Aratus' Phaenomena: the Bears, the Waggons, Kynosura, Helice

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Abstract: *In antiquity there was a long tradition of writing astronomical poetry dating from the time of the poet Hesiod. In his Works and Days Hesiod establishes a didactic tone in seeking to persuade his interlocutor Perses to order his life by the risings and settings of astronomical bodies. Thus, notionally, Hesiod's farmers will be thought to begin harvesting crops when the Pleiades star cluster begins to rise at dawn. Similarly sea-traders will be thought to put their ships into dry dock once the Pleiades begin setting at dusk. The* **sine qua non** *however of obedience to the stars is the locating of those stars, and here Aratus' work, The Phaenomena, seems to fulfil a useful function. It may use the fixed rising of a single star as a point of repair for locating whole constellations which are either (a) simultaneously breaking the same eastern horizon or (b) setting into Oceanus on the far western side of the night sky. In reality of course, no farmer or sailor, illiterate or otherwise, is going to consult verse such as Hesiod's that is complex enough to contain a possible hendiadys in its very title ('Works and Days' = 'Working Days' = 'Daily Tasks'). Instead we will take the radical view that Aratus' work is permeated by allegory. The movement of the heavens will be seen to 're-present' the way in which Aratus' text operates. That is, as one nuance of a word 'rises' to prominence in a passage, so other nuances of other words either (a) disappear over the western literary horizon or (b) demand attention themselves, as they accompany the original star into the literary spotlight. In this way a single phrase can give birth to a kaleidoscope of meanings as different nuances assume prioritty. The critic's duty, we suggest, is to explore each screenshot of the ever-rotating text. To illustrate the wealth of meaning this strategy produces, we will explore Aratus's treatment of the northern constellations Ursa Major and Ursa Minor.*

Keywords: *stars; Aratus; Greek; poetry; constellations; Helice; Kynosura; helmsman; sea; sky; signs; Penelope; Cassiepeia; ship; stern; prow; Jason; Argo; Odyssey; Iliad; Odysseus;*

1. Introduction

The Roman poet Ovid took a keen interest in a particular passage of 'The Phaenomena', the astronomical poem of the Greek Hellenistic writer Aratus. Early in that work, the constellations Helice & Kynosura are mentioned, on the face of it, as reference points for navigation by Greek & Phoenician sailors respectively. On the three occasions when Ovid refers to these lines (36-39), his detailing of the practical value of these constellations distinguishes such mentions from any 'Alexandrian' references to the polar stars. In other words, in these passages Ovid is sending the reader back to the didactic text of Aratus. This article sets out to explain the reasons why these lines attracted Ovid's attention, and why they will repay our interest today. It will be suggested that Aratus uses the passage as a launching pad from which to write large his literary strategy, a strategy which will be seen to have at least as much to do with the art of poetry as it has with astronomy, meteorology, or Stoicism.

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2. Helice and the Movement of the Bears:

The two constellations Helice & Kynosura form the star groupings called 'Ἄρκτοι' ('The Bears'), or 'Ἄμαξαι'[2] ('The Waggons'), and they receive individual attention in Phaenomena 36-44. We reproduce the text below along and append our own maverick and multivalent translations of individual lines

'Καὶ τὴν μὲν Κυνόσουραν ἐπίκλησιν καλέουσιν,

τὴν δ' ἑτέρην Ἑλίκην. Ἑλίκῃ γε μὲν ἄνδρες Ἀχαιοὶ

εἰν ἁλὶ τεκμαίρονται ἵνα χρὴ νῆας ἀγινεῖν,

τῃδ' ἄρα Φοίνικες πίσυνοι περόωσι θάλασσαν.

 Ἀλλ' ἡ μὲν καθαρὴ καὶ ἐπιφράσσασθαι ἔτοη

πολλὴ φαινομένη Ἑλίκη πρώτης ἀπὸ νυκτός

ἡ δ' ἑτέρη ὀλίγ**η μέν**, **ἀ**τὰρ ναύτῃσιν ἀρειών

μειτέρη γὰρ πᾶσα περιστρέφεται στροφάλιγγι·

τῃ καὶ Σιδόνιοι ἰθύντατ**α ναυτ**ίλλονται'.   'τα φαινόμενα' 36-44

'And men invoke the one under the name Kynosura and the other under the name Helice / and men call one by a further name the Tail of the Bear, and the other the Other Helice / and they call them under one appellation, the Tail of the Dog, and under another appellation Helice. At sea, Achaean men make a judgement by Helice as to when they should drive their ships in [to land] / at sea Greeks are proved men at Helice where it is necessary to steer ships [in to land] / meanwhile Phoenicians put their trust in Helice when they traverse the sea. But whilst the one is visibly large at the beginning of night - Helice being bright and easy to mark - the Other Helice is small, yet better for sailors: for all her stars wheel round in a smaller orbit. Going by her then, even Sidonians turn on a sixpence in the most straightforward way'

Clearly there is much to defend in these idiosyncratic translations, but we begin with some observations on the literary qualities of the passage. In line 37 the repetition of the proper name 'Helice' on either side of the caesura ('…Helice. By Helice…') is arresting. It constitutes the crux of a chiasmus spanning lines 36 to 38. In fact these three lines will absorb our attention during the first part of this work, during which we will find there were two Helices even as the anaphora might suggest. Our initial objective is to make clear the nature of the path that leads from one Helice to the Other and to elucidate what we mean by 'other'. Just as a double helix was found to be the shape of the gene of human identity, so a double Helice will be found to lie at the root of Ovid's engagement with these lines. And, just as the two strands of the anatomical double helix are interwoven, so too are the twin literary Helices as well as the arguments that prove their existence. Meanwhile in line 37, the interwoven, rhyming effect produced by the alliterative sounds of the short '-ε(ν)', long '-ῆ(ν)', and 'α' is not mere adornment. It reflects the sinuous, spiralling, and interwoven character not just of the constellations that twist about

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[2] Aratus *τα φαινόμενα* 28

the pole but also of the text as it snakes[3] from side to side ('τὴν δ' ἑτέρην Ἑλίκην. Ἑλίκῃ γε μὲν ἄνδρες Ἀχαιοὶ'). The meaning of 'Helice' ('spiral') is expressed by these interwoven chiasmuses.

