Making Sense of the Seascape

Elements of Cognitive Mapping in the Ancient Greek Literary Tradition

Donner un sens au paysage maritime. Éléments de cartographie cognitive dans la tradition littéraire de la Grèce antique

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Jan Paul Crielaard

Introduction¹

- 1 Over the last decades, Mediterranean archaeologists and historians have shifted away from models that emphasize small, static units and rigid structures towards a new paradigm that puts the emphasis on Mediterranean connectedness, ever-expanding networks, and the fluidity of the movement of people, goods and ideas.² The publication of Peregrine Horden and Nicholas Purcell's *The Corrupting Sea* in 2000 was a landmark in this development, at least in the Anglo-American academic world.³ Other sources of inspiration for this connectivity paradigm are today's network society and information economy, and such related phenomena as globalization and increased economic interdependence, while it can also be argued that the refugee crisis resulting from the civil war in Syria raised a renewed interest in the long-term history of mobility within the Mediterranean.
- 2 Current notions about Mediterranean interconnectivity are to a large extent based on grand theories and quite often expressed in sweeping statements that take priority over understanding the social and technological realities of how and why people connected. At a very basic level, there is much less concrete concern with such questions as: How were people interconnected with others, with their gods, with the land- and seascape, with the sea and communities overseas? What role was played by the physical environment or the presence or absence of infrastructural elements? What were the technological, political and sociocultural possibilities to connect, and what were the restraints on connecting? And how did people move through the landscape and how did they find their way over the seas in the first place?⁴

- 3 In this paper, I address *some* of these issues by focussing on the “maritime cultural landscape”.⁵ According to Christer Westerdahl, who introduced the term, the maritime cultural landscape comprises “the whole network of sailing routes, old as well as new, with ports and harbours along the coast”, and “an important part [...] is immaterial, cognitive or indicative”.⁶ Focussing on the Aegean, it is precisely this cognitive aspect of the maritime cultural landscape that I wish to explore. In the first place, I will show that for the ancient Greeks, and for many other seafaring people, the sea was a knowable, textured space. Through senses, observations, skill and mythology this space could be ‘read’, described and mapped.⁷ I wish to reflect on how this was possibly accomplished and how early Greek seafarers found their way in this textured space. I will focus on the period before written *periplooi* (literally “sailing-arounds”) and cartographic maps became available for navigation. The first *periplooi* probably date to the early 6th century BC. The first maps by Anaximander and Hekataios belong to the 6th or 5th century BC, but these seem to have embodied the philosophical idea of a global representation of the world for the sake of knowledge, rather than serving a practical function.⁸ Instead, I will use mainly literary sources (especially epic and lyric poetry) and some archaeological data. What is important in this context is that our written sources regularly offer a maritime perspective on topographical and geographical matters. For instance, when in *Odyssey* Book 9 Odysseus identifies himself to Alkinoös, leader of the Phaiakians, he tells him:

I am at home in sunny Ithaka. There is a mountain
there that stands tall, leaf-trembling Neritos, and there are islands
settled around it, lying one very close to another.
There is Doulichion and Same, wooded Zakynthos,
but my island lies low and away, last of all on the water,
toward the dark, with the rest below facing east and sunshine,
a rugged place, but a good nurse of men (*Od.* 9.21-27; transl. R. Lattimore).

- 4 Odysseus does not describe his homeland as if he were actually on the island (for an example of this, see *Od.* 13.242-249), but provides a sailor’s view of Ithaka and the surrounding islands with Mt Neritos as a landmark as a mariner would experience while trying to find his way in this small archipelago.⁹ To give another example of a comparable maritime perspective, we may refer to the way that Archilochos characterizes Thasos in comparison to Siris in southern Italy:

There like the spine of a donkey,
it stands, wreathed with wild forest.
For it’s not a fair, desirable
or lovely land, as one around the streams of Siris (*Arch.* 21 W).

- 5 This way of describing the landscape—characterizing it with help of landmarks and evoking it from the outside, through almost panoramic vistas—we will encounter again in certain passages in epic and lyric poetry and in our discussion below of anthropological reflections of ‘wayfaring’.

The Sea as a Knowable Place

- 6 An important starting point for our discussion of perceptions of the maritime cultural landscape in early Greece, is the observation that people code their environment in order to give meaning to their living space, make sense of it, and find their way in this environment. The maritime environment is no exception to this. The sea is hardly an

empty space, a uniform and anonymous quantity of water. Quite the contrary, it is a highly dynamic environment shaped by waves, currents and winds. There are swells and eddies, and below-surface features, such as reefs, shoals and sandbanks, that colour the water differently.¹⁰ For ancient mariners the ‘undisturbed water’ of the sheltered coastal zone and the open sea were worlds apart with different sailing conditions, different risks and dangers, and different gods to appeal to for protection.¹¹ Just like the landscape varies from one place to another, there are also local variations in the seascape. The following simile taken from the *Iliad* shows that the poet and his audience could easily evoke the maritime circumstances prevailing in a particular part of the Aegean. The Ikarian Sea (*pontou ikarioio*, *Il.* 2.155)–which was famously associated with the story of Ikaros’ fall from the sky during his flight from Crete together with his father Daedalos (thus illustrating the above point that the sea is not an anonymous place, but could be imbued with stories)–was notorious for its big waves, especially when a south-easterly was blowing:

And the assembly was shaken as on the sea the big waves
in the main by Ikaria, when the southeast winds (*Euros te Notos te*)
driving down from the clouds of Zeus the father whip them (*Il.* 2.144-6; transl.
R. Lattimore).

