῦ Τίγριδος ποταμοῦ μέρος τὸ μέχρι θαλάσσης, ἀπὸ δὲ ἀνατολῆς τῇ Περσίδι, ἀπὸ δὲ μεσημβρίας τῷ Περσικῷ κόλπῳ [...]

Sousiane lies in the Persian gulf. It is bounded on the north (*apo arktōn*, lit. 'from the bears') by Assyria; on the west (*apo dyseōs*, lit. 'from the settings') by the aforementioned Babylonia beside this part of the river Tigris as far as the sea; on the east (*apo anatolēs*, lit. 'from the rising') by Persis; and on the south (*apo mesēmbrias*, lit. 'from the midday') by the Persian gulf [...]

The passage echoes much earlier usage, such as that of Herodotos in the fifth century BC, describing Ionia (1. 142):

οὔτε γὰρ τὰ ἄνω αὐτῆς χωρία τὸν αὐτὸ ποιεῖ τῇ Ἰωνίᾳ οὔτε τὰ κάτω, οὔτε τὰ πρὸς τὴν ἡῶ οὔτε τὰ πρὸς τὴν ἑσπέρην

For neither do the places above it behave in the same way as Ionia, nor do those below it<sup>43</sup>; neither do those to the east of it (*pros tēn ēō*, lit. 'towards the dawn') or to the west (*pros tēn hesperēn*, lit. 'towards the evening').

Again, a rapid accumulation of orientations makes the non-cardinal connotations irrelevant, and we should translate using standard cardinal directions.

### 5.3 'There's a Bitter East Wind and the Fields are Swaying': Primary Meaning Present

Other passages, however, make it hard not to be aware of the original, primary sense of a term. This is particularly the case when a directional expression is a phrase composed of two or more words (other than a simple preposition-plus-noun phrase), where a syntactical relationship is created between the terms. Among these, perhaps the most telling are those that refer to the stages of the sun's daily movement, such as 'the rising sun' or 'the setting(s) of the sun', where it is hard to suppose that the author does not intend us to acknowledge the metonymy, recognizing the primary

<sup>43</sup>One would normally take ἄνω (*anō*), 'up', to mean 'up-country', i.e. 'inland'; but here it is opposed to κάτω (*katō*), 'down', which cannot mean 'out at sea'. Possibly Herodotos is thinking of spatial relationships on a display map of the kind that Aristagoras of Miletos possessed (5. 49).

meaning as well as the directional. The same is true of those phrases that incorporate seasonal terms, such as ‘summer rising’ and ‘winter setting’; and finally of those expressions that incorporate astronomical references, such as ‘equidiurnal’ (i.e. equinoctial) sunrise or summer sunset, where the reader or listener is likely to perceive the connotations of sky and horizon as well as understand the ordinal direction as intended. Such phrases often occur in passages where cardinal directional terms are employed in their purely metonymic sense (e.g. *arktos* meaning north) while others, including phrases, make their connotations visible.

### 5.3.1 Ps.-Skylax

Some sources revealingly combine different sets of terms and point up the contrast between directional and ‘meaningful’ usage, as in this remarkable passage from the anonymous mid-fourth-century BC *Periplus* (*Circumnavigation*) known as Pseudo-Skylax (47. 3–4):

(2) ἔστι δὲ ἡ Κρήτη μακρὰ στάδια βφ', στενὴ δέ, καὶ τέταται ἀπὸ ἡλίου δυσμῶν πρὸς ἡλίου ἀνατολάς

(3) <ἐπὶ Κωρύκ>ω ἀκρωτηρίῳ ἔστι πρώτη πόλις πρὸς ἥλιον δυόμενον ἢ προειρημένη Φαλασάρια καὶ λιμὴν κλειστός. Πολυρρηνία, καὶ διήκει ἀπὸ βορέου πρὸς νότον. Δικτυνναῖον Ἀρτέμιδος ἱερὸν πρὸς βορέαν ἄνεμον, τῆς χώρας Περγαμίας. πρὸς νότον δὲ Ὑρτακίνα. Κυδωνία καὶ λιμὴν κλειστός πρὸς βορέαν. [...] πρὸς νότον δὲ Λίσσα [...] πρὸς βορέαν δὲ ἄν<εμοι> ἢ Ἀπτεραία χώρα. [...]

4. μετὰ δὲ ταύτην ὄρος Ἴδα καὶ Ἐλευθέριαι πρὸς βορέαν. πρὸς νότον δὲ Σύβριτα καὶ λιμὴν πρὸς νότον Φαιστός. πρὸς βορέαν Ὀαξὸς καὶ Κνωσσός. πρὸς δὲ νότον Γόρτυνα. [...] Ἴτανος ἀκρωτήριον Κρήτης πρὸς ἥλιον ἀνίσχοντα<sup>44</sup>

(2) Crete is 2,500 stades long, and narrow, and extends from the settings of the sun (*apo hēliou dysmōn*) towards the risings of the sun (*pros hēliou anatas*).

(3) <After Koryk>os promontory the first city towards the setting sun (*pros hēlion dyomenon*) is the aforementioned Phalasarna with an enclosed harbour. Then Polyrrhenia, and it extends from the north (*apo boreou*) towards the south (*pros noton*). Diktynnaion, a sanctuary of Artemis, towards the north wind (*pros borean anemon*), belonging to the Pergamia territory. Towards the south (*pros noton*) Hyrtakina. Kydonia with an enclosed harbour towards the north (*pros borean*). [...] Towards the south (*pros noton*) Lissa [...] Towards the north wi<nd> (*pros borean an<emon>*) the Apteraia territory. [...]

(4) After this Mount Ida, with Eleuthernai towards the north (*pros borean*). Towards the south (*pros noton*) Sybrita with a harbour towards the south (*pros noton*), Phaistos. Towards the north (*pros borean*) Oaxos and Knossos. Towards the south (*pros noton*) Gortyna. [...] Itanos, the promontory of Crete towards the upcoming sun (*pros hēlion anischonta*).

It is likely that in this passage Pseudo-Skylax is drawing upon an earlier source specifically dedicated to Crete, for its arrangement is quite different from that of the rest of his *periplus*: the elongated island is described from west to east, the gaze swinging from the north coast to the south and back again as necessary (Fig. 2). I have translated *boreas* and *notos* above, when they occur alone, metonymically as

<sup>44</sup>The Greek text is that reconstructed by Shipley 2019.





