Pytheas and Hecataeus: Visions of the North in the Late Fourth Century B.C.

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διὰ δὲ τὴν ἄγνοιαν τῶν τόπων τούτων οἱ τὰ Ῥιπαῖα ὄρη καὶ τοὺς Ὑπερβορείους μυθοποιοῦντες λόγου ἠξίωνται, καὶ ἃ Πυθέας ὁ Μασσαλιώτης κατεψεύσατο ταῦτα τῆς παρωκεανίτιδος, προσχήματι χρώμενος τῇ περὶ τὰ οὐράνια καὶ τὰ μαθηματικὰ ἱστορίᾳ.

> It is because of men's ignorance of these regions that any heed has been given to those who created the mythical Rhipaean Mountains and Hyperboreans, and also to all those false statements made by Pytheas the Massalian [fr.8g Bianchetti = T 16 Roseman] regarding the country along the ocean, wherein he uses as a screen his scientific knowledge of astronomy and mathematics.
>
> Strab. 7.3.1, transl. Jones

Ἑκαταῖος δὲ ὁ Ἀβδηρίτης, ἀνὴρ φιλόσοφος ἅμα καὶ περὶ τὰς πράξεις ἱκανώτατος…

> Hecataeus of Abdera, at once a philosopher and a highly competent man of affairs…
>
> Jos. *Ap.* 1.183 (*BNJ* 264 T 7a), transl. Thackeray

In 1809 a double-headed herm was erected in Marseille. One of its faces depicts Pytheas, the other Euthymenes, two notable Massaliote explorers. The choice of these two is rather straightforward, as they share a common background and an inclination to geographical exploration. By contrast, and putting their country of origin aside, would anyone today commission a double-headed herm depicting Pytheas together with his near contemporary Hecataeus of Abdera, an author best known for his utopian fiction? I will argue that this would not be unwarranted, for at least two good complementary reasons: one is their shared interest in the far north, the other their appropriation of information on this region from both

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literary, including mythic, accounts and from scientific, both theoretical and observational, reports and discussions.

A comparison between Pytheas and Hecataeus will especially increase modern scholars' understanding of the various ways in which traditional material was exploited by writers with rather different authorial goals. These are not explicitly stated in their preserved fragments, but scholars have managed to reconstruct a persuasive portrait of Hecataeus' intentions as a writer of utopian fiction (his *On the Hyperboreans*), while Pytheas is understood as attempting to give a truthful account of his explorations.[1] At the same time, it will bring into sharper focus the different treatment of these two authors by scholars. A seafarer, astronomer, and geographer on the one side and a philosopher and historian on the other,[2] Pytheas and Hecataeus were only a generation apart, with the explorer the earlier of the two. Both exhibited a considerable interest in the far north; but while the older one is firmly assimilated into the scientific tradition and is hailed as a daring explorer and an accomplished scientist (both empirical and theoretical),[3] the other is often labelled a writer of utopian fiction and an untrustworthy writer.[4] However, it seems that in reality the situation is not so

[1] See the latest authoritative treatments in D. W. Roller, *Through the Pillars of Heracles* (London 2006) 57–91 (Pytheas), and M. Winiarczyk, *Die hellenistischen Utopien* (Berlin 2011) 45–71 (Hecataeus).

[2] Their respective 'professional' designations in *Brill's New Pauly* s.v. Pytheas 4 and Hecataeus 4.

[3] See for example C. F. C. Hawkes, *Pytheas: Europe and the Greek Explorers* (Oxford 1977) 44–45; G. Aujac, *La Sphère, instrument au service de la découverte du monde* (Caen 1993) 81, 245, 257, 259, 296–297, 300–301; C. H. Roseman, *Pytheas of Massalia: On the Ocean* (Chicago 1994) 148, 155; S. Bianchetti, *Pitea di Massalia: L'Oceano* (Pisa 1998) 45–46; Lutz Käppel, "Bilder des Nordens im frühen antiken Griechenland," in A. Engel-Braunschmidt et al. (eds.), *Ultima Thule: Bilder des Nordens von der Antike bis zur Gegenwart* (Frankfurt am Main 2001) 11–27, at 11; Cameron McPhail, "Pytheas of Massalia's Route of Travel," *Phoenix* 68 (2014) 247–257, at 247, 251.

[4] He is, for example, not even mentioned in a recent comprehensive and authoritative review of ancient geography (D. W. Roller, *Ancient Geography.*

straightforward and that both occupy a place in the continuum of Greek geographical/meteorological/astronomical knowledge, even though their precise positions on this continuum are perhaps not adjacent to each other.[5] What brings them closer together is, on the one hand, the fact that Pytheas' approach to meteorological conditions obtaining in high northern latitudes was not, as we shall see, as straightforwardly and uncompromisingly scientific as often maintained; on the other, Hecataeus was apparently highly receptive to the information derived precisely from Pythean tradition on the same subject, even if he was more interested in concocting a story and not in offering an unbiased account of these phenomena. It seems worthwhile to analyse their respective treatments of the far north and in

The Discovery of the World in Classical Greece and Rome [London] 2015).