3. The Issue of Diacritics

We begin with lines 36-37 as far as the caesura. What follows is an analysis of the words as they presented themselves to readers of the text in 270 BC. The readers were faced with lines of uninterrupted letters (*scriptio continua*) which they divided into words according to well-known metrical principles. However there were no diacritical marks added to words in Aratus' day[4]. It is true that the spoken delivery of Greek tragedies would have highlighted differences between homonyms through the differences in pitched accent, as the story of the actor Hegelochus proves[5]. But such concerns need not have troubled writers whose works were never intended for recital. In fact, spoken puns in Greek Comedy are common, showing that, in any case, the pitched accent did not prevent the audience getting the joke. So much the more likely is it then that readers would have been alert to double meanings in written texts. Plato, in The Laws alludes to a well-known pun beloved of Aristophanes where the accentuation technically distinguishes one meaning from another ('to fall *off a donkey* ['ap' ónou'] = to fall *off one's rocker* ['apò noû']). By inserting another word in the middle ('ἀπό τινος ὄνου πεσεῖν' = 'to fall off *a certain* donkey'), Plato wants to emphasise the point that he is aware of the pun but that he is using it to make an an astute equestrian analogy. That is, the 'reining in of one's discourse' is the wiser course for an orator. For otherwise, one will be proved foolish in coming to grief on *the type of* donkey ('τινος') that is well-known for both its stupidity and its Aristophanic characterisation. The over-ebullient speaker is already on a fool's road to disaster. His is the sort of fall that is guaranteed by the 'he-haw' oratorical delivery to which he has saddled himself.'

4 The Mobility of the Text

Such a passage as Plato's, we would contend, suggests how readily written words could be misconstrued without diacritics[6]. In turning now to our Aratean text it is immediately obvious that the ancient reader, untrammelled by diacritics, could have interpreted the word 'Κυνόσουραν' as 'Κυνός ουραν' or 'the tail of the dog'. Such a notion is more than a just a passing whim given Aratus' etymologising separation, or *tmesis*, of the word 'Hippocrene' (the 'Horse's Spring') later in the work ('Ἵππου κρήνης … Ἵππου κρήνην': 217, 221)[7]. Now the 'Tail of the Dog' is an etymology that precisely suits the conformation of the constellation

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[3] Note Cicero's description of the Argo 'serpens prolabitur' ('it snakes forwards': XXX111.126 Aratea ed. Soubiran, Bude 2002)

[4] See Gunkel, Dieter (2014) "Accentuation" in *Encyclopedia of Ancient Greek Language and Linguistics*. Vol 1: A–F: 'The accent marks written in modern editions of Ancient Greek texts derive from a grammatical tradition that most likely began in Alexandria in the early 2nd c. BCE, with Aristophanes of Byzantium, to whom the invention of the written signs is attributed, along with his successor as librarian, Aristarchus of Samothrace. Given the important functional role that accent played in the language, conveying accentual information in writing facilitated the difficult task of reading poetic texts written in *scriptio continua* . In the early accented papyri, which date from the 2nd c. BCE onwards, notational conventions vary, as does the frequency with which written accents were applied. The notational system familiar to us, where each accented word is marked with an acute, circumflex, or grave, was first applied in minuscule manuscripts of the 9th c. CE by scribes following the precepts of the same grammatical tradition'.

[5] Slater, Niall W. *Spectator Politics: Metatheatre and Performance in Aristophanes* pp.37-38. Hegelochus accentuated the word 'calm' as 'weasel' producing instant bathos in the first performance of Euripides' Orestes (408 BC).

[6] Plato *Laws* 701d; Aristophanes *Clouds* 1227. The Greeks were happy to accept puns on the aspirated consonant 'ph' when barbarised as 'p'. Aristophanes *Thesmophoraiazusae* 1190 reveals that the spectators were expected to recognise 'φιλησεις' ['phileseis'] behind the barbarian utterance 'πιλησει' ['pilesei'].

[7] See Kidd (1997) p.261 note on line 217 for discussion and other examples.

Kynosura as it arcs into the night sky. However the Great Bear also has an initially erect (and highly canine) 'Tail of a Dog' in the guise of the stars Alioth, Mizar, Alkaid which spring from Megrez on the Great Bear's posterior. That is, Aratus could have secreted into his text a colloquial name that was regularly applied to both the celestial Bears. The ease with which the word 'Κυνόσουραν' separates, will now have a deliberately unsettling effect on the reader's confidence in the text as well as a domino effect on the words within the syntactical reach of 'Kynosura' itself. The reader now looks askance at the word'ἐπίκλησιν'. This latter word forms part of a famous Homeric nexus ('ἐπίκλησιν καλέουσιν':Il 18.487) which challenges the reader to respect its Homeric integrity. But the daring Aratean reader will proceed to disrespect the elements of the nexus by separating 'ἐπίκλησιν' into 'ἐπί κλησιν'. We can now posit a grammatical agreement between 'ἐπί κλησιν' and 'τὴν μὲν … / τὴν δ' which will produce the sense '**under the one name … under the other name**'[8]. The sentence would now mean '**under the one name they call [them] 'the Tail of the Dog', but under the other name, they call them 'Helice'**'[9]. Alternatively the nexus 'ἐπί κλησιν' may be considered to have no grammatical ties to the pronouns 'τὴν μὲν'... τὴν δ'. That is, we may translate as follows: '**in terms of their name, they call the one the 'Tail of the Bear' and the other 'Helice'** *or* '**they call the one the 'Tail of the Bear' and the other 'The Other Helice'**'. Thus the same sentence provides two titles each for the Bears.[10].Just as Homer's alternative name of 'waggons' does not distinguish between the two waggons so 'the Tail of the Dog'is allowed by Aratus to apply to either of the Bears. Everything depends on how one divides the text and interprets the syntax. The dislocation of 'Kynosura' appears on reflection, to be an omen of what is afoot in the text. Names become etymological periphrases for names, whilst words divide as the metre allows. One could of course retain the integral 'Kynosura' and 'ἐπί κλησιν' and assume 'τὴν μὲν … / τὴν δ' refers to the Bears (the one they additionally call Kynosura, the other Helice). This is the received, 'Homeric' way of interpreting the text.