Fig. 2 Crete, showing places mentioned by Pseudo-Skylax (Shipley 2019: 130)

‘north’ and ‘south’ because the passage also twice contains the phrase *pros borean anemon* (in one case partly restored), which is translated literally as ‘towards the north wind’ (*anemos* means ‘wind’), not simply ‘towards the north’. If the variation in expression has any significance, the unadorned *boreas* and *notos* should be purely directional without their original connotations being present. A similar variation can be seen in Herodotus’ practice: of the 20 instances in which he uses *notos* as a directional term, eight include the word *anemos*, as in *pros noton anemon*, ‘towards the south wind’.<sup>45</sup> Translations should reflect this variation.

The phrase *apo hēliou dysmōn*, likewise, merits literal translation (‘from the settings of the sun’, ‘from the sun’s settings’, or ‘from the sunsets’) as it has been chosen by the writer where a simpler metonymic phrase such as *apo dyseōs*, ‘from the setting’, could have been used; the latter, in such a context, would be translated simply ‘from the west’.

### 5.3.2 Aristotle, *Meteorologika*

Aristotle, a contemporary of the unknown author of the *periplous* just quoted, devotes Chap. 6 of book 2 of his *Meteorologika* (the title means roughly ‘aerial phenomena’) to the winds, and includes one of the earliest mentions of a diagram accompanying a text (the original is, of course, lost),<sup>46</sup> as well as one of the earliest codifications of the ‘wind rose’, a version of which we have already encountered in the version quoted from the slightly later author Timosthenes. An extract from the middle of his chapter is particularly worthy of attention when we consider the denotations and connotations of wind names and directional expressions, as it combines

<sup>45</sup>In one of these 8 cases the word order is varied: *pros anemon noton* (Hdt. 7. 129. 1).

<sup>46</sup>We have no original, or even near-contemporary, copies of Classical, Hellenistic, or Roman-period books unless they happen to have been copied onto stone or metal (which is rare); occasionally we have fragmentary copies on Egyptian papyri. Most ancient writings survive only in medieval parchment or vellum manuscripts.

metonymic uses of cardinal terms (e.g. the adjective *boreia* = ‘northerly’) with names of winds used literally:

Ἔστι δὲ τῶν εἰρημένων πνευμάτων βορέας μὲν ὁ τ᾽ ἀπαρκτίας κυριώτατα, καὶ θρασκίας καὶ μέσης· ὁ δὲ καϊκίας κοινὸς ἀπηνλιώτου καὶ βορέου· νότος δὲ ὁ τε ἰθαγενῆς ὁ ἀπὸ μεσημβρίας καὶ λίψ· ἀπηνλιώτης δὲ ὁ τε ἀπ᾽ ἀνατολῆς ἰσημερινῆς καὶ ὁ εὐρος· ὁ δὲ φοινικίας κοινός· ζέφυρος δὲ ὁ τε ἰθαγενῆς καὶ ὁ ἀργέστης καλοῦμενος.

Ὀλως δὲ τὰ μὲν βόρεια τούτων καλεῖται, τὰ δὲ νότια· προστίθεται δὲ τὰ μὲν ζεφυρικά τῷ βορέα (ψυχρότερα γὰρ διὰ τὸ ἀπὸ δυσμῶν πνεῖν), νότω δὲ τὰ ἀπηνλιωτικά (θερμότερα γὰρ διὰ τὸ ἀπ᾽ ἀνατολῆς πνεῖν). διωρισμένων οὖν τῷ ψυχρῷ καὶ τῷ θερμῷ καὶ ἀλεινῷ τῶν πνευμάτων οὕτως ἐκάλεσαν. θερμότερα μὲν τὰ ἀπὸ τῆς ἕω τῶν ἀπὸ δυσμῆς, ὅτι πλείω χρόνον ὑπὸ τὸν ἥλιον ἔστι τὰ ἀπ᾽ ἀνατολῆς· τὰ δ᾽ ἀπὸ δυσμῆς ἀπολείπει τε θάττον καὶ πλησιάζει τῷ τόπῳ ὀψιαίτερον.

The difficulties of doing justice to the terminology, and an unwillingness to use wind names that might be unfamiliar to readers, caused the Loeb translator of 1952 to undergo contortions in order to convey what is admittedly an elliptical, and possibly not quite logical, passage:

Of the winds thus described the truest north winds are Aparctias, Thrascias and Meses. Caecias is part east and part north. South are the winds that come from due south and Lips.<sup>47</sup> East are the winds that come from the equinoctial sunrise and Eurus. Phoenicias is part south, part east. West is the wind from due west and also the wind called Argestes.

There is a general classification of these winds into northerly and southerly: westerly winds are counted as northerly, being colder because they blow from the sunset; easterly winds are counted as southerly, being warmer because they blow from the sunrise. Winds are thus called northerly and southerly according to this division into cold and hot or warm. Winds from the sunrise are warmer than winds from the sunset, because those from the sunrise are exposed to the sun for longer; while those from the sunset are reached by the sun later and it soon leaves them.

An alternative rendering will stay closer to the Greek:

Among the said winds, Boreas (*i.e. the set of northerly winds*) is chiefly Aparctias, but also Thraskias and Mesēs; but the Kaikias is shared between Apeliotes and Boreas. Notos is both the direct wind from the south (*mesēmbria*), and also the Lips. Apeliotes is that from the equinoctial sunrise, and also the Eurus; Phoinikias is shared. Zephyros is both the direct wind and the one called Argestes.

Overall, some of these are called northerlies (*boreia*), others southerlies (*notia*). The westerlies (*zephyrika*) are assigned to Boreas, as they are colder since they blow from the west (*dysmai*). To Notos are assigned the easterlies (*apēliōtika*), as they are warmer since they blow from the east (*anatolē*). People called them by these names (*i.e. grouped them in two categories*) because they were distinguished by cold, heat, and warmth. For those from the east (*ēōs*) are hotter than those from west (*dysmē*), because they are under the sun for a longer time than are those from the east (*anatolē*); but it leaves those from the west (*dysmē*) more swiftly and approaches that location later.<sup>48</sup>

The Loeb translator seems unsure whether certain terms are meaningful or purely metonymic (directional). Now substituting cardinal terms for wind names (e.g., ‘part east and part north’ rather than ‘shared between Apeliotes and Boreas’), now

<sup>47</sup>This makes it appear that Lips is a directional term.