[5] For a recent nuanced classification of ancient geographical knowledge into intuitive/naïve, scholarly/canonical, and scientific/fully reasoned categories see A. Dan, K. Geus, and K. Guckelsberger, "What is Common Sense Geography? Some Preliminary Thoughts from a Historical Perspective," in *Features of Common Sense Geography: Implicit Knowledge Structures in Ancient Geographical Texts* (Berlin 2014) 17–38, at 19–21, 26–31 = "Common Sense Geography and Ancient Geographical Texts," *eTopoi* 6 (2016) 571–597, at 572–574, 578–580, 583–585. For a similar classification of ancient astronomical knowledge into cosmological or speculative, scientific or descriptive, and mathematical categories see D. L. Couprie, *Heaven and Earth in Ancient Greek Cosmology. From Thales to Heraclides Ponticus* (New York 2011) xxviii–xxxii. For a similarly sensitive and inclusive approach to ancient ethnographic knowledge, although with no attempt at classification, see J. E. Skinner, *The Invention of Greek Ethnography. From Homer to Herodotus* (Oxford 2012), esp. 7–8, 14–17, 43–44, 49–50, 59, 133, 233–236, 241–243, 255. I will not here discuss the now generally superseded *muthos* vs. *logos* dichotomy; it is enough to refer to such works as Bruce Lincoln, "Gendered Discourses: The Early History of 'Mythos' and 'Logos'," *HR* 36 (1996) 1–12, "Competing Discourses: Rethinking the Prehistory of *Mythos* and *Logos*," *Arethusa* 30 (1997) 341–367, and *Theorizing Myth: Narrative Ideology and Scholarship* (Chicago 1999); R. Buxton (ed.), *From Myth to Reason? Studies in the Development of Greek Thought* (Oxford 1999); W. Wians (ed.), *Logos and Mythos: Philosophical Essays on Greek Literature* (Albany 2009); Robert L. Fowler, "*Mythos* and *Logos*," *JHS* 131 (2011) 45–66; D. Lehoux, *What Did the Romans Know? An Inquiry into Science and Worldmaking* (Chicago 2012).

this way to position them on the continuum of Greek geographical/meteorological/astronomical knowledge in their proper places.

1. *Pytheas' Thule and northern barbarians*

Pytheas' treatment of the far north characteristically includes his appropriation of Homeric poetry.[6] In his account of the meteorological conditions obtaining at Thule, as well as its position, he seems to have consciously reflected (or refracted) the *Odyssey*. The Massaliote located Thule at the latitude of the geographical arctic circle, a six-days' sail to the north of another island, Britain. In his exact words, at Thule "the arctic and the summer tropic circle are the same" (ὁ αὐτός ἐστι τῷ ἀρκτικῷ ὁ θερινὸς τροπικὸς κύκλος), which is a formulation drawn from the vocabulary of scientific astronomy.[7] But Pytheas' report on Thule reveals a conscious integration of the results of his geographical explorations and of his prior knowledge of the geometry of the sphere with an engagement with Homeric poetry.[8] More specifically, the explorer, scientist, and scholar seems to have interpreted the poet's account of Laestrygonia, situated six days' sail from Aeolus' island, where there is almost no night "since the paths of night and day are [there]

[6] On Pytheas and his *On the Ocean* see, for example, Roseman, *Pytheas*; Bianchetti, *Pitea*; B. Cunliffe, *The Extraordinary Voyage of Pytheas the Greek* (New York 2002); Roller, *Through the Pillars* 57–91, *Ancient Geography* 84–90.

[7] For Thule at the latitude of the geographical arctic circle see Pyth. fr.8c B. = fr.6 R. *ap*. Eratosth. fr.34 Roller; cf. fr.12a B. = T 27 R., also Cleom. *De motu circ.* 1.4.222 Todd; cf. Pyth. fr.14 B. = T 10 R. and Crates fr.37b Mette (H. J. Mette, *Sphairopoiia: Untersuchungen zur Kosmologie des Krates von Pergamon* [Munich 1936] 268.5–7). For its location with respect to Britain see Pyth. fr.8a B. = fr.2 R. *ap*. Eratosth. fr.35 Roller; fr.9a B. = T 18a R.; cf. Timaeus *BNJ* 566 F 74 = Pyth. fr.8f B. = T 23 R. See also the interpolation in Solinus, Th. Mommsen, *C. Iulii Solini Collectanea rerum memorabilium* (Berlin 1895) 219, cf. xci (J. J. Tierney, *Dicuili Liber de Mensura Orbis Terrae* [Dublin 1967] 116). Unacknowledged translations of Greek are my own.

[8] Tomislav Bilić, "Crates of Mallos and Pytheas of Massalia: Examples of Homeric Exegesis in Terms of Mathematical Geography," *TAPA* 142 (2012) 295–328, at 319–322; "The Island of the Sun: Spatial Aspect of Solstices in Early Greek Thought," *GRBS* 56 (2016) 195–224, at 221–223.

near [to each other]" (ἐγγὺς γὰρ νυκτός τε καὶ ἤματός εἰσι κέλευθοι, *Od*. 10.80–86), in terms of the meteorological conditions obtaining at the geographical arctic circle, and utilized this understanding of the Homeric text in his account of the far north. Indeed, Pytheas in *On the Ocean* wrote on some northern areas where the night is so short that "between the setting and the following rising of the sun there is only a short interval" (μετὰ τὴν δύσιν μικροῦ διαλείμματος γινομένου ἐπανατέλλειν εὐθέως τὸν ἥλιον), specifically referring to the regions with the longest day of 21 or 22 hours.[9] This corresponds to the description of Laestrygonia in the *Odyssey*, and seems to have been conceived and written with these particular epic verses in mind.

This apparently was recognised by the second-century B.C. grammarian of the Pergamene school Crates of Mallos, who compared the meteorological conditions characteristic of the land of the Laestrygonians to those obtaining in the far north—more precisely, in the area with the longest daylight on the summer solstice of 23 hours, where "the sunset is near to dawn, only a small arc of the summer tropic being cut off under the horizon" (πλησιάζειν τὴν δύσιν τῇ ἀνατολῇ μικρᾶς παντάπασι τῆς περιφερείας ὑπὸ τὸν ὁρίζοντα ἀπολαμβανομένης ἀπὸ τοῦ θερινοῦ τροπικοῦ).[10] The similarity of Pytheas' description to Homer's is probably the reason why Crates believed that it referred to the conditions imagined by the poet.

Pytheas' report thus reflects the method he used in composing his account of the far north: it consisted of combining his knowledge of the geometry of the sphere and his observations gathered during an actual voyage to whatever northern place he had visited with a specific Homeric reference. An island situated six days' sail to the north of Britain with no night on the summer solstice conforms well with Homer's account in the *Odyssey*, where Telepylus is situated six days' sail

[9] Fr.13a B. = fr.8 R.; cf. Roseman, *Pytheas* 140, and Bianchetti, *Pitea* 103. Compare also fr.13b B. = fr.9 R. On this fragment more will be said below.