- 7 Another factor determining the specific character of the maritime environment is that the sky above the sea looks bigger and is more visible than it is above land (cf. *Il.* 11.297-8). This means that the formation of clouds during the day and the changing positions of the stars at night have a great impact on the perception of this environment. The observation of clouds plays a role in predicting the weather, and stars are used for wayfinding at night.¹² Clouds gathered by island or coastal mountain tops (e.g. *Hom. Hymn Ap.* 428) may signal proximity to land or help to identify one’s position at a greater distance. Navigation in this particular space requires special skills and sea knowledge (e.g. *Od.* 3.281-2; 5.269-71). Also important is that the sea is invested with particular sea creatures¹³ as well as with supernatural entities that may or may not take the shape of sea creatures. In early Greek myth and literature, gods and nymphs may guide sailors to their destination, like Ino-Leukothea, who in the shape of a sea bird helps Odysseus to survive a storm caused by Poseidon (*Od.* 5.333-53), or Phoibos Apollo, who, self-transformed into a dolphin, guided a Cretan ship to Delphi (*Hom. Hymn Ap.* 399-401). Proteus, one of the Old Men of the Sea (*halios gerōn*)–who was a mutant, prophetic deity as well as a herdsman of sea beasts–gave Menelaos instructions on how he could return home from Egypt (*Od.* 4.383-425). Homer’s use of the term ‘fishy pathways’ (*ichthuóenta kéleutha*; *Od.* 3.177) evidences a clear awareness of the underwater world¹⁴ and the same can be said of, for instance, Geometric vase-paintings or engraved fibulae showing fish under the hull of a ship (fig. 1).

Fig. 1: Late Geometric 'Boiotian' fibula from Karystos-Plakari, showing galley and two fishes.

Drawing by Bert Brouwenstijn.

- 8 So, instead of being anonymous, grey and empty, the sea was a colourful place alive with animals, deities and stories that established a relationship between people and the sea. This applied even more so to coastal areas—the interface of land and sea. In the case of pre-Classical Greece, the coastal maritime landscape did not include such aspects of maritime-related material culture as ports, quays, docks, moles, storage facilities, boat houses or defences that Westerdahl mentions, but rather typically coastal landscape features or environmental land- and seamounts and environments, like cliffs (*Od.* 3.293, 295; 4.500-1, 506-11; Arch. fr. 105 W), promontories (*Od.* 13.97-8), capes and headlands (*Od.* 3.287; 13.97-8), reefs (*Od.* 3.298; 5.405), islands (each often possessing its distinct features, cf. e.g. *Hom. Hymn Ap.* 44 and 429), natural breakwaters (*Od.* 3.296, 13.99), littoral caves (*Od.* 13.103, 347-50; 19.188), dunes or lagoons (e.g. at “sandy Pylos”, *Il.* 9.153; 11.712; *Od.* 1.93, 2.214=2.359, 11.459; *Hom. Hymn Ap.* 393, 424), river mouths (*Od.* 3. 292; 19.185; *Hom. Hymn Ap.* 423; Arch. fr. 22 W), mountain peaks visible from the sea (*Hom. Hymn Ap.* 428), coastal towns (*Od.* 3.292, 294, 296) and sanctuaries (*Od.* 3.178), natural harbours (*Od.* 13.96-101), anchorages (*Od.* 4.358-9) etc.

Dialogic Seascapes

- 9 Places acquire meaning when they are spoken about and named. They may become points of orientation or landmarks for travellers, and their names and properties may be remembered or transmitted for future wayfinding.¹⁵ In this process, the inherent qualities of landmarks and seamounts are sometimes transformed into fixed toponyms (see e.g. Delos, meaning ‘clearly visible’, several ancient towns called Kyme, ‘the Surf’, or specific reefs, presumably from their shape, that were in antiquity known as ‘the Ass’ or ‘the Ant’¹⁶). Another way in which the qualities of these places can be memorized is by linking them to a story. In the case of a series of landmarks, their

qualities and the interconnections between them are more easily memorized in the form of a comprehensive narrative, and travel stories that retell or rehearse journeys made by others are an obvious medium with which to link this information together and ‘remember’ an itinerary.¹⁷ The ancient Greeks, like other Mediterranean seafaring peoples, had a great number of stories about travelling heroes, and this fostered the idea of a connected Mediterranean and led to the sea itself, stretches of coast, capes and islands becoming intertwined with mythological, legendary and historical events,¹⁸ thus creating long-term dialogic seascapes of mythical and historic memory, for which the term “memory-scape” has been coined. The working of such a maritime memory-scape can be vividly illustrated by means of two well-known passages from the *Iliad* and *Odyssey*. In the first, Agamemnon describes the grave mound that the Greeks piled up for Achilles and Patroklos. The mound was erected:

On a jutting promontory there by the wide Hellespont,
so that it can be seen afar from out on the water
by men now alive and those to be born in the future (*Od.* 24. 82-84; transl.
R. Lattimore).

- 10 This passage offers a perspective on the maritime cultural landscape that evidently includes, as Westerdahl also stresses, features and monuments on nearby land. In addition, this passage may be taken to show what the term ‘long-term dialogic seascape’ entails. Like all grave monuments, this mound is meant to preserve the memory of the deceased,¹⁹ but through its location and visibility this particular one is specifically meant to communicate with passing seafarers, both men who live now and those who will live in the future. This is even clearer in a passage from the *Iliad* in which Hektor describes the future tomb of the warrior who will perish in a duel between champions:

And heap up a mound upon him beside the broad passage of Helle.
And some day one of the men to come will say, as he sees it,
one who in his benched ship sails on the wine-dark water:
‘This is the mound of a man who died long ago in battle
who was one of the bravest, and glorious Hektor killed him’.
So he will speak some day, and my glory will not be forgotten (*Il.* 7. 86-91; transl.
R. Lattimore).