<sup>48</sup>The Loeb translator has reversed the order of this last phrase to improve the logic.

leaving wind names unchanged, the translation obscures more than it illuminates Aristotle's admittedly compressed expression, and leads to apparent tautology that is not present in the Greek ('south are the winds that come from due south and Lips ... West is the wind that comes from the west and also the wind called Argestes'). In the second paragraph (as divided above), the Loeb translates both *heōs* and *anatolē* as 'sunrise', whereas they are purely directional terms in this passage; as are *dysmai* and *dysmē*, both unnecessarily translated 'sunset'. It would be desirable to reflect the variation between *heōs* and *anatolē*, but it is difficult without importing metonymic words ('dawn', 'rising'). Part of the solution is to include the different transliterated Greek words in parentheses.

### 5.3.3 Theophrastos

Aristotle's younger contemporary Theophrastos also discusses the winds systematically in his *Weather Signs*. Although the following extract uses only wind names, it offers a salutary indication of the responsibilities of the translator. A small extract (from section 36) suffices:

Υγροὶ δὲ μάλιστα ὅ τε καικίας καὶ λίψ· χαλαζώδης δ' ἀπαρκτίας καὶ θρακίας καὶ ἀργέστης· υἱφετώδης δὲ ὅ τε μέσης καὶ ἀπαρκτίας· καυματώδης δὲ νότος καὶ ζέφυρος καὶ εὐρος.

The Loeb translator of 1916 imagines that converting unfamiliar wind names to compass directions will make the meaning clear, but leaves the Greek far behind:

The north-east and south-west are the wettest winds; the north<> the north-north-east<><sup>49</sup> and the north-east bring hail; snow comes with the north-north-east and north. The south, the west, and the south-east winds bring heat.

The wind names are suppressed, but the plethora of hyphenated compass bearings arguably makes the text more resistant to reading—even though a reconstruction of Theophrastos' diagram (mentioned in the Greek text) accompanies the printed text.<sup>50</sup> An alternative rendering, much closer to the Greek and surely no less transparent, is:

The Kaikias and Lips are particularly moist; the Aparktias, Thrakias,<sup>51</sup> and Argestes are characterized by hail; the Meses and Aparktias are snowy; Notos, Zephyros, and Euros are burning.

<sup>49</sup>I have added the two commas, clearly omitted by typographic error.

<sup>50</sup>Though with the wind names only in Greek: Hort 1916, 414 (relevant passage of text on pp. 416–17).

<sup>51</sup>Same as Thraskias in other sources.

## 6 Conclusion: An Enriched Experience

A translator should endeavour to replicate differences in the original. To ignore variations in the Greek, and use only ‘north’, ‘east’, ‘south’, and ‘west’ whenever any of the nine simple (one-word) cardinal terms in Greek is used, might seem regrettable: it offers the reader less than one might; it could be a missed opportunity to clarify the text; it may sometimes amount to falsifying the text.

Should we then veer to the opposite extreme, and always communicate the original senses of the terms? Geographical areas might in that case be said to extend ‘from the settings to the risings’, barbarian peoples to live ‘towards the midday’ or ‘in the dawn’, one place to lie ‘towards the setting’ from another, and so on. This has something to commend it, in reminding the reader that the original texts are from a very different cultural milieu<sup>52</sup>; but one risks attempting to teach the reader a new vocabulary and change their understanding in a way that they may find rebarbative. A translator cannot afford to lose their audience. We might gloss each term with an insertion such as ‘(i.e. *the north*)’; but if we were to do so at every occurrence we would make many passages less legible. The more serious problem with this approach is that, on the basis of context, it is evident that Greek authors, as we have shown, very often use these eight cardinal terms metonymically, no hint of their primary meanings (e.g. ‘bear’, ‘dawn’, ‘setting’) being intended or needed. We must fall back on the regular cardinal terms in English.

Is the use of English compass bearings justified in the case of phrases denoting either cardinal or ordinal points, or in the case of wind names? Should we render the unfamiliar Thraskias as ‘north-west’ or ‘north-west wind’, the phrase ‘sun’s settings’ as ‘west’, and so on? But this, too, would impoverish the reader’s experience and, as we have seen, can make texts harder to understand as well as diverging further from the original.

As Fowler remarks of the split infinitive, the correct response to such anxieties is to ‘know and distinguish’.<sup>53</sup> A middle way seems best. A familiar starting-point for translators is to try to replicate for modern readers, as far as possible, the effect a text may be thought to have had upon ancient readers (or listeners),<sup>54</sup> rather than to follow an ephemeral modern style. (Some early Penguin Classics volumes have been said to adopt the style of a 1950s British civil servant.<sup>55</sup>) A suitable compromise, inevitably involving subjectivity at certain points, would be, as Raymond Dawson opined in 1993, to offer a version that while ‘as close to the original as

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<sup>52</sup>Cf. R. B. Rutherford, reviewing Woodman 2004, at *BMCR* 2005.07.15, on ‘defamiliarising (emphasising [a work’s] alien or remote qualities)’.

<sup>53</sup>Fowler 1965, 579–82, at 579: ‘The English-speaking world may be divided into (1) those who neither know nor care what a split infinitive is; (2) those who do not know, but care very much; (3) those who know and condemn; (4) those who know and approve; and (5) those who know and distinguish.’

<sup>54</sup>A view famously expounded by Arnold 1861.

<sup>55</sup>D. Nightingale, pers. comm, c.1978.

possible, *even if the result is sometimes a little outlandish*' (italics added), does not read 'as if it were written at the end of the twentieth century'.<sup>56</sup> Applying this to geographical texts is not always easy; but some of the examples above have illustrated how a pronounced departure from the Greek, for example the silent replacement of wind names (other than *boreas* and *notos* used directionally) with compass points, sells the reader short and does not necessarily make things clearer.

The case has been made above that the one-word Greek terms for cardinal directions, when there is no reason to think their primary senses are part of the author's intention, should be translated by the four English terms. Rather than repeated comments within the translation, an editorial note at the start of the translation, particularly of a geographical work, should be used to explain that cardinal terms in Greek are more numerous than in English and illustrate how they have been translated; and, if appropriate, to note the ancient author's habitual usage. Regrettably, there seems to be no way to use two alternative English terms for each cardinal point (as would be possible in, for example, French, where *midi* might very appropriately be used for *mesēmbria* and *sud* for *notos*). There are situations in which 'sunrise', 'midday', and 'sunset' might serve but, as these are not normal directional terms in English, they cannot help but force their original meanings upon the reader, unlike *anatolē*, *mesēmbria*, and *dysis* when used in this way. (The terms 'orient' and 'occident', as general directional terms, are not current English; and the former carries unwelcome ideological freight.) If these simple terms occur in proximity to the other member of their pair (e.g. *ēōs* to *anatolē*), to directional wind names, or to other multi-word direction phrases, the transliterated terms may be added in parentheses, in a form such as 'east (*ēōs*)'.