[10] Crates fr.50 Broggiato = *BNJ* 2113 F 20.

from Aeolus' island, with the night encompassing only the smallest part of a 24-hour day in Laestrygonia. It seems that Pytheas in part turned to Homer for inspiration when discussing the meteorological conditions obtaining in the far north; in addition, he seems to have indulged in a piece of Homeric scholarship in the form of an interpretation of the Laestrygonian episode as referring to the latitude of the geographical arctic circle. These observations show that the postulated continuum of Greek geographical/meteorological/astronomical knowledge is not only a modern hermeneutic tool created in order to facilitate understanding of ancient societies but also a concept corresponding to the way in which the Greeks themselves understood the relation of what modern scholarship classifies as narrative vs. descriptive and scientific approaches to phenomena. Thus a Homeric description was here incorporated into a study of natural phenomena by the scientific tradition as a respectable source of information, with little or no prejudice against its narrative character and traditional background. This is completely different from, for example, Eratosthenes' attitude to Homeric poetry as a source of information for scholarly geography. While he trusted Pytheas and accepted him as an important source of information on the north,[11] Eratosthenes scorned Homer's poetry as 'an old wive's tale' and notoriously discarded any merit in his geography by referring to the cobbler who sewed up Aeolus' bag of winds (frr.2, 5 Roller).

Another mixture of scientific and more traditional approaches to a similar subject appears in Pytheas' report, as recorded by at least one trustworthy witness; this part of his account specifically dealt with Britain. Quite apart from his historically attested visit to or circumnavigation of Britain, Pytheas' voyage necessarily introduces Britain into my discussion, for in his wake it was regularly associated with meteoro-

[11] D. W. Roller, *Eratosthenes' Geography* (Princeton 2010) 18, 29, 128, 153, 212.

logical conditions characteristic for Thule itself. But it is probable that already Pytheas' story of how "the barbarians" showed him "where the sun goes to sleep" (ὅπου ὁ ἥλιος κοιμᾶται) refers precisely to Britain (fr.13a B. = fr.8 R.). As already noted, he describes how in that region the night can be as short as two or three hours so that only a short interval elapses from sunset to sunrise,[12] which cannot refer to Britain as such, but the information probably came from the inhabitants of the island or at least Pytheas credited them as his source. Elsewhere Pytheas describes how in the farthest north he was shown "the sun's bed" (τὴν ἡλίου κοίτην) by the barbarians, as there "the sun always spent its nights" (τῶν νυκτῶν ἀεὶ γινομένου) with them.[13] Thus Pytheas once again writes of a nightless day, still most probably referring to Britain. Again we must presume that this description applies primarily to the days about the summer solstice,[14] while the descriptions of Thule and Britain resemble the conditions at Telepylus. The sun's "sleep" and its "bed" are certainly not the terms expected from an author who otherwise confidently used the postulates of the latest developments in geometry and astronomy, but is perhaps another concession on his part to his predecessors who used mythic discourse in accounting for the phenomena in which he was interested, or at least did so in his interpretation.[15] It appears that this was Pytheas' usual method in approaching and giving account of these phenomena.

[12] Bianchetti, *Pitea* 103; J. Evans and J. L. Berggren, *Geminos's Introduction to the Phenomena: A Translation and Study of a Hellenistic Survey of Astronomy* (Princeton 2006) 162.

[13] Pyth. fr.13b B. = fr.9 R.; W. Wolska-Conus, *Cosmas Indicopleustès. Topographie chrétienne* I (Paris 1968) 398; Roseman, *Pytheas* 143; Bianchetti, *Pitea* 103. The description only makes sense if it is referring to a model of the diurnal movement of the sun involving its nightly route behind a large mountain in the north, which makes little sense in terms of spherical astronomy with which Pytheas was more than familiar.

[14] Bianchetti, *Pitea* 190–192

[15] Cf. M.-C. Beaulieu, *The Sea in the Greek Imagination* (Philadelphia 2016) 7–8.

2. *Britain in the wake of Pytheas*

The tradition derived from Pytheas' report, which, if not particularly clearly, did focus on a more or less tangible region, fast became distorted and imprecise. Most notably, Britain and Thule were merged into a location in the far north characterised by meteorological conditions typical of high northern latitudes, extending from an area well to the south of the geographical arctic circle to the very north pole. This will have important consequences for the concept of Britain as it appeared in Hellenistic geography and literature, including the most extensive account of the north, found in Hecataeus' *On the Hyperboreans*.

Caesar mentioned some unnamed islands around Britain, of which it is written that at the winter solstice the night there lasts for thirty consecutive days, while Plutarch described an island named Ogygia, situated five days' sail west of Britain "towards the summer sunset" (κατὰ δυσμὰς ἡλίου θερινάς), where "the sun is hidden for less than one hour for thirty days" (τὸν ἥλιον ὁρᾶν κρυπτόμενον ὥρας μιᾶς ἔλαττον ἐφ' ἡμέρας τριάκοντα).[16] These reports certainly stand in some connection with Procopius' and Jordanes' accounts of 'Thule' (actually Scandinavia) and its forty days of continuous day and night about the solstices.[17] At the same time, when Caesar and Plutarch associate these specific meteorological conditions with Britain, in light of Pytheas' voyage and report as well as these parallel accounts, a link with Pytheas' Thule immediately comes to mind.[18] All these testimonies could thus represent resonances of Pytheas' work, more or less removed from their ultimate source.

Indeed, Britain itself was loosely identified with Pytheas'

[16] Caes. *B.Gall.* 5.13.3; Plut. *De fac.* 941A, D (cf. J. Romm, *The Edges of the Earth in Ancient Thought* [Princeton 1992] 204).

[17] Procop. *Goth.* 6.15.6–7; Jord. *Get.* 3.19–20.