In general in this passage, the syntax is vulnerable to multiple interpretations. Thus a few lines later, what we take to be the Great Bear 'manifests itself' ('φαινομένη': 41) half-way through the sentence as the 'large Helice' ('πολλὴ … Ἑλίκη': 41). This refocuses the reader's mind on 'Helice' in time to interpret the subject of line 42 as 'Helice' rather than 'Ἄρκτος' ('Bear'). Thus the referent of the phrase 'ἡ δ' ἑτέρη ὀλίγη' now becomes 'Helice' (= 'the Other little Helice' 'rather than 'the Other little Bear'). Meanwhile it is reasonable to wonder, once we are in the realms of 'the other Helice', whether we should also expect to be confronted by a 'different' Helice', that is by an 'Other Helice'.

It also seems reasonable to suppose, even without evidence, that sailors will have had their own names for those star-signs that contributed most to the science of nocturnal navigation. If alternative names for the Great and Little Bear had a colloquial smack ('the Tail of the Dog'; 'the Other Helice') that would have been entirely to be expected. The 'tail of the dog' evokes the curling shapes of the extremities of both Bear constellations as seen from Earth[11]. Aratus,

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[8] For this use of 'ἐπί'see Demosthenes 44.36 ('πρὶν ἐπὶ τὸ ὄνομά τινα τὸ τοῦ Ἀρχιάδου εἰσποιηθῆναι'; 'before anyone should be adopted under the name of the son of Archiades'). See also Homer *Odyssey* 5.245, 21.44 where the preposition with the accusative means 'according to' [a rule].

[9] The alternative Aratean names for the two star groups, namely the 'Bears' and the 'Waggons', clearly do not in themselves differentiate between the members of the two constellations.

[10] Notice the chiastic ordering 'Kynosurav … verb … Ἑλίκην'

[11] The sometimes extreme curve of the 'tail of a dog', and the other meanings of 'ἑλίκη' ('convolution of a spiral shell': Aristotle *Historia Animalium* 524a12) evoke a sailor's visual perspective on the shape of Kynosura. Meanwhile 'the other Helice' has a colloquial ring. Compare the UK politician Ed Miliband who 'used to introduce himself at meetings as 'the other Miliband'' in ironic deference to his (at that time) more famous elder brother, David (http://www.bbc.co.uk/news/uk-politics-11316855). Meanwhile the Bear constellations were both known in Latin as 'triones' or 'septentriones' or (literally) 'the twin sets of draught

we think, has intruded a subtextualcomment on an unsuspected but entirely naturalistic aspect of the nomenclature of the Bears. Sailors will have termed the Little Bear both the 'Tail of the Dog' and the 'Other Helice' whilst the Great Bear will have been known as 'Helice' or the 'Tail of the Dog'. The fact that there is an overlap in names is entirely consistent with Aratus' fusion of the constellations' identities on the basis of Homer's appellation of Ἄρκτος and Ἄμαξα' for the Great Bear ('Bear' and 'Waggon'). Thus while Aratus and Homer call the two constellations by the same two names "Ἄρκτοι' and Ἄμαξαι',Aratus adds two more names, namely the 'Tail of the Dog' snd 'Helice' ('Other' or not). Where Homer leads Aratus seeks to better his master. In any event Aratus' allusion to the Homeric 'ἐπίκλησιν καλέουσιν' obliges us to import any Homeric findings into the discussion of Aratus' meaning.

The uncertainty produced by 'τὴν μὲν … / τὴν δ' … ἑτέρην' is very influential. We mentally subsume 'ἑτέρην' under the antithesis 'the one … the other' such that the presence of 'ἑτέρην, is virtually tautologous ('τὴν δ' … ἑτέρην Ἑλίκην' = 'the one … the other [appellation], Helice'). Yet 'ἑτέρην' is not just a gloss on 'the one … the OTHER'. It also has an independent existence as 'the other' ('τὴν δ' …ἑτέρην Ἑλίκην' = not only 'they call it under the one appellation the Tail of the Dog' and under the other appellation 'Helice' but also 'they call [it] under the one appellation 'Kynosura' and under the other appellation'*The Other* Helice')..

In sum, Homer's official and unofficial joint names for the Bears encourage Aratus to further 'improve' on his source by adding a third official and fourth unofficial name to both of the Bears. In Aratus the 'Tail of the Dog' becomes the title of both Bears thanks to the dual role of 'ἑτέρην'. Meanwhile, the importance of 'ἑτέρην' seems to take on ominous proportions in the text for, in short order, we meet the antithesis 'ἀλλ' ἡ μὲν …πολλὴ … Ἑλίκη .... ἡ δ' ἑτέρη ὀλίγη …' (40-42). Aratus seems to go out of his way here to modulate from the 'Bears' to the 'Helices'. This is because the trick up his sleeve is the 'otherness' of Helice as opposed simply to 'the other' Bear. This suspicious reader, on reaching this interpretative crux, will be concerned to return to the nature of the 'otherness' of Helice in the earlier passage.(37) where 'other' was also appended to 'Helice' but not to the little Helice of Kynosura as in line 42.