In conclusion, the following policy seems to commend itself:

(1) Single Greek words for cardinal directions to be translated by their simple English equivalents, explaining (in an introduction or note) the translator's practice; including, when necessary to distinguish, the transliterated Greek in parenthesis. *Examples*: *arktoi* 'north'; *ēōs* 'east'—or, for clarity, 'east (*anatolē*) ... east (*ēōs*)'.

(2) Cardinal directions expressed by phrases of two or more words to be translated so as to preserve the syntactical relationship and grammatical number. *Examples*: *hēliou dysmai* 'settings of the sun'; *therinē anamolē* 'summer sunrise' (rather than the vague 'rising'); *boreas anemos* 'north wind'.

(3) Ordinal directions (NE, SE, SW, NW) expressed by astronomical modifications to be translated as literally as possible. *Example*: *isēmerinē dysis* 'equidiurnal setting', if necessary with explanations such as '(i.e. equinoctial)' and '(due west)'.

(4) Names of winds, when not used simply as under (1) above, to be retained as names, with capital initial and in roman type. *Examples*: *Boreas*, *Apartkias*.

In these ways it is hoped that translators will modify their habitual procedure in the interest of clarity and of representing the thoughts of the Greek geographers more accurately.

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<sup>56</sup>Dawson 1993, xvi.

## Appendices

The two catalogues below are illustrative, not comprehensive. In this section of the paper, translations below are strictly literal unless prefixed by ‘i.e.’ Some noun phrases are converted to the nominative case. The prefix ‘Ps.-’ means ‘Pseudo-’.<sup>57</sup>

Some citations are accompanied by a reference to their original context: e.g. Timosthenes fr. 3 is a quotation or paraphrase preserved in the surviving treatise of Agathemerus at 2. 6. Citations of Agatharchides are accompanied by ‘(Photios)’ or by a citation of Diodoros because our extensive derive from long summaries in those two authors (those of Photios, though later, being generally more accurate). For approximate dates of authors, see n. 3 above.

### Appendix 1: Examples of Celestial Directions

#### North

**ἄρκτος** (*arktos*), ‘bear’, pl. ἄρκτοι (*arktoi*), ‘bears’

ἀπὸ ἄρκτου (*apo arktau*), ‘from (the) bear’, Timosthenes fr. 3 (Agathemerus 2. 6); Ps.-Aristotle 4; ἀπὸ τῆς ἄρκτου (*apo tēs arktau*), ‘from the bear’, Agatharchides 10 (Photios) ἀπὸ ἄρκτων (*apo arkton*), ‘from (the) bears’, Markianos 6; ἀπὸ τῶν ἄρκτων (*apo tōn arkton*), ‘from the bears’, *Airs, Waters, and Places* 3

ἐπὶ τοὺς ἄρκτους (*epi tous arktaus*), ‘to the bears’, Markianos 6

πρὸς ἄρκτον (*pros arkton*), ‘towards (the) bear’, Herodotos 1. 148; Hipparchos fr. 21 (Strabo 2. 1. 27); *Hypotyposis* 53; πρὸς τὰς ἄρκτους (*pros tas arktaus*), ‘towards the bears’, Agatharchides 43b (Diodoros 3. 19. 1)

adj. **ἀρκτικός** (*arktikos*), ‘of (the) bear(s)’

τὰ ἀρκτικά (*ta arktika*), ‘the (places) of the bear(s)’, Dikaiarchos fr. 124 (Strabo 2. 4. 2); = Arctic circles, Eratosthenes fr. 44 (Geminus 15)

ἀρκτικός πόλος (*arktikos polos*), ‘pole of the bear(s)’, Ps.-Aristotle 2 (also ἀνταρκτικός πόλος, *antarktikos polos*, ‘pole opposite the bears’—the unknown South Pole)

comparative: ἀρκτικώτερος (*arktikōteros*), ‘more of/towards the bear(s)’, i.e. ‘more northerly’, ‘further north’, Hipparchos fr. 11 (Strabo 1. 1. 12)

adj. **ἀρκτώος** (*arktiōs*), ‘of (the) bear(s)’

ἀρκτώοιο ... βορέαο (*arktiōio ... boreao*), ‘of Boreas of the bear(s)’ (Homeric dialect), Dionysios Periegetes 519

ὁ ἀρκτώος ὠκεανός (*ho arktōōs ōkeanos*), ‘the ocean of the bear(s)’, i.e. the northern or Arctic part of the Ocean, Markianos 1

adj. **προσάρκτιος** (*prosarktiōs*), ‘by/towards (the) bear(s)’, Strabo 1. 4. 5

<sup>57</sup>The name ‘Ps.-Skymnos’ is in quotation marks because the attribution of the Hellenistic poem to the real Skymnos of Chios is not a suggestion made in any manuscript but a hypothesis of the early modern period, now disproved. The work would better be called ‘Anonymous, *Iambics to King Nikomedes*’, but ‘Pseudo-Skymnos’ has stuck.

τὰ προσάρκτια μέρη (*ta prosarktia merē*), ‘the parts towards the bears (*from these*)’, i.e. to the north of these, Timosthenes fr. 5 (Strabo 2. 1. 41)

τὴν προσάρκτιον τῆς Εὐρώπης πᾶσαν (*tēn prosarktian tēs Europēs pasan*), ‘all the part of Europe towards the bear(s)’, Polybios 34. 5. 9

## East

**ἀνατολή** (*anatolē*), ‘a rising’

ἀπὸ (or ἀπ’) ἀνατολῆς (*apo anatolēs*), ‘from (the) rising’, Agatharchides 10 (Photios); Ps.-Aristotle 4; Markianos 6; *Hypotyposis* 1

ἐν ταῖς ἀνατολαῖς (*en tais anatolais*), ‘in the risings’, Hekataios fr. 18b (scholiast on Apollonios Rhodios, *Argonautika* 4. 284)