- 11 This shows that such a coastal monument has the ability to enter into a dialogue with passing seafarers and communicate a rather complex message about a fallen hero, his killer and-by implication-the context in which the killing happened.²⁰ Both passages illustrate that these stories are part of the collective memory and that for those sailing by, landmarks can evoke associations or emotions that activate the memory of these stories connected to landmarks or, rather, from a mariner’s perspective, seamarks.²¹ As Andrew Jones rightly points out, memory does not solely reside in the mind, but emerges through intersubjective experience with the material world.²²

Maritime Spatial Information and Wayfinding

- 12 The next question is how maritime spatial information of a larger complexity was constituted, memorized and conveyed, and how spatial cognition and orientation was operationalized in wayfinding in a maritime environment. Spatial cognition is a topic of research that features in a number of disciplines, including psychology, geography, urban planning and anthropology. In research on human spatial cognition, there are

two conflicting theories concerning day-to-day wayfinding: one is centred on the concept of the 'mental map' (also called survey or layout knowledge), the other on 'route knowledge' (also known as sequential knowledge).²³ A mental map can be defined in a broad sense as one's internal representation of the environment, irrespective of the form and content of this representation.²⁴ In the context of the debate on spatial cognition, a mental or cognitive map comprises stored spatial information about the terrain in the form of abstract representations of the spatial relations that exist between objects, features and locations. Alfred Gell stresses the non-indexical character of mental maps: the map reflects the objective spatial relations in a form independent of any localized point of view.²⁵ Like cartographic maps and unlike simple images, mental maps are allocentric: they are based on a system of spatial knowledge that is independent of any point of view and of how a person is positioned in relation to the objects and places described by this system. The nonindexical character of a mental map means that once a position has been determined in relation to another encoded object on the map, one's position in relation to all other objects also becomes automatically known. A mental map includes inferential schemes that help to convert this information into decision making and concrete actions. It allows a person to plot a route in relation to the landmarks or hallmarks encoded in a mental map. Navigating with the help of a mental map supposes that the user moves from one landmark to another, updates his or her position in space and chooses the right direction with reference to a mental map.

- 13 Martin Thiering makes a related point in an article where he explores the concept of common sense geography. Although he does not directly relate to the above discussion, there are strong resemblances especially in his conceptualization of mental models. These come close to the idea of mental maps, although Thiering envisages a strong and dynamic interrelationship between spatial orientation and a person's position in relation to places or cues that are part of the mental model. Thiering starts from the position that people possess and assemble spatial and geographical knowledge taken from present and past experiences. He distinguishes different types of spatial knowledge: practical knowledge of the environment, explicit knowledge in the form of, for instance, itineraries, texts or practices, and implicit or tacit knowledge. These different types of knowledge are embedded in mental models for spatial orientation and navigation on land and sea. In the case of orientation, mental models take the shape of cognitive maps that are often collections of toponyms, landmarks, frames of reference and other cues that help to mentally triangulate a reference system. These mental models function as implicit knowledge systems that enable people to explicitly navigate in a specific environment at a given time and space. When traveling and defining a trajectory in a certain environment, travelers use these models or cognitive maps to draw a correspondence between the 'real world' cues such as objects and places, and their symbolic equivalents in the models. Navigation on land and on sea in his view relies heavily on the combination of mental models and some fundamentals in mental triangulation and gestalt theoretic conceptions of spatial relations such as figure/ground asymmetries, enabling the navigator, traveler, or geographer to arrive at a spatial conception of his or her position at any time. Thiering stresses that spatial knowledge is not only encoded in mental concepts or categories, but is embodied in the lived histories of human beings, and their cultural and linguistic practices as encoded in texts or maps.²⁶

- 14 Whereas the theory of mental mapping presumes that people know the relation of localities, features and landmarks to each other at any given moment in time and irrespective of where a subject is positioned, route knowledge is all about the visual relationship between a subject and landscapes and landmarks that are indexical of a subject's position. Route knowledge is based on habit and practical mastery obtained during previous journeys.²⁷ As a traveller moves from one place to another, the visual perspective changes: vistas open up and close off in a particular order. Wayfinding is conceived as a process of moving from one recognized visual perspective to another. In other words, it presumes that what people have in their heads is a sequence of temporally ordered vistas and transitions. People travel along a particular 'path of view', generating or recreating the route as a specific order of successive vistas connected by transitions. Wayfinding, Tim Ingold stresses, has an essentially temporal character; it is more akin to playing music or storytelling than to reading a map: 'the path, like the musical melody, unfolds over time rather than across space'. Every place holds within it memories of previous arrivals and departures, as well as expectations of how one may reach other places from it. In this model, human spatial cognition is not about where one is in space, but how it is possible to get there: people know as they go, not before they go.²⁸
- 15 Kirill Istomin and Mark Dwyer have tried to bridge these opposing theories by pointing out that they actually concern complementary navigation methods, which are often practised at the same time: humans rely on mental maps but also remember vistas while navigating, or switch between these two modes of space cognition. In familiar environments, day-to-day wayfinding makes use of route knowledge, while mental maps are used mostly in environments that are more or less novel.²⁹ What may be of interest regarding this dual navigation method is that neurophysiological evidence shows that information about what an object is (visual imagery) and where it is (spatial imagery) are registered in different areas of the brain. Spatial memory encodes information about location, orientation, distance and direction. Our ability to remember scenes and the layout of objects within scenes allows us to evaluate routes and imagine particular sites and points en route. In other words, two systems of memory process these complementary data.³⁰