[18] For Pytheas as Plutarch's source see Romm, *Edges* 204.

Thule in the Roman period.[19] More to the point, its long daylight hours and bright nights in summer were often emphasised.[20] This tradition was occasionally presented in precise numerical day-length values: the longest day in Britain was reported as consisting of between 17 and 19½ hours, which corresponds to a latitude from 54° to 61°30′.[21] It was thus couched in mathematical terms and offered as empirically verified—and thus scientific—information.

In addition, there are several mythic accounts that associate Britain with Thule. Of these the most interesting—or at least the best attested—is Hecataeus' account of Hyperborea (see

[19] Sil. *Pun.* 3.597, 17.416–417; Stat. *Silv.* 3.5.20, 4.4.62, 5.1.91 (perhaps also 5.2.54–55); Tac. *Agr.* 10.4 (the Shetlands); Claud. *Cons.Stil.* 3.52–58, 155–156, 4.32. Cf. J. O. Thomson, *History of Ancient Geography* (Cambridge 1948) 235; H. J. W. Wijsman, "Thule Applied to Britain," *Latomus* 57 (1998) 318–323.

[20] Plin. *HN* 2.186; Tac. *Agr.* 12 (cf. Jord. *Get.* 2.13), one can "distinguish [only] a short interval between the end and the commencement of light" (*ut finem atque initium lucis exiguo discrimine internoscas*), which should be compared to Aratus *Phaen.* 61–62, Hom. *Od.* 10.86, and Pyth. fr.8c B. = fr.6 R., as well as to Tac. *Germ.* 45.1; Juv. 2.161 with Serv. *ad Aen.* 6.265; Cass. Dio 77.13.3; Cleom. *De motu circ.* 1.4.197–207 Todd; *Pan.Const.Aug.* 6(7).7.1, 3, 9.2–5, pp. 205–208 Bährens (S. N. C. Lieu and G. Vermes, "Constantine's 'Pagan Vision'; The Anonymus Panegyric on Constantine (310), *Pan. Lat.* VII(6)," in *From Constantine to Julian, Pagan and Byzantine Views* [London 1996] 63–96, at 80–82), with a reference to the passage in the *Agricola*; Serv. *ad Georg.* 1.247; Bede *Hist.Eccl.* 1.1. The phenomenon was also noticed for more southern regions, Hipparch. frr.57, 58 Dicks.

[21] Pyth. fr.11 B. = T 5 R. *ap.* Hipparch. fr.61 Dicks, more than 19 hours (D. R. Dicks, *Geographical Fragments of Hipparchus* [London 1960] 190; Roseman, *Pytheas* 44–45); Plin. *HN* 2.186 (cf. Mart. Cap. 6.595); Cleom. *De motu circ.* 1.4.197–207, 2.1.443 Todd; Ptol. *Alm.* 2.6 (I 112.8–114.8 Heiberg), *Geog.* 8.3.4–11; the sundials from Rome and Crêt-Chatelard (H. Diels, *Antike Technik: Sieben Vorträge*[2] [Leipzig 1920] 189–191 with Abb. 63–64; Derek J. De Solla Price, "Portable Sundials in Antiquity, including an Account of a New Example from Aphrodisias," *Centaurus* 14 [1969] 242–266, at 254–255 Table 1; R. J. A. Talbert, "The Roman Worldview: Beyond Recovery?" in K. A. Raaflaub et al. (eds.), *Geography and Ethnography: Perception of the World in Pre-Modern Societies* [Chichester 2010] 252–272, at 266 Table 16.1).

below). His city of the Cimmerians[22] was probably associated with his Hyperborean Helixoia that most likely represents—fictionalised—Britain.[23] It is not impossible that his *On the Hyperboreans*, although mostly fantasy, might have contained certain resonances of Pytheas' report, and the most likely type of data for his appropriation from Pytheas would be the information about the sun's behaviour at the solstices and the accompanying phenomena of daylight/nighttime. Similarly, the account in the *Orphic Argonautica* places the sun-deprived Cimmerians in the far north-west, on the way from the Northern Ocean towards the British Isles.[24] Indeed, the Cimmerians were sometimes identified with the Celts that attacked Delphi, originally inhabiting a region near the western Ocean, or with the Cimbri living at the north pole by the outer sea.[25] It is clear that Homer's Cimmerians were at some point identified with

[22] *BNJ* 264 F 8 = Apollod. *FGrHist* 244 F 157a and Eratosth. fr.8 Roller (cf. K. Geus, *Eratosthenes von Kyrene: Studien zur hellenistischen Kultur- und Wissenschaftsgeschichte* [Oberhaid 2011] 268 with n.42).

[23] *BNJ* 264 F 7, 11a; Hawkes, *Pytheas* 38; T. P. Bridgman, *Hyperboreans: Myth and History in Celtic-Hellenic Contacts* (New York 2005) 133, 136–137, 139–140; Iris Sulimani, "Imaginary Islands in the Hellenistic Era: Utopia on the Geographical Map," in G. Hawes (ed.), *Myths on the Map. The Storied Landscapes of Ancient Greece* (Oxford 2017) 221–242, at 230, 242 (with other references noted in Winiarczyk, *Die hellenistischen Utopien* 55 n.63). This was surely Timaeus' interpretation, *BNJ* 566 F 164 *ap*. Diod. 5.21.1, cf. 3 (see K. Geus, "Utopie und Geographie. Zum Weltbild der Griechen in frühhellenistischer Zeit," *Orbis Terrarum* 6 [2000] 55–90, at 71).

[24] *Orph.Argon.* 1120–1127. For a land of the dead in the British Isles see Claud. *In Ruf.* 1.123–128; Procop. *Goth.* 8.20.42–58; cf. Tzetzes schol. Lycoph. 1200 (II 346 Scheer) *ad* Hes. *Op.* 169bis (Serena Bianchetti, "Ancient Perceptions and Representations of the Island Britannia," in *Features of Common Sense Geography* 115–130, at 124–125); the mediaeval *mappa mundi* reproduced in E. Edson, *Mapping Time and Space* (London 1997) 62–63 with Fig. 4.2.