ἐντὸς ἀνατολῶν (*entos anatolōn*), ‘within (the) risings’, ‘Pseudo-Skymnos’ 270

πρὸς ἀνατολάς (*pros anatas*), ‘towards (the) risings’, Theophrastos, *History of Plants* 9. 15. 2; πρὸς τὰς ἀνατολάς (*pros tas anatas*), Polybios 2. 14. 4

with ἥλιος (*hēlios*), ‘sun’: ἀπὸ ἡλίου ἀνατολέων (*apo hēliou anatoleōn*), ‘from (the) risings of (the) sun’, Ionic, Herodotos 4. 8; πρὸς ἡλίου ἀνατολάς (*pros hēliou anatas*), ‘towards (the) risings of (the) sun’, Ps.-Skylax 47. 2

special forms: ἀπὸ ἰσημερινῆς ἀνατολῆς (*apo isēmerinēs anatolēs*), ‘from (the) equidurnal (i.e. *equinoctial*) rising’, i.e. from due west, Timosthenes fr. 3 (Agathemerios 2. 6) *bis*; ἀπὸ τοῦ περὶ τὰς ἰσημερινάς (sc. ἀνατολάς τόπου) (*apo tou peri tas isēmerinas*, sc. *anatas tou*), ‘from the (place) around the equidurnal (i.e. *equinoctial*) (risings), i.e. around due west, Ps.-Aristotle 4

adj. **ἀνατολικός** (*anatolikos*), ‘of (the) rising’, Hipparchos fr. 21 (Strabo 2. 1. 27)

τὸ ἀνατολικὸν (ἡμισφαίριον) (*to anatolikon*, sc. *hēmispairion*), ‘the hemisphere of (the) rising’, Strabo 2. 3. 2

comparative: ἀνατολικώτερος (*anatolikōteros*), ‘more in/towards (the) rising(s)’, i.e. further east, Hipparchos fr. 21 (Strabo 2. 1. 27)

superlative: ἀνατολικώτατος (*anatolikōtatos*), ‘most in/towards (the) rising(s)’, i.e. furthest east, Markianos 6

**ἥλιος ἀνατέλλων** (*hēlios anatellōn*), ‘(the) rising sun’

τὰ πρὸς ... ἥλιον ἀνατέλλοντα (*ta pros ... hēlion anatellonta*), ‘the parts towards (the) rising sun’, Herodotos 4. 40

**ἥλιος ἀνίσχων** (*hēlios anischōn*), ‘(the) sun emerging’

πρὸς ἥλιον ἀνίσχοντα (*pros hēlion anischonta*), ‘towards (the) emerging sun’, Hanno, 3; Hekataios fr. 204 (Stephanos of Byzantion s.v. Χοιράδες); Ps.-Skylax 47. 4; Herodotos 3. 98

**ἥλιος ἀνιών** (*hēlios aniōn*), ‘(the) ascending sun’

πρὸς ἀνιόντα ἥλιον (*pros anionta hēlion*), ‘towards (the) ascending sun’, ‘Ps.-Skymnos’ 522–3

**ἠώς** (*ēōs*), dawn; **ἕως** (*heōs*) in Attic dialect

ἀπὸ ἠοῦς (*apo ēous*), ‘from (the) dawn’, Herodotos 2. 8; ἀπὸ τῆς ἠοῦς (*apo tēs ēous*), ‘from the dawn’, *Airs, Waters, and Places* 6

ἐπὶ ἕω (*epi heō*), ‘to (the) dawn’, Eratosthenes fr. 72 (Arrian, *Indike* 3. 1–5)

πρὸς ἠῶ τ’ ἡέλιόν τε (*pros ēō t’ ēelion te*), ‘towards dawn and sun’, *Iliad* 12. 239

πρὸς ἔω (*pros ēō*), ‘on the side of (the) dawn’, Eratosthenes fr. 32 (Agathemerios 1. 2), fr. 71 (Arrian, *Anabasis* 5. 6. 3); Dionysios son of Kalliphon 83

τὰ πρὸς ἡῶ (*ta pros ēō*), ‘the parts towards (the) dawn’, Herodotos 4. 40; τὰ πρὸς τῆν ἡῶ (*ta pros tēn ēō*), ‘the parts towards the dawn’, Herodotos 2. 8

adj. **ἑοθινός** (*heōthinos*), ‘of the dawn’

ἑοθινὸν ἔθνος (*heōthinon ethnos*), ‘nation of the dawn’, i.e. eastern nation, Dionysios Periegetes 697

comparative: ἑοθινώτερος (*heōthinōteros*), ‘more in/towards the dawn’, i.e. further east, Strabo 11. 2. 2; *Hypotyposis* 53

superlative: ἑοθινώτατος (*heōthinōtatos*), ‘most in/towards the dawn’, i.e. furthest east, Strabo 4. 5. 1; *Hypotyposis* 1

adj. **ἑῶος** (*heōios*), ‘off/in the dawn’

ἡ ἑῶη θάλασσα (*hē heōiē thalassa*), ‘the sea in the dawn’, Eratosthenes fr. 72 (Arrian, *Indike* 3. 1–5)

τὰ ἑῶα (*ta heōia*), ‘the parts in the dawn’, Ps.-Aristotle 4

ὁ ἑῶος ὠκεανός (*ho heōos ōkeanos*), ‘the ocean in the dawn’, Markianos 1

ἐξ ἑῶας (*ex heōias*) (sc. χώρας, *chōras*), ‘from (the) dawn (land)’, Aristotle, *Problemata* 946b14

πρὸς ἠοίων ... ἀνθρώπων (*pros ēoiōn ... anthrōpōn*), ‘from men of the dawn’, *Odyssey* 8. 29

πρὸς τῷ ἑῶνί τειχει (*pros tōi heōiōi teichei*), ‘by the dawn wall’, Xenophon, *Hellenika* 4. 4. 9

## South

**μσημβρία** (*mesēmbria*), ‘the midday’

ἀπὸ μσημβρίας (*apo mesēmbrias*), ‘from (the) midday’, Timosthenes fr. 3 (Agathemerios 2. 6); Ps.-Aristotle 4; Markianos 6; Ionic ἀπὸ μσημβρίας (*apo mesambriēs*), Herodotos 1. 6; ἀπὸ τῆς μσημβρίας (*apo tēs mesēmbrias*), ‘from the midday’, Agatharchides 10 (Photios)