Mental Mapping and Wayfinding in the Pre-Classical Aegean

- 16 As mentioned, there were no maps or *periplooi* before the 6th century, but this of course does not mean that before this point in time, Greeks and others were not capable of picturing the Aegean as geographical space. A strong but indirect indication that they could is provided by the fact that they practised night sailing. Although Homeric navigation normally relied on landfalls (see below), night sailing is mentioned a number of times (e.g. *Od.* 3.176-8; 5.270-5). If moonlight permitted it, this could be accomplished by eyesight, but *Od.* 5.272-274 suggests that the poet and, by implication, his audience were familiar with visually navigating by the stars.³¹ In the latter passage, a number of constellations, including Boötes, are named. An astronomical graffito, probably representing Boötes, on a fragment of a giant krater of local manufacture from Pithekoussai may reflect a similar astronomical interest of early Euboean navigators.³² The stars were likely used for navigating during long-distance voyages

across open waters.³³ Still, these navigators had to know quite precisely where they were heading to in order to avoid hitting the shore or subsurface obstacles. This is clear, for instance, from *Od.* 3.174-9, where Greeks returning from Troy arrive in the dark at Geraistos, which provides a small but protected cove—one of the very few on the otherwise inaccessible and treacherous north and east coasts of the southern part of Euboea.³⁴ In other words, mariners sailing at night could do so only in combination with a mental map. Indeed, as Istomin and Dwyer point out, reliance on stars or winds during a journey evidences the usage of mental maps rather than route-based orientation; it is a mode of orientation that by its nature cannot rely on the remembrance of a sequence of vistas.³⁵

- 17 Having said all this, a number of larger bodies of text from the Archaic period also make it clear that the early Greeks used various ways to store spatial information and employ this information for wayfinding. The Iliadic ‘Catalogue of Ships’ (2.494-760) and ‘Catalogue of Trojan Allies’ (2.816-877) provide us with an overview of territories, peoples and communities on two large chunks of land on both sides of the Aegean.³⁶ The Aegean itself and most of its islands, however, are largely omitted from this picture. Of greater significance for our purposes is the *Homeric Hymn to Apollo*.³⁷ Its ‘Delian part’ (30-50) describes how Leto in travail travelled to many places that, out of fear, refused to give Apollo his first abode, until Delos accepted him. A number of locations are mentioned (31 in total; see fig. 2) that follow a clockwise, circular or spiralling course around the Aegean, moving from Crete to Athens, Aegina and Euboea to the north-western Aegean, then to the north-eastern Aegean and subsequently along much of the east Aegean coast down to Karpathos, to finally arrive via Naxos and Paros in ‘rocky Rhēnaia’ (fig. 3). There is a certain poetical organization underlying the verses in this passage, which indicates that we should probably not take the order of the places mentioned as a sequence of stop-overs on Leto’s journey. This wide circle can hardly be an actual shipping route. It is rather a way to describe (and circumscribe) a region³⁸ that is framed by conspicuous landmarks (peninsulas and mountain tops)³⁹ and demarcated in the north by Thracian Athos and Thracian Samos, and contains an assemblage of islands and coastal towns, most of which bear highly evocative epitheta that are sometimes landmark features but often also specify the individual qualities of these locations. Eudeielon, for instance, is an epitheton, applied to Ithaka (*Od.* 2.167) and Krisa (*Hom. Hymn Ap.* 438), that probably indicates that a mountain or harbour is easily visible.⁴⁰ Something similar may relate to the notorious Cape Malea, whose ‘steep mountain top’ (*Od.* 3.287) can be considered a warning sign once it hove into sight. Other epitheta occur in both the epics and the Homeric hymns, such as ‘the steep crests of Mykale’ (*Mykalēs t’aipeina karēna: Il.* 2.869; *Hom. Hymn Ap.* 41) and ‘misty Lemnos’ (*Il.* 24.753; *Hom. Hymn Ap.* 36). One could take these as stock epithets, carelessly used by the poet. Another way of looking at them is to acknowledge that they contained valuable geographical information.⁴¹

Fig. 2: Overview of *epitheta* and toponyms mentioned in the *Homeric Hymn to Apollo*, 30-50.

Characteristics/epitheta	Toponym	line
a. Landmarks		
	Pēlion	33
high/steep mountain tops (<i>akra/aipeina karēna</i>)	Kōrykos	39

	Mykalē	41
steep mountain (<i>oros aipy</i>)	Autokanē	35
	Aisagea	40
high (<i>aipēnē</i>) or rugged (<i>paipaloeis</i>) cape	Knidos (viz. Triopian promontory)	43
	Mimas	39
b. Islands and coastal towns		
ship-famed (<i>nausikleitē</i>)	Euboia	31
surrounded by near the sea (<i>agchialē</i>)	Peparēthos	32
good to dwell in (<i>euktimenē</i>)	Imbros	36
misty (?) (<i>amichthaloessa</i>)	Lēmnos	36
very holy (<i>ēgatheē</i>)	Lesbos	37
the most fertile (<i>liparōtatē</i>)	Chios	38
watery (<i>hydrēlē</i>)	Samos	41
shining (<i>aiglēesa</i>)	Klaros	40
windy (<i>ēnemoessa</i>)	Karpathos	43
rocky (<i>petrēessa</i>)	Rhēnaia	44

- 18 What is of particular interest is how this sea-based, religious region is mapped. On the one hand, the poet and his audience seem to have had a kind of mental map in their heads on which they were able to project Leto's imaginary itinerary. This map is a bit hazy on the north-western and north-eastern fringes where the route switches back and forth a number of times,⁴² and more accurate in the east and southeast where the itinerary follows a linear passage from one place to the next (see fig. 3).⁴³ On the other hand, the region is not presented as a kind of bird's-eye view of the position of these locations.⁴⁴ Rather, the narrator takes the audience on a tour of the region, which is apprehended from within⁴⁵; it is alive with 'high' mountains, 'craggy' capes and 'well-located', 'windy' or 'rocky' islands, which gives the audience a distinct sense of the maritime landscape and its subregions.⁴⁶ This apprehension from within is something that is rather characteristic of route knowledge.