[25] Schol. BH Hom. *Od.* 11.14 (II 479 Dindorf); Plut. *Mar.* 1.9–10. For Cimmerians = Cimbri see Posidon. *FGrHist* 87 F 116 and fr.272 E.-K. = *FGrHist* 87 F 31. For Cimmerians at terrestrial poles see Crates fr.54 Broggiato = *BNJ* 2113 F 23a (cf. Bilić, *TAPA* 142 [2012] 298–299).

the Celts of north-western Europe, and at the same time with the farthest north. It is the apparent latitude of their abode—more precisely, the meteorological phenomena characteristic of this latitude—rather than anything else that was decisive in their localisation. This Celtic association once more suggests a link with Britain, which is discussed more thoroughly below.

Thus Britain, owing to its position in the north and its proximity to Thule as reported by Pytheas, was in both Hellenistic geography and myth included, perhaps already by Pytheas or certainly in the wake of his report, into considerations of the phenomenon of long daylight hours about the summer solstice and, conversely, long nights about the winter solstice, in high latitudes. Its importance and attractiveness lay primarily in its cosmological setting, rather than in its geographical position, although the former is a direct consequence of the latter.

3. *Hecataeus' Hyperborea*

The most elaborate literary treatment of the north in the wake of Pytheas' report is the early Hellenistic utopian ethnography in Hecataeus' *On the Hyperboreans*.[26] Hecataeus of Abdera, most likely a generation younger than Pytheas, concocted an account that included, together with—I submit—Britain as the island of solstitial turning and thus associated with the phenomena characteristic for the latitude of the geographical arctic circle the fabulous northern people the Hyperboreans, the constellation Ursa Major, the north wind Boreas, and the Rhipaean mountains.

I rather dogmatically stated in the previous section that Hecataeus' Hyperborean Helixoia most likely represents Britain. It is time to supply some arguments to support this claim and to analyse the account of the north in *On the Hyperboreans* that most likely involves Britain, apparently engineered by

[26] For a full account of Hecataeus' *On the Hyperboreans* see Winiarczyk, *Die hellenistischen Utopien* 45–71; cf. P. Lang's entry "Hecataeus (264)" in *BNJ* (2016).

Hecataeus himself, at least in the form in which it has reached us.[27]

It is likely that Hecataeus included certain data from Pytheas' report in his account of the Hyperboreans, since the latter's testimony was by far the most detailed and up-to-date account of the far north available at the time.[28] The Abderite described a large island situated "towards the Bears" (κατὰ τὰς ἄρκτους), beyond the land of the Celts, inhabited by the Hyperboreans.[29] This terminology is echoed by no less a scholar than Hipparchus in his account of the relative positions of Britain and 'Keltikê',[30] while Britain was indeed placed "under the Bear" (ὑπ' αὐτὴν τὴν ἄρκτον) by Timaeus.[31] Hecataeus further recounted that Leto was born on this island and that Apollo was the most venerated deity there, describing his spherical temple and sacred precinct, as well as a city and its priesthood.[32] He also mentioned the Rhipaeans, whence the Hyperborean

[27] Cf. Tomislav Bilić, "Apollo, Helios, and the Solstices in the Athenian, Delphian, and Delian Calendars," *Numen* 59 (2012) 509–532, at 519–523.

[28] Hawkes, *Pytheas* 38–39; Geus, *Orbis Terrarum* 6 (2000) 71, 73; Bridgman, *Hyperboreans* 98–99, 101, 103; Roller, *Pillars* 66 with n.85; *pace* F. Jacoby, *FGrHist ad* 264 F 7 (pp. 53, 55); Winiarczyk, *Die hellenistischen Utopien* 62–63.

[29] *BNJ* 264 F 7 *ap*. Diod. 2.47.1. For an account of some islands in the land of the Hyperboreans see further Hecataeus' contemporary (cf. M. Baumbach, *Brill's New Pauly* s.v.) Simias of Rhodes fr.1 Powell (J. D. P. Bolton, *Aristeas of Proconnesus* [Oxford 1962] 68; Bridgman, *Hyperboreans* 77).

[30] Hipparch. fr.61 Dicks, Pyth. fr.11 B. = T 5 R. (Dicks, *Hipparchus* 190; Roseman, *Pytheas* 44–45). This echo most likely reflects Hipparchus' and Hecataeus' common source, i.e. Pytheas.

[31] *BNJ* 566 F 164 *ap*. Diod. 5.21.6. This designation by Timaeus, another contemporary of Hecataeus, here perhaps echoing Pytheas (but not if he meant by "under the Bear" precisely the arctic circle), might stand in some relation to Hecataeus' claim that the Hyperborean island is situated "towards the Bears."

[32] Diod. 2.47.2–3. In another fragment Hecataeus emphasised that Apollo is revered by the Hyperboreans in their lands (264 F 10), and he interpreted Apollo's 19-year intervals between his visits of the island in terms of the Metonic cycle (F 7 *ap*. Diod. 2.47.6).

priests of Apollo, sons of Boreas, summon the swans in order for them to join in the singing of the hymns of praise to Apollo (F 12). The fact that the moon appears to be near the earth when viewed from the island probably belongs to the complex of ideas of the moon being very near some regions of the earth, especially those in the far north.[33] Hecataeus called this island Helixoia,[34] and its inhabitants Hyperborean Carambycians, after the name of a river Carambyca.[35] This finds a suggestive parallel in the Carambis promontory in Paphalgonia, situated opposite "Helikê the Bear" and exposed to Boreas, as recorded by Ephorus.[36] It is likely that Helixoia was indeed concocted from Helikê, the name of the constellation Ursa Major, perhaps solely on the basis of Ephorus' description,[37] but possibly also due to the fact that the constellation, in one model accounting for the annual solar movement devised by the Greeks, determined the northern limit of the *oikoumenê* and the fixed, i.e. geographical, arctic circle.[38]

The earliest source for this concept is Heraclitus' description

[33] *BNJ* 264 F 7 *ap.* Diod. 2.47.5; Phot. *Bibl.* cod. 166.111a4–11, "beyond Thule" (J. R. Morgan, "Lucian's True Histories and the Wonders beyond Thule of Antonius Diogenes," *CQ* 35 [1985] 475–490, at 477–478); Plut. *De fac.* 937E.