Firstly however a further look at the redivided 'ἐπί κλησιν καλέουσιν', initially sends the reader back even further in the text. Through an aition of the Bear constellations (30-35), Aratus had asserted the 'will of mighty Zeus' in the animals' meritorious catasterisation[12]. According to Aratus, the Bears are an aspect of Jove's kindly presence in the sky. Thus it seems reasonable to suggest that these constellations, the former wet nurses of the infant Zeus, were the focus of prayers offered up at sea. In this context, the words 'τὴν μὲν Κυνόσουραν ἐπίκλησιν καλέουσιν / τὴν δ' ἑτέρην Ἑλίκην…' could also mean **they [the sailors] call out under one invocation 'Kynosura', and under another invocation 'Helice'.** In this latest translation of the Aratus passage the words 'ἐπί κλησιν' have been interpreted as being in agreement with 'τὴν μὲν … τὴν δ'', whilst 'Κυνόσουραν' and 'ἑτέρην Ἑλίκην', through being in apposition to '[ἐπί] κλησιν', are deemed to be attracted into its case. We assume the nursemaids of Zeus were called Kynosura and Helice.

Contextualisaton is all-important here. Whilst addressing the one Bear by its proper name of Kynosura the benighted sailor will also be appealing to 'The Tail of the Bear'. This nickname could hardly be tolerated as the recipient of earnest prayer, yet prayers in ancient times were

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oxen' ('geminosque triones': Virgil Aeneid 1.174), and Hyginus specifically alludes to Kynosura as 'the other Septentrio' ('Kynosura nutrix Iovis [relata] in alterum septentrionem': Fabulae 224.3). Aratus, as we shall see, has other more etymological preoccupations in his discussion of 'Hamaxai' the Greek 'waggons'.

[12] Line 31:'Διὸς μεγάλου ἰότητι'

always as inclusive as possible. Thus no harm will be done, thinks the sailor, if the Great Bear (also the'Tail of the Bear') finds its attention attracted to his vow which will of course bring with it a sacrifice when or if the crew survive. Meanwhile, in the same way, the appellant in crying 'Helice'' will necessarily be crying out [to] 'the other'Helice'as well. He will not however be voicing the invocation 'The Other Helice' which would be absurdly bathetic in the elevated context of invoking divinities, particularly if the title 'The Other Helice' *were* common currency as a name for the Little Bear. For a shout of 'The Other Helice' would not just sound allusive and offhand it would also *inter alia* suggest the exclusion of the 'first' Helice. This brings us back to the inclusivity of ancient targets of prayer. For, the same sailor who cried out to the other bear 'Helice' would be secretly delighted that his invocation could aso be thought to have attracted the attention of potential listeners such as not only Kynosura who is an other Helice, but also to a hitherto unidentified 'other' person or thing that happens to be also called Helike. Thus under the redivided form of 'ἐπί κλησιν' we may also translate as follows: '**they invoke [the Bears] under one name as 'Kynosura', and under another name 'Helice'**. It is not clear whether both bears are to be callled Kynosura and Helice or whether one is Kynosura and the other Helice. The official version is the second one but unoffcially both Bears can happily accept having two names each, one 'proper, one slang (just as in Homer' Bears and Waggons). As we have seen, prayers must be addressed to proper names. Slang terms such as 'Tail of the Dog' would not be considered fitting in a religious setting, though in its subtextual capacity as a double meaning 'Kyno sura' will have been considered an 'omen' from the gods. This brings us back to 'τὴν μὲν … ἐπί κλησιν … τὴν δ' ἐτέρην' which all form just one prepositional phrase, albeit antithesized, in the Accusative and governed by 'ἐπί' ('as regards the one term of invocation …'). The word 'ἐτέρην' may simply point up the antithesis ('[they call out] the other's name of Helice') or it may join 'Helice' to form a nexus ('[they call out] the name of the Other Helice'). Meanwhile, remaining with the dismembered version of 'ἐπί κλησιν', if this were considered to be unconnected to 'τὴν μὲν … τὴν δ'', in constituting a stand-alone nexus, it could feasibly mean 'for the purpose of calling to aid'[13]. The line would now mean '**for the purpose of calling to aid, sailors invoke one Bear as 'Kynosura', and the other they invoke as 'Helice'**.

The version of the text that now holds our interest is the identity of the potential 'different Helice'. This version of the text will now be the invocatory one.. For there was a 'Helice' that, whilst it had nothing to say about the stars and navigation, must have been on the lips of thousands of Greek sailors as they solemnly intoned their prayer, and pleaded for help.

5. Invoking Helice the City

The most interesting aspect of these subtle, kaleidoscopic changes of meaning is the emergence of a quite different Helice which is neither Ursa Major nor Ursa Minor. That is, the ominous repetition of '… Ἐλίκην. Ἐλίκη…' observed earlier has proven to have some substance. There are two different sorts of 'Helice' both of which may be reasonably addressed at sea by sailors who are respectful (pre-storm) or fearful (mid-storm) or grateful (post-storm). The 'other Helice' cannot be other than the famous and prestigious city of Helice in Achaea which was swept away by a tidal wave, following an earthquake in 373 B.C.[14]. Its fame was legendary even before its manifestation as an Archaic and Classical city-state. In Homer's catalogue of Agamemnon's sea forces[15]. Helice's prowess at sea makes it worthy of prominence as a

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[13] See Polybius 2.5.70.
[14] Strabo 1.3.18; Diodorus Siculus 15.48.3: 'Helice and Bura the former of which had, as it happened, held first place among the cities of Achaia before the earthquake'.
[15] Iliad 2.575

provider of ships. Significantly it is mentioned last. Homer also mentions its importance in the worship of Poseidon[16] who is called 'Heliconian' in a simile inspired by the bull-sacrifices there in his honour.