Fig. 3: Map showing Leto's journey according to the *Homeric Hymn to Apollo*.

Map by Jaap Fokkema.

- 19 The Pythian part of the *Hymn to Apollo* contains two more geographical passages. One is land-based, describing the route taken by Apollo through northern and central Greece in search of a suitable place to house his oracle (216-286: 21 locations en route). The other is seaborne, telling how Apollo, while looking for people to minister his sanctuary, hijacked a ship of Cretans on the open sea between Crete and the Peloponnese (388-408), and in the shape of a dolphin sailed with them, passing Cape Malea and Cape Tainaron, along the western coast of the Peloponnese, into the Corinthian Gulf and then to Krisa (409-439: 18 locations). Once more a religious geography is mapped, now embracing the landscape of central Greece and the seascape of western Greece, respectively, and this time by mode of what may represent actual travelling routes.
- 20 The most detailed instance of a seascape description of the Archaic period is found in Book 3 of the *Odyssey*.⁴⁷ Much of the *Odyssey*'s geography is linked to Odysseus's wanderings and represents a phantasy world somewhere within the Mediterranean, but Book 3 is exceptional in this respect as it deals with the Greek heroes' journey home from Troy. Nestor describes how the Achaians left Troy and travelled via Tenedos (*Od.* 3.159) to Lesbos (169), from where part of the army crossed the Aegean by sailing due south to the northern tip of Chios (172: *kathyperthe Chioio*), then west but staying north of Psara (171: Psyra), and from there across the open sea (169: *dolichos ploos*) to Geraistos on the southernmost tip of Euboia, where they arrived at night (174-8). After a stop-over at Geraistos that included sacrificial thanksgiving to Poseidon (178-9), Diomedes and Nestor continued their journey to Argos and Pylos (180-85). Nestor apparently successfully rounded Cape Malea, the notoriously dangerous southern point of the Peloponnese (182-3).⁴⁸ Menelaos, however, was forced to spend some time at

Cape Sounion to bury his steersman, Phrontis (278-85). Continuing his journey, he too reached Cape Malea, but here some of the ships were blown off course to the south coast of Crete, the others to Egypt (286-300).

- 21 There is no doubt that these descriptions represent actual seaways. Homer typically speaks of *hygrá kéleutha* ('wet pathways') and *ichthuóenta kéleutha* ('fishy pathways').⁴⁹ The context makes it clear that the poet does not refer to fixed sea routes, but uses these terms in a general way, as known seaways, a 'place of paths' that connect communities.⁵⁰ It is linked with a flexible manner of travelling that is typical of island-rich maritime environments, like the Aegean, where there are many ways to reach a destination, depending on via which islands one decides to travel. This, however, does not mean that wayfinding and geographical knowledge were less important. Quite the contrary, one may argue. Navigators may have used wider mental maps to organize their journeys, like the Greeks returning home from Troy in *Odyssey* Book 3, deciding along which of the pathways they would cross the large-scale environment of the Aegean Sea. Once underway, they would probably navigate on route knowledge, a type of wayfinding more suitable for small-scale environments. Aided by narrative maps like the ones we have discussed in this contribution, they would sail from island to island and from landmark to landmark.

Narrative Maps and Route Knowledge

- 22 What is of interest is that descriptions like the ones in *Odyssey* Book 3 are enriched with all kinds of details about landmarks, holy places, dangerous spots, alternative sailing routes, meteorological circumstances, sea currents, etc. The route is firmly anchored in space with the help of two cult places that have special significance for seafarers, namely the Poseidon sanctuaries at Geraistos and Sounion (and, we may add, the future cult site of Phrontis, for which this story provides an *aition*).⁵¹ Especially detailed information about the seascape is provided for the south coast of Crete:

Where the Kydonians lived around the stream of Iardanos.
There is the sheer of a cliff, a steep rock out in the water
at the other end of Gortys on the misty face of the main, where
the south wind piles up a huge surf on the left of the rock horn
towards Phaistos, and a little stone holds out the big water.
It was there they came, and by lively work the men avoided
destruction, but the waves smashed their ships on the splinters
of rock, but the wind and the water catching up the other
five dark-prowed ships bore them along and drove them on Egypt (*Od.* 3.292-300;
transl. R. Lattimore).