[34] The island is only named in *BNJ* 264 F 11a (Steph. Byz. s.v. Ἐλίξοια = Hdn. 1.281.13–14 Lentz), where it is described as "not smaller than Sicily" (νῆσος … οὐκ ἐλάσσων Σικελίας), exactly as in Diodorus (2.47.1 = F 7, νῆσον οὐκ ἐλάττω τῆς Σικελίας).

[35] *BNJ* 264 F 11ab; cf. Geus, *Orbis Terrarum* 6 (2000) 71–72; Winiarczyk, *Die hellenistischen Utopien* 54. Cf. Plin. *HN* 6.34 for the river Carambucis associated with the Hyperboreans and the *Ripaei montes*.

[36] *BNJ* 70 F 41; Ap. Rhod. 2.360–362 with schol. 2.360–363ab (p.157 Wendel); cf. Geus, *Orbis Terrarum* 6 (2000) 72; Bridgman, *Hyperboreans* 131; see also Strab. 2.5.22, 12.3.10.

[37] Geus, *Orbis Terrarum* 6 (2000) 72.

[38] For the derivation of the name see Grace H. Macurdy, "The Hyperboreans Again, Abaris, and Helixoia," *CR* 34 (1920) 137–141, at 140–141 (further cited by Thomson, *History* 403, and Winiarczyk, *Die hellenistischen Utopien* 55 n.66). For Ursa Major as the northern limit of the annual solar movement see Bilić, *TAPA* 142 (2012) 311–312.

of the Bear as forming "the limits of morning and evening" (ἠοῦς καὶ ἑσπέρας τέρματα). His wording suggests that he was referring to an arctic circle as defined by the Ursa Major constellation, which thus presented one of the limits (μέτρα) of the sun's annual movement in the north.[39] After Heraclitus, Ursa Major was recognised by several authors, including Aristotle, as the northern limit of the annual solar voyage and/or involved in the interdependent concept of the extent of the *oikoumenê*.[40] This tradition was followed by Avienius, who explicitly associated the concept of Ursa Major as the boundary of the annual solar movement (*Or.Mar.* 649–650)[41] with the continuous 24-hour daylight at Thule on the day of the summer solstice (*Descr.orb.terr.* 761–763). The latter passage is a translation of Dionysius the Periegetes' verses, where "the pole of the Ursae" (πόλον ἄρκτων) also has the meaning "the fixed arctic circle,"[42] and naturally reflects the data originally introduced by Pytheas. Another Hyperborean toponym, the Rhipaean mountains (in Hecataeus' description of Helixoia at *BNJ* 264 F 12), were also conceived in the Archaic period as hindering the sun's advance

[39] Heracl. B 120 D.-K. with B 94 (to the latter add *P.Derv.* 4.8); cf. G. S. Kirk, *Heraclitus: The Cosmic Fragments* (Cambridge 1962) 289; C. H. Kahn, *The Art and Thought of Heraclitus* (Cambridge 1979) 109.

[40] Aeschin. *In Ctes.* 165; Arist. *Mete.* 362b3, 9, fr.695 (p.749B.37–38 Gigon = *BNJ* 646 F 1.6), cf. *Mete.* 350b6–7; [Arist.] *Pr.* 942a1, 4; Ptol. *Tetr.* 2.2.6.

[41] E. Kiessling, "Ῥίπαια ὄρη," *RE* 12 (1914) 846–916, at 852.38–854.6, believes that Avienius here described the diurnal rather than the annual path of the sun. The passage is admittedly ambiguous and the context suggests that Avienius had the diurnal movement in mind here, but "limits of the Bear" (*septentrionum … confinia*) cannot in any way be associated with the diurnal solar movement (see Avienius *Descr.orb.terr.* 761–763). For the complicated question of the nature, organization, and sources of *Ora maritima*, deriving from—as a rule, much earlier—sources, see Hawkes, *Pytheas* 19–23, 25; Bianchetti, *Pitea* 49–52, 128–129; Cunliffe, *Extraordinary Voyage* 38–44; Bridgman, *Hyperboreans* 211 n.16; Roller, *Pillars* 9–12, *Ancient Geography* 38, 44; L. Antonelli, "Commento" on *Jacoby Online* "Auienus, *Ora maritima*."

[42] Dionys. Per. 582 (J. L. Lightfoot, *Dionysius Periegetes: Description of the Known World* [Oxford 2014] 228–229), cf. 394; *pace* Eust. *ad* Dionys. Per. 581 (*GGM* II 330.8–10).

to the north at the summer solstice.[43]

At the same time, both Helikê and, consequently, Helixoia, derive their name from the noun *helix* ("spiral") or verb *helissô* ("turn round or about").[44] This 'turning' probably refers to a concept characteristic of the annual motion of the sun—indeed, the semantic ranges of both *helissô* and *helix* include the solar movement.[45] These considerations allow us to infer that Hecataeus envisaged Helixoia as "the island of turning," that is, "the island of the solstice," combining in its nature the association both with the constellation that marked the location of the annual solar turn in the far north (Helikê) and with the sun's annual turning round the solstitial *terma* (*helissô*). These two derivations need not be mutually exclusive and could both refer to the northernmost reach of the sun at the summer solstice,

[43] Aristeas *BNJ* 35 F 8 with Bolton, *Aristeas* 41, and R. L. Fowler, *Early Greek Mythography* II (Oxford 2013) 606; Alcm. 90 *PMG* (itself dependent upon Aristeas; Bolton 5, 40, 43, and Dowden, "Commentary" on *BNJ* 35 F 2, 9, "Biographical essay"); cf. Soph. *OC* 124 and fr.956 Radt with A. C. Pearson, *The Fragments of Sophocles* III (Cambridge 1917) 118, and Dowden on *BNJ* 35 F 9; [Hippoc.] *Aer.* 19 and *De victu* 2.38; Arist. *Mete.* 350b6–7.