Now, long after the expulsion of the Ionians, and under the historical[17]'Achaeans', the city of Helice became the head of the Achaean League of twelve cities[18] . Much later Ovid in the Metamorphoses mentions Helice specifically as an Achaean city ('si quaeras Helicen et Burin, Achaidas urbes…'; 'if you seek the Achaean cities of Helice and Buris…': Met 15.293). The presence therefore of the word 'Ἀχαιοὶ' ('Achaeans') at line 37 in our text must give us pause for thought, especially as it occurs nowhere else in the 'Phaenomena'. Originally Helice had been a Bronze Age Ionian settlement. Thus whilst any association of the name 'Helice' with 'Achaeans' will conjure up both the 'Heroic' or 'Iliadic' sense of [conquering] 'Achaean', and the specific Archaic or Classical nation of the 'Achaeans'. it will also conjure up at the back of the reader's mind the autochthonous Ionians and an ancient injustice perpetrated upon them by the conquering Achaeans at the end of the Mycenean Age.

The Homeric quote 'ἐπίκλησιν καλέουσιν' initially coats the actions of the sailors in this passage with an archaic Homeric patina. We hear their prayers filtering through the pages of Homer, beginning with such 'Greek 'Achaeans as Odysseus who we conjecture might have prayed to Helice, as Poseidon's 'consort', (Callimachus Hymn to Delos 100) to intercede for him with her spouse and Odysseus' implacable foe. Odysseus will have had full confidence in being heard if his prayer were accompanied by a Heliconian bull sacrifice. Later prayers addressed to Helice by ethnic Achaeans after the expulsion of the Ionians will be infused with self-aggrandisement and 'gloria'. Prayers uttered after 373 BCE by the same ethnic Achaeans will strike a much more sober, apotropaic note.

Now, to return to the [Achaean] sailors, through the anaphora '…Ἑλίκην. Ἑλίκη…' (37) Aratus seems here to be voicing their naturalistically-repeated prayer, beginning with an apostrophe. Aeschylus' text contains the same appeal (Aeschylus'Agamemnon: Zeus, Zeus…': 973). In terms of the termination of 'Ἑλίκην', the Accusative of Exclamation seems to have existed in Greek to judge by Callimachus' Baths of Pallas (89: 'ὦ ἐμὲ δειλάν') and other contexts[19]. Meanwhile a Dative is entirely naturalistic as the indirect object of an understood verb such as 'εὐχόμαι'. That is, in 'Ἑλίκην. Ἑλίκῃ' we hear the typically anaphoric words of a sailor crying in prayer 'Oh Helice, to Helice [I pray]')[20].

A third cry of 'Helice' filters back as more than a post-script from line 41. For this is the Nominative form, and it activates the sense of 'Nominative' in the word 'κλησιν'. Thus 'ἐπί κλησιν καλέουσιν' comes to mean 'they call out in the Nominative upon the one and the other'.

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[16] Iliad 20.404

[17] I mean by this 'post-Dark Age'

[18] See Smith *Dictionary of Greek & Roman Geography* s.v. 'Helice' for references to its Achaean status. The expulsion of the Ionians only served to spread Helice's fame as the Ionians built the Panionion at Mycale in honour of Heliconian Poseidon (Herodotus 1.148) as well as altars near Miletus & Teos in Asia Minor (Pausanias 7.24.5) . Aratus would have been familiar with the cult having being born at Soli in Cilicia & having been a pupil of Menecrates of Ephesus. See A.W.Mair *Callimachus* Loeb (ed. 2000) pp.186/7.

[19] See also Revelations 8:13: 'Οὐαὶ οὐαὶ οὐαὶ τοὺς κατοικοῦντας' and Sappho *GVI 11386*. It is worth observing that in Aristophanes' Clouds (248), the verb 'ὄμνυμι' ('I swear by') takes both the Accusative and Dative of the person or thing sworn by. See Clouds 247-8: [Socrates] 'ποίους θεοὺς ὀμεῖ σύ; [Strepsiades] τῷ γὰρ ὄμνυτ'. For the accusative, see also Euripides Hippolytus 713. In the Clouds, the bumpkin Strepsiades uses the Dative despite being rehearsed in the accusative by the intellectual Socrates. This hints at the colloquial use of the Dative in a direct oath.

[20] See Iliad 8.526 [the direct speech of Hector)] 'εὐχόμενος Διί τ' ἄλλοισίν τε θεοῖσιν'

In 'Helice' in line 41 and later in 'Kynosura' in line 52 we hear these Nominatves wafting back from the distant seas of the text. Yet these terminations are also Vocatives and as such they satisfy the reader's desire to continue to receive the sounds of the sailors invoking the stars by any avenue possible. Meanwhile the Genitive of 'Helike' appears twice in the succeeding passages at lines 51 and 59. Since there is a Genitive of Exclamation in Greek we may consider ourselves invited subtextually to hear the sailors' continuing addresses to the stars. Meanwhile, as we have seen, the deliberate inclusiveness of ancient prayer formulae allows us to suppose that the sailors are attempting to enlist the help of both the Helice that is the most prestigious of Poseidon's cities and the two Helices that are the nursemaids of Zeus. All invocatory terminations of 'Helice' cascade through the text in the hope of finding their target

In sum the text has become the sea at night with the inflected cries of endangered sailors echoing through the hexameters.and beyond the confines of the syntax. The sailors **'invoke the one [Bear] by the cry/call 'Kynosuran' and the other by the cry 'Heliken, Helikei …'.** At the same time 'the other Helice' in alluding to the Achaean city-state, has its own nuances to bring to the text. We are, that is, obliged to take into account 'other' meanings of 'ἑτέρην' As well as now referring (also) to the Helice 'of a different kind' (namely, a city, not a constellation), 'ἑτέρην' is also a euphemism for 'the not-to-be-spoken-of Helice', the Helice that is 'other-*than-it-should-be*', the Helice, in other words, that had become an ominous byword for the wrath of Poseidon after 373 B.C. when it disappeared under the force of a tsunami. The passage thus underlines Aratus' ability to conjure 'meanings' - and indeed 'omens', or 'σηματα'[21]- out of a word like 'ἑτέρην' that had appeared quite mundane. Our task as the reader is to read the signs, however 'faint'[22], and be guided by them.