ἐπὶ μσημβρίαν (*epi mesēmbrian*), ‘to (the) midday’, Eratosthenes fr. 71 (Arrian, *Anabasis*, 5. 6. 3)

πρὸς μσημβρίαν (*pros mesēmbrian*), ‘towards (the) midday’, Eratosthenes fr. 83 (Strabo 2. 1. 26); ‘Ps.-Skymnos’ 171, 521; Dionysios son of Kalliphon 62; Ionic πρὸς μσημβρίην (*pros mesambriēn*), Herodotos 1. 142

πρὸς μσημβρίας (*pros mesēmbriēs*), ‘on the midday side of’, Hekataios fr. 108 (Stephanos of Byzantion s.v. s.v. Δωδώνη)

ὑπὸ τῆν μσημβρίαν (*hypo tēn mesēmbrian*), Artemidoros (Diodoros 3. 2. 1)

adj. **μσημβρινός** (*mesēmbrios*), ‘of the midday’

τὰ μσημβρινά (*ta mesēmbrina*), ‘the parts towards the midday’, Thucydides 6. 2. 5; Strabo 2. 1. 12

κατὰ τὸ μσημβρινόν (*kata to mesēmbrinon*), ‘towards the midday (place)’, Ps.-Aristotle 4

ὁ μσημβρινός ὠκεανός (*ho mesēmbrios ōkeanos*), ‘the ocean of midday’, Markianos 1

comparative: μσημβρινώτερος (*mesēmbrinōteros*), ‘more in/towards the midday’, Geminus 14. 10

superlative: μσημβρινώτατος (*mesēmbrinōtatos*), ‘most in/towards the midday’, Strabo 2. 5. 33



## West

**δύσις** (*dysis*), ‘sinking’, ‘(a) setting’ (*noun*)

ἀπὸ δύσεως (*apo dyseōs*), ‘from (the) setting’, Agatharchides 10 (Photios); Ps.-Aristotle 4; Markianos 6; Ionic ἀπὸ δύσιος (*apo dysios*), Hekataios fr. 217 (Strabo 12. 3. 22)

ἐπὶ δύσιν (*epi dysin*), ‘to (the) setting’, Markianos 6; *Hypotyposis* 1

πρὸς δύσιν (*pros dysin*), ‘towards (the) setting’, Hekataios fr. 102c (Strabo 6. 2. 4); Eratosthenes fr. 32 (Agathemerios 1. 2)

πρὸς δύσεις (*pros dyseis*), ‘towards (the) settings’, Polybios 1. 42. 5; πρὸς τὰς δύσεις βλέπειν (*pros tas dyseis blepein*), Polybios 5. 104. 7

πρὸς ἡλίου δύσιν (*pros hēliou dysin*), ‘towards (the) setting of (the) sun’, Thucydides 2. 96

modifications:

ἀπὸ ἰσημερινῆς δύσεως (*apo isēmerinēs dyseōs*) and ἀπὸ δύσεως ἰσημερινῆς (*apo dyseōs isēmerinēs*), ‘from (the) equidurnal setting’, Timosthenes fr. 3 (Agathemerios 2. 6); cf. Ps.-Aristotle 4

ὑπ’ ἰσημερινῆς <θερινῆς> τε δύσεως (*hyp’ isēmerinēs <therinēs> te dyseōs*), ‘Ps.-Skymnos’ 172; εἰς χειμερινὰς δύσεις (*eis cheimerinas dyseis*), Polybios 1. 42. 6

adj. **δυτικός** (*dytikos*), ‘of/in/towards (the) setting(s)’

τὰ δυτικά (*ta dytika*), ‘the parts towards (the) setting(s)’, Ptolemy 2. 11. 16

comparative: δυτικώτερον (*dytikōteron*), ‘more in/towards the setting(s)’, Ptolemy 1. 14. 7; Markianos 6; *Hypotyposis* 1

superlative: δυτικώτατος (*dytikōtatos*), ‘most in/towards the setting(s)’, Ptolemy 1. 11. 1; Markianos 6; *Hypotyposis* 1

**δυσμή** (*dysmē*), ‘sinking’, ‘setting’ (*noun*)

ἀπὸ ἡλίου δυσμῶν (*apo hēliou dysmōn*), ‘from (the) settings of (the) sun’, Ps.-Skylax 47. 2; Ionic ἀπὸ ... ἡλίου δυσμέων (*apo ... hēliou dysmeōn*), Herodotos 2. 31

πρὸς δυσμαῖς (*pros dysmais*), ‘towards (the) settings’, ‘Ps.-Skymnos’ 169

πρὸς ἡλίου δυσμέων (*pros hēliou dysmeōn*), ‘on the side of (the) setting sun’, Herodotos 7. 115

adj. **δυσμικός** (*dysmikos*), ‘of the setting(s)’

δυσμική πλευρά (*dysmikē pleura*), ‘(the) side towards the setting(s)’, Ptolemy 2. 11. 1

ἡλιος **δύομενος/δύνων** (*hēlios dyomenos/dynōn*), ‘(the) sun setting’

πρὸς ἡλίον δύομενον (*pros hēlion dyomenon*), ‘towards (the) sun setting’, Ps.-Skylax 47. 3

πρὸς δύνοντος ἡλίου (*pros dynontos hēliou*), ‘towards (the) setting sun’, Aeschylus, *Supplices* 255]

**ἑσπέρα** (*hespera*), ‘evening’

ἀπ’ ἑσπέρης (*ap’ hesperēs*), ‘from (the) evening’, i.e. west, Eratosthenes fr. 72 (Arrian, *Indike*, 3. 1–5)

ἀπὸ ἑσπέρης δυσμέων (*apo hesperēs dysmeōn*), ‘from (the) settings of (the) evening’, i.e. west, Herodotos 2. 31 (Ionic)

ἐπὶ τῆς ἑσπέρης (*epi tēs hesperēs*), (winds) ‘at the evening (point)’, i.e. from the west, *Airs, Waters, and Places* 6 (if correct)

πρὸς ἑσπέραν (*pros hesperan*), ‘towards (the) evening’, i.e. the west, Hekataios fr. 102b (Strabo 7. 5. 8; Hanno, 3; ‘Ps.-Skymnos’ 519; Ionic πρὸς ἑσπέρην (*pros hesperēn*), Herodotos 2. 8

ὡς πρὸς ἑσπέραν (*ta pros hesperan*), ‘roughly towards (the) evening’, i.e. the west, Eratosthenes fr. 71 (Arrian, *Anabasis*, 5. 6. 3)