[44] For the etymology see schol. Aratus 35, 37, cf. Hippol. *Haer.* 4.48.8 (W. Gundel, "Helike 3," *RE* 7 [1912] 2858–2862, at 2859.22–34); Macurdy, *CR* 34 (1920) 140; P. Chantraine, *Dictionnaire etymologique de la langue grecque* II (Paris 1970) 339; R. Beekes, *Etymological Dictionary of Greek* I (Leiden 2010) 411 s.v. ἕλιξ.

[45] For *helissô* see Eur. *Phoen.* 3; Herodorus of Susa *SEG* VII 14.8 (R. Merkelbach and J. Stauber, *Jenseits des Euphrat. Griechische Inschriften* [Munich 2005] 74–75; D. T. Potts, *The Archaeology of Elam* [Cambridge 2016] 360); Heracl. *Quaest.Hom.* 44.4; Mesomed. fr.2.25 Heitsch; *SteinepigrGrOst* III 06/02/27; Orph. *Poet.Epic.Gr.* 539F, etc. For *helix*, Pl. *Ti.* 39A; [Eudox.] *Ars Astron.* coll. 9.1–11, 20.17–21.2 Blass; Epicurus *Ep.* 2.93 (p.40.14 Usener); Callim. fr.191.61 (W. Burkert, *Lore and Science in Ancient Pythagoreanism* [Cambridge 1972] 420 n.106); Hermesianax fr.7.86 Powell; Aët. 2.23.8–9 Mansfeld and Runia (attributed to the Stoics by J. Mansfeld and D. T. Runia, *Aëtiana. The Method and Intellectual Context of a Doxographer* II [Leiden 2009] 555, 557–558); [Tim. Locr.] *De Nat. Mund. et An.* 29); see further R. Beck, *The Religion of the Mithras Cult in the Roman Empire* (Oxford 2006) 241 with n.2.

one referring to the movement of the sun and its change of direction both on the horizon and on the meridian, the other referring to the approach of the daily orbit of the sun to the orbit of Ursa Major in terms of its connection with the fixed arctic circle (what Pytheas described in terms of identity of the arctic circle and the summer tropic) or simply to the sun's approaching the region in which Ursa Major revolves. In Hecataeus' construction the name Helixoia would thus at a single stroke designate both the solar movement in a helix and the name of the constellation Helikê, two concepts already drawn together in Greek tradition.

It seems only natural that Hecataeus introduced the Hyperboreans, the northern people *par excellence*, into his account of the far north. But it does not seem likely that he borrowed them from Pytheas, who apparently did not mention them, despite having ample opportunity to do so.[46] It seems that they were an addition of his own, perhaps motivated by their close association with Apollo and his seasonal voyages to the north[47] or their identification with the Celts,[48] which placed them in the region at close proximity to Britain. Otherwise, their close connection with the northern limit of the annual solar movement, exemplified in the reports of Pherenicus and Pliny, which are probably later than Hecataeus, perhaps featured in a pre-Hecataean tradition and was the reason for their placement on Helixoia.[49]

[46] *Pace* Bridgman, *Hyperboreans* 129, 135.

[47] Alc. fr.307c Lobel-Page/Voigt. On Apollo's association with the Hyperboreans and seasonal movement of the sun see Tomislav Bilić, "Calendric Aspects of Myths and Cults Involving Apollo's Visit to Hyperborea," *CJ* (forthcoming).

[48] Cf. Protarchus *ap.* Steph. Byz. s.v. Ὑπερβόρεοι (*FHG* IV 485) and Hdn. 3.1.115 Lentz; Heraclid. Pont. fr.49 Schütrumpf; Philistus(?) *ap.* Steph. Byz. s.v. Γαλεῶται (I. Malkin, *The Returns of Odysseus: Colonization and Ethnicity* [Berkeley 1998] 248); Asclepiades of Tragilos *BNJ* 12 F 19 (Bridgman, *Hyperboreans* 68).

[49] Pherenicus, probably a Hellenistic poet (Fornaro in *Brill's New Pauly* s.v. "Pherenicus 2"), claimed that the Hyperboreans live beyond the course

One can recognise in Hecataeus' account a reference to a model of annual solar movement involving, most likely, Britain, the Hyperboreans, the constellation Ursa Major, Boreas, and the Rhipaean mountains. Except for Britain, all other elements could be styled traditional or primarily cosmological, i.e. not attached to a specific tangible location that could be identified on a geographical map. It is highly probable that Britain was introduced into this nexus of mythic references to the northern limit of the annual solar movement by Pytheas himself. To this, Hecataeus, further inspired by Homer's account of the Cimmerians and the description of Cape Carambis as it appears in Ephorus, added a systematisation of all these elements into a narrative of Hyperborean Helixoia.

4. *Conclusion*

The title of this paper has paired Pytheas and Hecataeus as two nearly contemporary authors who shared a lively interest in the far north, but with radically different biographies and authorial profiles. It seems that both played a role in the formulation of the late classical/early Hellenistic vision of the Atlantic north that assimilated the island at the edge of or outside of the *oikoumenê* to the mythic land of the Hesiodic author of *Catalogue of Women* (fr.150 M.-W. = *P.Oxy.* XI 1358 fr.2l.i.21–24) and Aristeas (*BNJ* 35). Greek tradition unsurprisingly suggests a northern or north-western provenance of Hyperborea, a paradigmatic region of the far north. In this context it was occasionally more precisely identified with either 'Keltikê' or

(δρόμον) of the sun (G. Ferrari, *Alcman and the Cosmos of Sparta* [Chicago 2008] 144 with n.58) or Boreas (Bolton, *Aristeas* 22–23; fr.671 *Suppl.Hell.*; emendation ὑπέρ for the MS. ὑπό in *Suppl.Hell.* p.318, following Voss). Since, to the best of my knowledge, a *dromos* of Boreas is nowhere mentioned in Greek, while that of the sun is widely attested, the earliest sources being Emped. fr. dub. 154 D.-K. (Plut. *De esu carn.* 993E); Hippocr. *Flat.* 3; Pl. *Cra.* 397D, *Leg.* 821C (by implication); [Pl.] *Ax.* 370B; Arist. fr.948 Gigon; Alex. Aet. fr.1.3–4 Powell, Ferrari's interpretation is more plausible. Pliny's description of the setting of Hyperborea locates it in relation to the solar movement (*HN* 4.90, cf. Solin. 16.2; also *HN* 2.119, 125), but his report is otherwise incomprehensible.