- 23 Although the amount of detail certainly helps to enliven the story, it seems to do more than that: the story conveys *nautical* information. It is difficult to establish whether the poet incorporates in his poem traditional stories or whether he is the source of these stories and a vehicle for the spread of the nautical knowledge they contain.⁵² Either way, when this type of story is memorized and transmitted—and we have every reason to think that this was the case with epic, lyric and other kinds of poetry—we have a form of route knowledge that is widely known and comes close to an orally transmitted,⁵³ Archaic version of a pilot book, not that far removed from the later *periplooi*.⁵⁴ Here, three aspects are important that are also known from anthropological studies of this type of traditional geographical information. The first relates to the

capacity to imagine the larger picture of the area, almost as if seen from above. Studies of the Nenets, nomadic reindeer-herding people in north-western Siberia, show that these can create an image of 'watching from the sky' that is not related to recent cartographic images, as the same vision can be traced in archaic folktales.⁵⁵ The second point relates to routes, narrative routes, and the storage and transmission of geographical knowledge, operationalized for wayfinding. As Ingold stresses, one sense of mapping is the retelling of journeys made: '[...] the vast majority of maps that have ever been produced in human societies [...] have been improvised on the spot within a particular dialogic or storytelling context, and without any intention for their preservation or use beyond that context'.⁵⁶ However, as research among the Inuit of the Canadian Arctic shows, route knowledge does not require the actual travel of routes; the journey can be entirely constructed discursively (orally) through a narrative, and the land can be imagined by an interlocutor.⁵⁷ Once they become common knowledge, the geographical information they contain can be operationalized for wayfinding, even by those 'who had not visited the area previously'.⁵⁸ All this is not different with people that maintain close relations to the sea: similar experiences and a similar lifeworld are shared through narrations, stories and myths, constituting a collective memory. This collective memory is a common resource for knowledge of the sea and seascapes and hence for seaborne wayfaring.⁵⁹

- 24 To appreciate the kind of spatial information that is encoded in this route-type of narrative we can compare it to the cartographic maps that we moderns are used to. The advantage of a cartographic map is, of course, that it contains fixed and ready-made information that can be preserved and, in principle, reproduced indefinitely. Narrative or discursive maps need memorization, which takes a certain effort. On the other hand, whereas a cartographic map is fixed and represents a certain state of knowledge, orally transmitted narratives can be updated and enriched with further details while travelling, in an ongoing process of experiencing and observing. In contrast to the cartographic map, the narrative map has no frame boundaries and is thus extendable, in principle endlessly. Moreover, as Ingold points out, cartographic maps are abstractions; the cartographic world is still and silent, deserted, devoid of life: there are no variations of light and shade, no clouds, no winds, no waves, no animal life, no people. There is nothing to respond to, nothing to prepare for, like bad weather, dangerous coasts, or hospitable or hostile people.⁶⁰ In addition, as various scholars have remarked, touch, sounds, smells and other senses are also vital to our worldview, and instrumental to the ways we experience the landscape and seascape.⁶¹ Hearing and feeling the wind or waves crashing on the shore or into cliffs (*Il.* 2.394-397; 4.421-426; 15.619-620; *Od.* 5.401-403) are an important element of experiencing the seascape.⁶² Obviously, detailed narratives and multi-sensorial descriptions are better equipped to appeal to such 'haptic geographies'⁶³ than cartographic maps. As a final remark, we may pose that whereas cartographic maps represent the world in two dimensions, narrative maps are multidimensional: the third dimension can be present in the form of images, while the description of a sea or land route in itself already represents a dimension of time, although this may be specified by the mention of the days or hours it takes to travel from one point to the next (e.g. *Od.* 4.356).
- 25 Many of these qualities also apply to the description of the travels of the Greek heroes in *Odyssey* 3. By way of contrast with a modern cartographic map that depicts the Aegean sea as an all-out blue, one-dimensional space, the Aegean of Book 3 is a

multidimensional space where we encounter waves, cliffs and headlands as we travel through it. There are dangerous coasts and cliffs and off-shore rocks (e.g. the rocks of Gyrai, near Tēnos, where Aias shipwrecked and died: *Od.* 4.500-1, 506-11; Arch. fr. 105 W) or bad weather conditions that require preparations and calculations, as well as risk management and decision making. There are safe havens in the form of holy places to connect with the gods of the sea. The third dimension is embodied not by full-blown images or vistas, but by epitheta that evoke images of 'craggy', 'steep' or 'rocky' headlands and islands. Epitheta such as 'misty Lemnos' (*Il.* 24.753; *Hom. Hymn Ap.* 36) or 'windy Mimas' (*Od.* 3.172) or descriptions like 'the misty face of the main, where the southern wind piles up a huge surf' (*Od.* 3.294-5) create a haptic geography by which one can almost feel, hear and smell the seascape. These elements are important, since in the Aegean there is a direct connection between coastal topography and local meteorology and oceanography, and hence seafaring practices.⁶⁴ The fourth dimension, finally, is represented by the time it takes to travel through this three-dimensional space. Book 3, for example, tells us how long (under favourable conditions) a trans-Aegean crossing over the open sea takes, and we learn that landing on the coast near Geraistos at night is risky but possible.

Concluding Remarks

- ²⁶ For the pre-Classical Greeks, the sea was a knowable, textured place that through senses, observations, skill and mythology could be described, mapped and understood. Stories and myths were crucial to give meaning to and make sense of the seascape. These stories suggest that seafarers could produce a kind of mental map of a larger region and could use this to conceptualize different sailing routes, but that for more detailed geographical information and wayfinding at sea, route-like representations of space in the shape of route-type narratives could be called upon. This type of information formed keystones in building narrative maps that could be passed on verbally to seafarers, including those who had not visited the area before. These narratives were not of sailor X or about sailor Y, but concerned heroic figures, whose travel details were intimately linked with their persona and the larger narratives they were part of. This spatial information was therefore easy to remember and was common knowledge. In other words, these stories and the information they contained can be considered 'social memory'.⁶⁵ These mythical stories produced *and* reproduced practical maritime knowledge, as they were capable to absorb geographical knowledge of the Aegean seascape, but at the same time helped to transfer this knowledge.
- ²⁷ The stories containing maritime knowledge that have come to us through Homer, the Homeric hymns and lyric poetry are probably the tip of the iceberg—samples from a much larger reservoir of stories that were told and retold and on some occasions became embedded in Archaic poetry, which in its turn helped to diffuse information about seascapes and wayfinding.