6. The Axis and the Pivoting of Earth and Heaven

In the lines that most command our (and Ovid's) attention, namely 36-38 we encounter the words **'τεκμαίρονται'** and **'ἀγινεῖν'**. Not coincidentally these words have already appeared in the text in the forms 'τεκμήρατε' & 'ἀγινεῖ' and their earlier usage must be taken into account in examining the sentence Ἑλίκηι … ἀγινεῖν'. That is, when lines 36-38 emerge, as it were, above the literary horizon, these earlier contexts will have primed the reader to receive the words **'τεκμαίρονται'** and **'ἀγινεῖν'** in a particular way. Thus the main verb in line 38, 'τεκμαίρονται' (in, apparently, the Middle Voice) will be influenced by the earlier meaning of 'τεκμήρατε', where, however, the verb has unsettled translators & scholiasts (Phaenomena 17-18)

'Ἐμοί γε μὲν ἀστέρας εἰπεῖν/ ᾗ θέμις εὐχομένῳ τεκμήρατε πᾶσαν ἀοίδην'/'τα φαινόμενα'

'But for me, too, in answer to my prayer, direct all my song, even as is fitting, to tell the stars'

Some consider 'τεκμήρατε' here to mean 'guide'[23] [sc. 'my song'], others seem to prefer 'show [sc. 'what my song is'] by signs'[24]. Clearly the latter translation would play on Aratus' use of the 'stars' [sc. 'signs'] as the subject matter of the poem. Examination of such 'signs' constitutes a large part of his work after all. More importantly for the current discussion however, the word

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[21] For 'σημα' as the most common noun in the 'Phaenomena' and as a touchstone of the overall theme of the work see Mary Prendergraft "*Aratean Echoes in Theocritus*" in "*Quaderni Urbinati di Cultura Classica'* N.S. vol. 24, nr. 3 din 1986 p.51. The word 'ἑτέρην' is a 'σημα' in the sense of 'sign' 'word' 'omen', and it also describes a 'constellation' or 'σημα'

[22] 'Faint' is 'λεπτά' in Greek,a key word in Aratean poetics. See below.

[23] Liddell & Scott, Stuart Jones & McKenzie *Greek-English Lexicon* ninth edition (1996) p.1767 *s.v* 'τεκμαίρομαι' Β'

[24] See discussion of 'τεκμήρατε' in D.Kidd *Aratus: Phaenomena* (1997) p.174 who nevertheless also translates as 'guide'.

'τεκμήρατε', by virtue of its meaning in line 18, projects forward 'signs' about the poem[25], and particularly, as we have seen, about itself, whenever it recurs in the text. Furthermore the verb's cognate nouns 'τεκμαρ'/'τεκμωρ', and 'τεκμήρίον' mean 'sure proof' rather than 'indication' ('σημεῖον')[26]. The verb therefore makes an intrinsically strong case for its meaning here to be taken as a 'fixed sign' of something to follow 'they are proved to be… ')[27]. Thus the meaning it bears here must heavily influence its reappearance precisely because of the micro-poetics produced by that meaning itself ('τεκμαίρονται' is proven to be what it is by the nuance ['sign'] contained in 'τεκμήρατε').

Meanwhile, the word 'ἀγινεῖ' also acts as a 'sign' pointing forwards to the same passage (35-39) and to a specific nuance of this verb. The word 'ἀγινεῖ' appears in Phaenomena line 20 where the role of the words 'οὐρανὸν αὐτὸν' has been disputed:

'ἄξων αἰὲν ἄρηρεν, ἔχει δ' ἀτάλαντον ἀπάντη / μεσσηγὺς γαῖαν, περὶ δ' οὐρανὸν αὐτὸν ἀγινεῖ'.

'But the Axis is forever fixed, and in the midst it holds the earth in equipoise, and wheels/drives/guides the heaven itself around'.

Kidd has argued that this is the correct reading of the MSS, with the small 'axis' driving the great heaven 'itself' around. As he says, 'the emphatic 'αὐτὸν' contrasts the grandeur of the sky with the slenderness of the axis'[28]. The word 'περι' ('around') is used adverbially indicating the circling motion of the heavens around the tiny axis. It is not impossible however to take 'περὶ … αὐτὸν' together as meaning 'περὶ … εαυτὸν' ('the axis drives the heaven around itself'). In either case, the verb 'ἀγινεῖ' itself must connote 'propelling' since motion is imparted to the globe. That is, if taken with 'περὶ' it will mean 'drive in a circle'. As we shall see there is also a fundamental sense in which the globe is 'steered' in a circle.

Meanwhile, the wider context of line 23 relates to the 'axis' of heaven ('ἄξων αἰὲν ἄρηρεν, ἔχει δ' ἀτάλαντον ἀπάντη / μεσσηγὺς γαῖαν, περὶ δ' οὐρανὸν αὐτὸν ἀγινεῖ': 22/3). This is the first occurrence of the word 'ἄξων' in its sense of 'axis of heaven' so its use is significant[29]. Now the verb 'ἄρηρεν' means 'is fixed' to which we may add an (anthropomorphised) sense of being 'steadfast'. It also means 'is firmly attached'. Alongside this, we suggest, there is a verbal play on 'ἄξων' which could equally well be the future participle of 'ἀγω' meaning 'he [note the

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[25] The cognate relationship of 'τεκμήρατε' with 'τεκμωρ' (= 'end' 'goal') makes 'τεκμήραίο' a fitting word with which to 'end' the poem (1154) especially as the word's Homeric nuance of 'goal' makes a final bow to the Homeric inheritance of the 'Phaenomena' as a whole. Allusions to Aratus' debt to Hesiod, as the father of didactic astronomical & meteorological poetry, will also figure prominently in the poem. See Kidd op.cit. p.188 on 'ἥ θεμις'. See below on Helice/Helicon.