Britain, with the latter identification certainly postdating Pytheas and probably originating with Hecataeus. Besides, several mythic concepts and relations were also added to this nexus (Hyperboreans, swans, Apollo, Ister, Rhipaeans, etc.). In addition, a reference to the solstices was also recognised in the description of Helixoia, another element in this mythic nexus, and one more specifically created by Hecataeus. This reference is coupled with a reference to the movement of certain circumpolar stars, most notably Ursa Major, in terms of its role in the delineation of the geographical arctic circle (described by Pytheas in terms of equation of the arctic circle and the summer tropic) or simply as signifying the summer sun approaching the region in which the constellation revolves.

It seems then clear that Pytheas should not be treated as a 'hard' scientist dismissive of non-scientific sources of information, as is apparent in his appropriation of Homer and his use of traditional terminology (either actually related to him by the natives or attributed to them by Pytheas himself) in accounting for the sun's movement at the time of the summer solstice in high northern latitudes. Even though he was well versed in the latest developments in astronomy and geometry—his work on the geographical arctic circle being a prominent example of his proficiency—he was certainly receptive to the more traditional sources on the meteorological conditions and the behaviour of the sun in the far north. Hecataeus, in his turn, was equally receptive to the latest geographical and meteorological information available, which he freely utilised in his ethnographic utopian writing, offering a description of a fabulous country anchored in hard scientific facts (by contemporary standards), both empirical/observational and theoretical.

Thus there appears to have existed some not insignificant common ground between the scientist-traveller and the writer of utopian fiction. Their interest in the meteorological conditions obtaining in the far north and the sun's behaviour in high latitudes compelled them to turn to all the sources they had at their disposal. In Pytheas' case, he had a powerful tool in the geometry of the sphere, which he combined with early em-

pirical reports, some of which were echoed in Homer, and with his own observations, further supported by the testimonies of the natives of the regions he visited. While we may be certain that he relied mostly on his own observations and the postulates of the geometry of the sphere with which he was well acquainted, he was apparently open to what we would label less reliable sources, such as the Homeric poems and the barbarians' accounts of the solar movement. Hecataeus, in his turn, most probably had at his disposal—in addition to the tradition he shared with Pytheas, if he did not share his scientific proficiency—precisely the report of the great explorer of the north. He was apparently receptive to the new theories and reports on the conditions in the far north, which he adapted to his own authorial goals in concocting a story of a utopian land which he located at the edge of *oikoumenê*, a natural place for all utopias. While his main interest may have been to tell a story, this was not solely meant to entertain, but also to educate. By supporting his utopian landscape with information gathered from reliable and credible sources, he may have attempted to uphold his own credibility;[50] but this information served him only as a canvas upon which he painted what was of real importance to him.

I believe I have demonstrated in this paper that both Pytheas and Hecataeus partake in the continuum of geographical/meteorological/astronomical knowledge engaged with by the ancient Greeks.[51] The emphasis here is on Hecataeus and his

[50] *Pace* C. van Paassen, *The Classical Tradition of Geography* (Groningen 1957) 280, who claimed that Hecataeus "does not take any trouble to give a real geographical environment as a background," without offering any evidence for this claim whatsoever.

[51] Dan, Geus, and Guckelsberger, in *Features of Common Sense Geography* 17–38, did not include either of these two authors in their classification of ancient geographical texts; but Hecataeus would surely belong to the category of "scholarly" geography no. 14, "invented travel reports and parodies," together with Hanno, Euhemerus, Flavius Philostratus, Iambulus, and Lucian, while Pytheas would most probably belong to category no. 17, intermediate between "scholarly" and "fully reasoned"

appropriation and use of geographical information, since he is usually dismissed as an untrustworthy author. Nevertheless, his geography deserves to be studied in its own right, with his idiosyncrasies acknowledged and taken into account. At the same time, while there are manifest differences in their expertise, methods, and goals, Pytheas and Hecataeus do share some common ground. Some aspects of this shared attitude have been explored here, most notably the interest in traditional knowledge shown by Pytheas and the appropriation of empirical and theoretical knowledge executed by Hecataeus. The reverse—i.e., Hecataeus' recourse to myth and Pytheas' use of scientific observation and theorising—has always been taken for granted, since it is fairly obvious and explicit in what is preserved of their works. But it is the less apparent characteristics of these two authors' respective approaches, specifically those addressed here, that reveal and emphasize their common partaking in the corpus of ancient Greek geographical knowledge. More precisely, it is Pytheas' interest in unorthodox sources of information for a scientist and Hecataeus' interest in equally unorthodox sources of information for a writer of utopian fiction that draw them closer to each other on the continuum of Greek geographical/meteorological/astronomical knowledge, stretching from the extremes of "fully reasoned" to "intuitive/naïve," than one might expect. In this sense it would be appropriate to combine their portraits on a double-headed herm, perhaps not in Massalia but rather somewhere farther to the north, or else wherever a need is felt to commemorate ancient geographical lore and those who contributed to its development.

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geography, "scientists who thought of more reasonable ways of representing terrestrial spaces," together with Eudoxus, Aristotle, and Hipparchus (29 = *eTopoi* 6 [2016] 585).