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NOTES

1. My warm thanks to Tatiana Theodoropoulou for the invitation to participate in the *Thalassotopies* conference and for the kind hospitality received in Paris. I also wish to thank the anonymous reviewers for comments and suggestions.
2. Morris 2003.
3. Horden and Purcell 2000.
4. Questions like these have been addressed only more recently in a more systematic manner, see e.g. Morton 2001; Arnaud 2005; Kowalzig 2007; Tartaron 2013.
5. The topic of the present paper is closely related to the central theme of a five-year research project that I directed at the Vrije Universiteit Amsterdam under the title *The Sea and Land Routes of Southern Euboea, ca. 4000-1 BC. A Case Study in Mediterranean Interconnectivity*. The aim of the project, which was funded by the Netherlands Organisation for Scientific Research (NWO), was to give a firmer empirical basis to the Mediterranean interconnectivity model and to critically examine some of its basic tenets by refocusing the attention on local and regional systems of communication (in addition to supra-regional networks) and on land-based interconnections (in addition to maritime communications).
6. Westerdahl 1992, p. 6.
7. Cf. Rainbird 2007, p. 47-49; Patton 1996, p. 89-111; also von Rügen 2015, p. 34-35.
8. Dilke 1985, p. 130-144; Thrower 2008, p. 18-19; cf. Arnaud 2014, p. 40: *periplooi* were 'armchair products.' In this connection it may be added that there is discussion about

the authenticity of the so-called Soleto map, scratched on a 5th-century black-gloss sherd and showing part of the coastline of the Salentine peninsula in the 'heel' of Italy as well as 13 toponyms whose positions are indicated by dots. A preliminary report was presented by Thierry Van Compernelle at the *Colloque International "La Mappa di Soleto". Échanges de cultures en méditerranée ancienne, Montpellier 10-12 mars 2005*; for critical remarks, see Yntema 2006.

9. There has been discussion since antiquity about how to reconcile the topographical details in this passage with geographical reality; see Heubeck and Hoekstra 1989, p. 13 *ad loc.* This does not, however, alter the fact that through his character the poet describes Ithaka's location from a mariner's perspective.

10. Cf. Morton 2001, p. 208-210; Tartaron 2013, p. 94-104.

11. Morton 2001, p. 311.

12. Morton 2001, p. 215-218, 227-228 and 261-265, for orientation with the help of stars (orographic), clouds and the direction and 'feel' of winds. Tartaron (2013, p. 121-122) calls them appropriately 'skymarks'.

13. One of the most vivid illustrations of this awareness is found on the Caeretan hydria now in the Niarchos collection; see Papadopoulos 2016. For Bronze Age conceptions of marine creatures, see Berg 2013.

14. Cf. von Rüden 2015, p. 35 and 54.

15. Morton 2001 offers an excellent study showing the importance of the coastal topography for ancient Greek seafaring. Morton shows that especially promontories, offshore islands and straits formed points of orientation for sailing routes and navigation.

16. Morton 2001, p. 104 and 189-192, who in addition refers to seamarks that were named after their colour.

17. Vella 2004, p. 49, referring to Certeau 1984.

18. Malkin 1998; Fox 2008.

19. Cf. *Od.* 4.584-5; 11.75-8, with Crielaard 2003, p. 57-60 on the biography of the Trojan landscape and burial mounds featuring as part of a *mnemoscape*.

20. For another example of the dialogic properties of grave mounds, see *Il.* 4.176-82.

21. Day 2010, p. 62; Minchin 2008, p. 10-11; also Vavouranakis 2011, p. 15-16; Tartaron 2013, p. 118-121. *Contra* Strauss Clay (2016, esp. 192), who claims that such a message requires writing.

22. Jones 2007, p. 41.

23. Ingold 2000, p. 220; Istomin and Dwyer 2009, p. 30-33, for a detailed overview of these theories. See also Tartaron 2013, p. 122-124.