τὰ πρὸς ἑσπέραν (*hōs pros hesperan*), ‘the parts towards (the) evening’, i.e. the west, Thucydides 6. 2. 3

adj. ἑσπέριος (*hesperios*), ‘of evening’

ἑσπέριος (κόλπος) (*hesperios*, sc. *kolpos*), ‘of the evening’, here meaning the more westerly of two (gulfs)

τὰ ἑσπέρια (*ta hesperia*), ‘the parts in/of the evening’, i.e. west, Thucydides 6. 2. 5; Dikaiarchos fr. 124 (Strabo 2. 4. 2); Ps.-Aristotle 4

τὸ ἑσπέριον (ἡμισφαίριον) (*to hesperion*, sc. *hēmispairion*), ‘the evening hemisphere’, Strabo 2. 3. 2

τὴν ἑσπέριον θάλασσαν (*tēn hesperion thalassan*), ‘the evening sea’, Timosthenes fr. 7 (Stephanos of Byzantium, s.v. Ἄπειρα)

ὁ ἑσπέριος ὠκεανὸς (*ho hesperios ōkeanos*), ‘the evening ocean’, Markianos 1

πρὸς ... ἑσπερίων ἀνθρώπων (*pros hesperiōn anthrōpōn*), ‘from evening men’, i.e. men in the west, *Odyssey* 8. 29

## Ordinals with Seasonal Qualifiers

Strictly speaking these directions, defined in terms of solstitial sunrise and sunset, are not the same as modern ordinals (NE, SE, SW, NW) which have azimuths of 45°, 135°, 225°, and 315° (taking north as zero), but are at around 60°, 120°, 240°, and 300° at the latitude of Athens. See n. 27 above.

### North-East

ἀπὸ θερινῶν ἀνατολῶν (*apo therinōn anatolōn*), ‘from (the) summer risings’, Timosthenes fr. 4 (Strabo 1. 2. 21)

ἀπὸ τροπῆς θερινῆς (*apo tropēs therinēs*), ‘from (the) summer turning’, i.e. sunrise at the solstice, Timosthenes fr. 3 (Agathemerios 2. 6)

μεταξὺ θερινῶν ἀνατολῶν καὶ χειμερινῶν (*metaxy therinōn anatolōn kai cheimerinōn*), ‘between (the) summer risings and (the) winter (ones)’, ‘Ps.-Skymnos’ 170–1

ἀπὸ τοῦ περὶ τὰς θερινὰς ἀνατολάς τόπου (*apo tou peri tas therinas anatas topou*), ‘from the place around the summer risings’, Ps.-Aristotle 4

### South-East

ἀπὸ χειμερινῆς ἀνατολῆς (*apo cheimerinēs anatolēs*), ‘from (the) winter rising’, Timosthenes fr. 3 (Agathemerios 2. 6)

πρὸς χειμερινὴν ἀνατολὴν (*pros cherimerinēn anatolēn*), Eratosthenes fr. 83 (Strabo 2. 1. 26)

μεταξὺ θερινῶν ἀνατολῶν καὶ χειμερινῶν (*metaxy therinōn anatolōn kai cheimerinōn*), ‘between (the) summer risings and (the) winter (ones)’, ‘Ps.-Skymnos’ 170–1

ἀπὸ τοῦ περὶ τὰς χειμερινὰς (ἀνατολάς τόπου) (*apo to peri tas cheimerinas*, sc. *anatas topou*), Ps.-Aristotle 4

## South-West

ἀπὸ δύσεως χειμεριῆς (*apo dyseōs cheimerinēs*), ‘from (the) winter setting’, Timosthenes fr. 3 (Agathemerus 2. 6); cf. Ps.-Aristotle 4; pl. ἀπὸ δύσεων χειμεριῶν (*apo dyseōn cheimerinōn*), ‘from (the) winter settings’, Timosthenes fr. 4 (Strabo 1. 2. 21)

## North-West

ἀπὸ δύσεως θερινῆς (*apo dyseōs therinēs*), ‘from (the) summer setting’, Timosthenes fr. 3 (Agathemerus 2. 6); ἀπὸ τῆς θερινῆς δύσεως (*apo tēs therinēs dyseōs*), ‘from the summer setting’, Ps.-Aristotle 4; pl. ἀπὸ δύσεων θερινῶν (*apo dyseōn therinōn*), ‘from (the) summer settings’, Timosthenes fr. 4 (Strabo 1. 2. 21)

μέχρι δυσμῶν θερινῶν (*mechri dysmōn therinōn*), ‘as far as (the) summer settings’, ‘Ps.-Skymnos’ 173

ὑπ’ ἰσημερινῆς <θερινῆς> τε δύσεως (*hyp’ isēmerinēs <therinēs> te dyseōs*), ‘under (the) equidiurnal (*i.e. equinoctial*) and <summer> setting’, ‘Ps.-Skymnos’ 172

## Appendix 2: Examples of Wind Directions

### North Winds

**ἀπαρκτίας** (*aparktiās*), ‘(wind) from the bear(s)’

κατὰ ἀπαρκτιῶν (*kata aparktiōn*), ‘by (the) Aparktiās’, Timosthenes fr. 3 (Agathemerus 2. 7)

**βορέας** (*boreas*) or **βορρᾶς** (*borrhās*), ‘Boreas’ or ‘north wind’

εἰς βορρᾶν (*eis borran*), ‘to (the) north wind’, Eratosthenes fr. 32 (Agathemerus 1. 2); Artemidoros (Agathemerus 18)

πρὸς βορρᾶν (*pros borran*), ‘towards (the) north wind’, Eratosthenes fr. 71 (Arrian, *Anabasis*, 5. 6. 3); ‘Ps.-Skymnos’ 174

adj. **βόρειος** (*boreios*), ‘of/towards Boreas’, Eratosthenes fr. 44 (Geminus 15); Hipparchos fr. 21 (Strabo 2. 1. 27)

βόρειον ἡμισφαίριον (*boreion hēmiphairion*), ‘hemisphere towards Boreas’, Strabo 2. 3. 2

βόρειον κλίμα (*boreion klima*), ‘zone of latitude towards Boreas’, Ps.-Aristotle 2