[26] See LSJ op.cit s.v.'σημεῖον' II.3 p.1593 & s.v.'τεκμήρίον' II.3 p. 1768

[27] If 'τεκμήρατε' means 'show by signs' at line 18 then a realignment of the meaning of the entire sentence is possible, as follows: 'show to me by signs, insofar as it is proper, that my entire song, in answer to my prayer, expresses/celebrates/names the stars'. Clearly the answer to such a prayer could punningly consist in the revelation by stars (= 'signs') of themselves. See Kidd op.cit p.188 for reference to Hopkinson's translation of 'ἥ θεμις' which I adopt here but which can move aside for Kidd's interpretation depending on how the reader wishes to 'view' this 'phaenomenon' of 'τεκμήρατε'. Furthermore, on the model of the Pindaric use of 'τεκμαίρει' at Nemea 6.8 one could make a case for the line to be construed as follows: 'to me (as I pray) give the stars as signs to express all my song, insofar as it is meet'. This interpretation relegates the stars to the role of 'extras' as it were, in support of Aratus' poetic strategy. In support of N.Hopkinson's view of 'ἥ θεμις', (1988) one might adduce Apollonius Rhodius 2.311-316 where the aged prophet Phineus suggests that not all of what is predictable is 'right' to be divulged. Zeus, he says, prefers to leave some things undivined. Aratus himself has a remarkably similar passage (768-740) in which he says Zeus gives many signs to mankind on all sides but many things remain hidden and humans do not (yet) know everything from Zeus. These passages provide useful insights into a text such as ours which incorporates the interpretation of signs into its poetic strategy. One is led to the conclusion that, with such a text as Aratus', it is 'right' that much is left to the reader's (in)sight.

[28] Kidd op.cit p.178/9 s.v.'οὐρανὸν αὐτὸν' version (1).

[29] Kidd op.cit. p.177/8 s.v. 'ἄξων'

masculine gender] who will guide'. This nuance is picked up by the main verb 'ἀγινεῖ' the subject of which must now be 'he' agreeing with 'ἄξων'. But the future participle 'ἄξων' gives us pause for further thought. Typically it conveys purpose as at Iliad 1.13 ('ἦλθε… / λυσόμενός …θύγατρα'; 'he went to ransom his daughter'). Nothing prevents us translating as follows (assuming a male antecedent): 'he, exactly as he is, is permanently fixed in order to steer… and he drives the heaven around himself'[30]. In this verbal game the pronoun 'αὐτὸν' is pivotal in confirming that a male Nominative is to be assumed with this manifestation of 'ἄξων' (= 'set to steer'). This affects the translation of 'ἄρηρεν' which should now apply to the actions of a male person. This person could be 'closely joined to (something)' or 'joined at the hip with (something)' one might say. Now, in order to steer well a helmsman would need to work 'in very close proximity to/attachment to' his rudder or tiller. One is beginning to see a cosmic helmsman emerging from these lines. So 'closely attached' ('ἄρηρεν') is this controller to his 'pivot-point' ('ἄξων' as substantive) that his 'determination to steer' ('ἄξων' as future participle) is one and the same with this 'pivot-point' ('ἄξων' as substantive).

However, perhaps more importantly, this cryptic manifestation of 'ἄξων' as deriving from 'ἀγω' inevitably intersects with the meaning of the main verb 'ἀγινεῖ' which is a variant form of 'ἀγω'. Now 'the intention' of the cosmic helmsman ('ἄξων') is to be achieved by being permanently fixed to, we suggest, the celestial rudder. A rudder's job is to steer. Thus 'ἄξων' should mean 'in order to steer' especially as the cosmic helmsman's job is to 'drive' the heavens around himself. This is virtually a definition of the act of 'steering'. Certainly one can say that one intends to 'drive' by 'driving' ('ἄξων … ἀγινεῖ').

The sentence thus becomes an affirmation of both the providentialism and the intentionality of the guided cosmos, a doctrine espoused by the Stoics through their understanding of the 'Nous' that directs the universe (Seneca *On Providentialism* 1.1-2). Meanwhile, on the textual level, this hidden meaning of 'ἄξων' will also transfer its nuance of 'steering' to the later incidence of 'ἀγινεῖ', in the Helice passage. The nuance of 'steer' (a helm) is also attested at A.R. 2.895. Thus two nuances of 'ἀγινεῖ' ('drive' 'steer') can be projected onto line 38 where it allows us to see in sharper relief both the helmsman as he 'steers' the boat, and the oarsmen as they 'drive' it.

The notion of 'guidance' permeates, or is, 'all around' lines 21-23, just as the guiding axis of heaven holds that which is 'all around' it in 'equipoise' ('ἀτάλαντον ἀπάντη'). And of course what is 'all around' a cosmic helmsman and 'ever poised by its own weight'[31] is the cosmic

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[30] Taking 'αὐτὸν' as 'εαὐτὸν' as suggested above