24. Downs and Stea 1973.

25. Gell 1985.

26. Thiering 2014.

27. Bourdieu 1977, p. 2; Ingold 2000, p. 238.

28. Ingold 2000, p. 223-240 (quote from p. 238); 2010, p. 128.

29. Istomin and Dwyer 2009, p. 33-41.

30. Minchin 2008, p. 9-10.

31. Heubeck *et al.* 1990, p. 276-278 *ad loc.*; Arnaud 2014, p. 48-49.
32. Coldstream and Huxley 1996.
33. As described in this passage in *Od.* 5, Odysseus was merely travelling generally to the east by keeping the celestial north pole above his left shoulder. On Homeric night sailing and celestial navigation, see Georgiou 1993, p. 361; also Aubet 2001, p. 168, with refs.; Berg 2007, p. 396-398; Tartaron 2013, p. 111-113.
34. See also Tartaron 2013, p. 111; Brugge 2017.
35. Istomin and Dwyer 2009, p. 46.
36. B. Graziosi (2016, p. 48-49) argues that in order to name the contingents in the 'Catalogue of Ships' the poet moves in anticlockwise spirals through a total of five sub-regions.
37. The first, Delian part seems to go back on an earlier hymn that was modified and combined with the second, Pythian part, probably for the celebration of the festival of Apollo by Polykrates in 523 BC; see Thomas 2015, p. 12.
38. See Ingold 2000, p. 155, 219 and 278 on the definition of a region. As N. Richardson (2010, p. 87) calls it, it is 'Apollo's Aegean empire'. All the places mentioned housed a cult of Apollo or can be associated otherwise with the god (Richardson 2010, p. 87-90), although as Richardson (*ibid.*, p. 87) emphasizes, this is not intended as a complete catalogue of cult-centres.
39. In a passage introducing the part under discussion it is already stated that all high points on the mainland and all headlands, rivers flowing into the sea, beaches and harbours are Apollo's delight (p. 22-24; also p. 144-145).
40. Heubeck *et al.* 1990, p. 143 *ad loc.*; Richardson 2010, p. 140 *ad loc.*
41. For a somewhat different angle on maritime knowledge and its relation to maritime religious networks, religious practice and religious and spatial imagination, see Kowalzig 2007 (esp. 56-110 on Delos and the Aegean); 2018. Note that in contrast to what is argued here, Kowalzig stresses that maritime knowledge was local or regional, linking this to small-scale cabotage networks (2018, p. 106-110). On Delos and the islands, see also Constatakopoulou 2007.
42. But this may have partly to do with the poetical organization of the verses mentioning locations, cf. Richardson 2010, p. 87.
43. Not accidental perhaps, as the poet who composed this piece of the hymn probably came from this part of the Aegean, see *Hom. Hymn Ap.* 172.
44. For an example in Homer of a bird's-eye perspective of a larger region, see e.g. *Il.* 13.11-14, with Poiss 2014.
45. Cf. Ingold 2000, p. 233.
46. Cf. the description of e.g. the Kafiros channel between Andros and Euboia in the *Mediterranean Pilot IV*, 1968, 210: "The north-western side of Nísos Ándros has a dry rocky appearance, whereas the south-eastern side of Nísos Évvoia is wooded."
47. For comments on this passage, see Malkin and Fichman 1987; Heubeck *et al.* 1988, *ad loc.*
48. The dangers that rounding Cape Malea entail are repeatedly stressed: *Od.* 3.287-91.; 4.514ff.; 9.80ff.; 19.186ff. See further Morton 2001, p. 81-85 for a discussion of these dangers.

49. *Od.* 3. 71, 177; also 9. 252; *Hom. Hymn. Ap.* 452, with Crielaard 2012, p. 138.
50. Cf. Rainbird 2007, p. 47.
51. Currie 2005, p. 54, who also points out that the meaning of Phrontis' name ('care') may imply that he was already known to Homer's audience as a 'patron saint' of sailors.
52. See also Tartaron 2013, p. 135: "Naming and animating these people, places, and forces of nature in the form of narrative stories served practical purposes. They were incorporated into a vital body of maritime knowledge as mnemonic devices to aid in the recognition of a route and the hazards that lay along it."
53. There are hints in the *Hymn to Apollo* that it was originally orally transmitted. In any event, the fact that the manuscript tradition contains many variant readings is a strong indication that it was reused over a period of time and, by implication, in different places. Perhaps, like the Homeric epics, the Hymns were performed in different contexts. See Richardson 2010, p. 1-3. For the spatially integrative dimensions of the *Hymn to Apollo*, see Thomas 2015, p. 12 and 18.
54. Janni (1985) points out that *periplooi* stem from a time when people travelled without maps; the space described is hodological space, i.e. places are described in relation to each other. Vella (2004, p. 44) equates this to Ingold's notion of wayfinding.
55. Istomin and Dwyer 2006.
56. Ingold 2000, p. 233.
57. Aporta 2009, p. 42.
58. A point made in a different context by Chapman and Chapman 2005, p. 48; see further von Rüden 2015, p. 36-37.
59. Von Rüden 2015, p. 36-37.
60. Ingold 2000, p. 230, 241-242.
61. See also Rainbird 2007, p. 47.
62. Cf. Ingold 2010.
63. Chadwick 2004, p. 7 and 11, with references.
64. Morton 2001, p. 67.
65. Cf. Chadwick 2004, p. 14.

ABSTRACTS

This paper is based on the notion that the sea is a knowable, textured place that through senses, observations, skill, myths and narratives can be described and mapped. Anthropological research shows that stories and myths are crucial to give meaning to and make sense of the seascape. In ancient Greece, this type of information formed keystones in building narrative maps that could be passed on verbally to seafarers, including those who had not visited the area before. In this paper I intend to show that ancient Greek stories and myths connected to seas and coasts contained spatial information and elements of cognitive mapping that could have served practical purposes when it came to spatial orientation and wayfinding across the seascape.

Cet article part de l'idée selon laquelle la mer est un lieu connaissable et « texturé » qui, par le biais de sens, d'observations, de compétences, de mythes et de récits, peut être décrit et cartographié. La recherche anthropologique montre que récits et mythes sont essentiels pour donner du sens au paysage marin et pour le comprendre. Dans la Grèce antique, ce type d'informations constituait la clé de voûte de la construction de cartes narratives qui pouvaient être transmises oralement aux marins, y compris à ceux qui n'avaient jamais visité la région auparavant. Dans cet article, j'espère ainsi montrer que les histoires et mythes de la Grèce antique qui étaient liés aux mers et aux côtes contenaient des informations spatiales et des éléments de cartographie cognitive qui auraient pu servir à des fins pratiques lorsqu'il s'agissait d'orientation spatiale et d'orientation à travers le paysage marin.

INDEX

Mots-clés: paysage culturel maritime, orientation, cartographie cognitive, Grèce préclassique, poésie archaïque

Keywords: maritime cultural landscape, wayfinding, cognitive mapping, pre-Classical Greece, Archaic poetry

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