### East Wind

**ἀπηνλιώτης** (*apēliōtēs*), ‘(wind) from the sun’

κατ’ ἀπηνλιώτην (*kat’ apēliōtēn*), ‘by (the) Apeliotes’, Timosthenes fr. 3 (Agathemerus 2. 7) (but SE at Timosthenes fr. 4 (Strabo 1. 2. 21))

πρὸς ἀπηνλιώτην ἄνεμον (*pros apēliōtēn anemon*), ‘towards (the) Apeliotes wind’ or ‘towards (the) wind from the sun’, Herodotos 4. 22; Eratosthenes fr. 71 (Arrian, *Anabasis*, 5. 6. 3)

adj. **ἀπηνλιωτικός** (*apēliōtikos*), ‘of the (wind) from the sun’

comparative: ἀπηνλιωτικώτερος, ‘more of/towards the wind from the sun’, Ptolemy 2. 1. 4

## South Wind

### νότος, *Notos*

ἀπὸ νότου (*apo notou*), ‘from (the) south wind’, Eratosthenes fr. 32 (Agathemerios 1. 2)  
ὡς ἐπὶ νότον (*hōs epi noton*), ‘generally to (the) south wind’, Eratosthenes fr. 71  
(Arrian, *Anabasis*, 5. 6. 2)

κατὰ νότον (*kata noton*), ‘in the direction of (the) south wind’, Timosthenes fr. 3  
(Agathemerios 2. 7)

πρὸς νότον (*pros noton*), ‘towards (the) south wind’, Artemidoros (Strabo 4. 1. 1)

adj. νότιος (*notios*), ‘of Notos’ or ‘of the south wind’; also ‘moist’, ‘rainy’

νότιον κλίμα (*notion klima*), ‘zone of latitude towards the south wind’, Ps.-Aristotle 2  
τὸ νότιον ἡμισφαίριον (*to notion hēmisphairion*), ‘hemisphere towards the south wind’,  
Strabo 2. 3. 2

comparative: νοτιώτερος (*notiōteros*), ‘more towards the south wind’, Hipparchos fr. 11  
(Strabo 1. 1. 12), fr. 21 (Strabo 2. 1. 27)

## West Wind

### ζέφυρος, *Zephyros*

ἀπὸ ζεφύρου (*apo zephyrou*), ‘from (the) Zephyros’, ‘Ps.-Skymnos’ 173

κατὰ ζέφυρον (*kata zephyron*), ‘in the direction of (the) Zephyros’, Timosthenes fr. 3  
(Agathemerios 2. 7)

πρὸς ζέφυρον (*pros zephyron*), ‘towards (the) Zephyros’, ‘Ps.-Skymnos’ 519,  
Herakleides Kritikos 9B

adj. ζεφύριος (*zephyrios*), ‘of the Zephyr’

ζεφύριον τοῖχος (*zephyrion toichos*), ‘(the) wall towards the Zephyr’, i.e. western wall,  
*Inscr. Délos* 290 (C3 BC), lines 166-7 [τῶι δεῖνι ἐργολαβήσαντι τοῦ νεῶ τῆς Δήμητρος  
τὸν τοῖχον τὸν ζεφύριον οἰκοδομήσαι καὶ τοῦ πρὸς ἔω τὰ ὑπὲρ | [ἀποπεπτωκότ?]α κτλ.

οἰκήμα ζεφύριον (*oikēma zephyrion*), ‘(the) house towards the Zephyr’, probable read-  
ing in *IG* xii. 5. 126 (Paros, C2 BC), lines 2–3 [ἐν τῶι οἰκίη|ματι τῶι ζεφυριῶι (?) μὴ καίειν  
πῦρ, ‘not to kindle fire [in the] zephyric [house?]’

## Ordinals

See note on ‘Ordinals with seasonal qualifiers’ in Appendix 1.

καικίας, *Kaikias* (approx. NE)

κατὰ καικίαν (*kata kaikian*), ‘in the direction of (the) *Kaikias*’, Timosthenes fr. 3  
(Agathemerios 2. 7)

εὐρος, *Euros* (approx. SE)

κατ’ εὐρον (*kat’ euron*), ‘in the direction of (the) *Euros*’, Timosthenes fr. 3 (Agathemerios  
2. 7) [but NE at Timosthenes fr. 3 (Strabo 1. 2. 21)]

πρὸς εὐρον (*pros euron*), ‘towards (the) *Euros*’, Eratosthenes fr. 32 (Agathemerios 1. 2)

λίψ, *Lips* (approx. SW)

κατὰ λίβα (*kata liba*), ‘in the direction of (the) *Lips*’, Timosthenes fr. 3 (Agathemerios  
2. 7)

ἀργέστης, *Argestēs*; ἰάπυξ, *Iapyx* (approx. NW)

κατὰ ἀργέστην (*kata argestēn*), ‘in the direction of (the) Argestes’, Timosthenes fr. 3 (Agathemerios 2. 7)

ὡς πρὸς ... ἄνεμον ἰάπυγα (*hōs pros ... anemon iapyga*), ‘generally towards (the) Iapyx wind’, Eratosthenes fr. 71 (Arrian, *Anabasis*, 5. 6. 3)

## Intermediate Winds

βορέας/βορρᾶς, *Boreas* or *Borrhas* (approx. NNE)

κατὰ βορρᾶν (*kata borran*), ‘in the direction of (the) north-north-easterly wind’, Timosthenes fr. 3 (Agathemerios 2. 7)

Boreas/Borrhas also means generally a northerly, or approx. north, wind.

φοῖνιξ, *Phoinix* (approx. SSE)

κατὰ φοινικᾶ (*kata phoinika*), ‘in the direction of (the) Phoinix’, Timosthenes fr. 3 (Agathemerios 2. 7)

λευκόνοτος, *Leukonotos* (approx. SSW)

κατὰ λευκόνοτον (*kata leukonoton*), ‘in the direction of (the) Leukonotos’, Timosthenes fr. 3 (Agathemerios 2. 7)

θρασκίας, *Thraskias* (approx. NNW)

κατὰ θρασκίαν (*kata thraskian*), ‘in the direction of the Thraskias’, Timosthenes fr. 3 (Agathemerios 2. 7)

Not noted here:

λιβόνοτος (*libonotos*), Timosthenes fr. 3 (Agathemerios 2. 7) (approx. SSW).

ὀλυμπίας (*olympias*), Timosthenes fr. 3 (Agathemerios 2. 7) (approx. NW).

κίρκιας (*kirkias*), Ps.-Aristotle 4 (approx. NNW).

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