[31] Note that another meaning of 'ἀτάλαντον' is 'equal' (Iliad 2.169) and this reminds us of the word 'sea' in Latin which derives from that which is 'equal' or 'flat', namely 'aequor'. There may be some sense of 'flatness' in the Greek here. The sea meanwhile is certainly 'all-surrounding' ('ἀπάντη') enhancing the image of the little helmsman in the vast expanse of ocean. The main meaning of 'ἀτάλαντον' however seems to be entirely accurate etymologically, namely 'very balanced'. The words 'ἀτάλαντον ἀπάντη' are a quotation from Empedocles (fragments 17.19) a fact which relates our text to Empedoclean 'Strife' which is in equipoise relative to the four elements, and on all sides, but yet apart from them. However the main reason Aratus quotes from Empedocles here is to allude back to the Works and Days of Hesiod, the text to which Aratus is most indebted thematically. Immediately after a proem accepting the omnipotence of Zeus, Hesiod had discussed the two types of 'Strife', negative and positive, which become one in Empedocles who seems to transform Hesiod's positive 'Strife' into 'Love', thereby implicitly engaging in a polemic with Hesiod. Note the allusive rhyming between Empedocles' 'Νεῖκός τ'οὐλόμεν*ον δίχα* τῶν ' – 'the destructive Strife [in equipoise] apart from them [sc. 'the elements']' (line 19) and Hesiod's 'διὰ δ'*ἀνδιχα* θυμὸν' - 'wholly apart in nature' (line 13 discussing evil Strife, which is the Empedoclean 'Νεῖκός'). As in Hesiod, so in Aratus. Aratus' proem also accepts Zeus' omnipotence and within four lines comes the Empedoclean quotation in order to continue the allusion to his didactic predecessor. It is also possible to unearth an Empedoclean joke here. If two parts of his text are unified or made one, namely '…-*ον δίχα*' = '…'*ονδίχα*' this would textually confirm and reflect Empedocles' unification of the two Strifes of Hesiod, especially as the words 'δίχα' and 'ἀνδιχα' mean 'apart'. Furthermore, the almost identical word 'ονδίκα' is an archaic form of 'ἀνάδικα' which means 'subject to appeal' or 'retried'. This would suggest that in Empedocles' mind the 'jury was

ship[32]. Here we should also consider the role of 'μεσσηγὺς'. Its suffix and prefix may suggest there is etymological play on 'γη' ('Earth') and 'μεσση' ('middle') which seems highly probable given the 'omen' in 'γαῖαν' ('Earth') and the senses of 'περὶ' ('around') and 'ἀπάντη' ('all around'). All these words put the spotlight on the man in the middle, the helmsman, along with the controlling hand that is on the tiller of heaven at the mid-point of the globe ('μεσσηγὺς').

7. The Rising and Setting of Words: Phaenomena 36-38:

Thus both 'τεκμήρατε' and 'ἀγινεῖ' come with extensive baggage when we re-encounter them a few lines later in the shape of 'τεκμαίρονται' (38) and 'ἀγινεῖ'. 'Now if we 'accept the omen', as it were[33] and translate 'τεκμαίρονται', not only on the model of 'τεκμήρατε', but also as the Passive (not Middle) Voice of 'τεκμαίρω', we can translate the verb as 'are guided' 'are proven' or 'are shown [by fixed signs] to be'.[34] If we now integrate this meaning into the sentence as a whole, what emerges is something that in general meets our expectations: **'at sea Achaean heroes are guided as to where they have to steer their ships by Helice'.** Here the constellation Ursa Major is used as a direction-finder or 'to steer by'. We are inevitably reminded here of Odyssey 5.277 where Odysseus is instructed to sail on the open ocean with Arctos on his left ('Ἄρκτον θ᾽,… //τὴν γὰρ δή μιν ἄνωγε Καλυψώ, δῖα θεάων, / ποντοπορευέμεναι ἐπ᾽ ἀριστερὰ χειρὸς ἔχοντα': Od 5.273-277). Clearly Odysseus cannot be near a navigable coast otherwise he would put in for the night. Meanwhile in Aratus, it is as if a Genie has now been released from a bottle. The text starts to move kaleidoscopically. A complementary text emerges if Achaeans and men are set in apposition to each other: '**At sea, where/when the guiding, driving of ships is to be done/is necessary**, **… men are proven (to be) heroic Greeks by Helice'.** On this reading, a reliance on Helice to ascertain one's position at night in the open seas marks men out as Achaean 'heroes' (such as Odysseus). However the text could also mean that the use of Helice to steer by marks out 'Achaeans' [Greeks] as true men. Of course the need to guide ships could also arise by day when there are no constellations to be seen and Tiphys the helmsman of the Argo does steer by the Sun**[35]**. But Aratus will wish to privilege the particular meaning of 'ἵνα' that relates to 'at times when' by which he means effectively 'during the dark of night'. At the same time the coverage of 'ἵνα' could be coterminous with the range of 'εἰν ἁλι' ('in the open sea, where …'). In this context Odysseus' fortitude and endurance at the rudder mark him out, like Tiphys and like other helmsmen, as much a hero as Achilles[36]

The different nuances of the words of lines 36-38 continue to encourage other elements of the sentence to accommodate themselves to any and every turn of the dictional kaleidoscope. Thus

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still out' on the binary nature of Hesiodic 'Strife'. In fact ironically, in Empedocles' mind, what Strife there is now (a) unitary (there is only one type of cosmic 'Νεῖκός') but also (b) intertextual ('the rivalry, or 'strife' between these two authors). I say ironically, because this leaves (à la Hesiod) two different forms of 'strife', despite Empedocles' best efforts to convince us there is only one. And this intertextual strife is very akin to Hesiod's second form of 'good strife'.

[32] We suggest elsewhere that the hold of a Greek ship was known as 'Hades'. This may suggest that the upper structures were the equivalent of 'heaven' or 'οὐρανος'. This will correlate the cosmic helmsman to his earthly counterpart even more closely. The earthly helmsman too drives or steers the 'heavens' around himself.

[33] 'σῆμα' = 'star sign' 'watchword' and 'omen',

[34] The fixed signs are the constellations both literally (they are riveted into the dome of the sky) and they are also guaranteed in significance (e.g. the setting of the Pleiades signals the start of the ploughing season whilst its rising is a sign to begin the harvest, according to Hesiod).

[35] For Tiphys see Apollonius Argonautica 1.105-108. For 'αγω' see LSJ op. cit. p.18 s.v 'αγω' I.4. Note the use of 'αγω', of which 'ἀγινεῖν' is a variant, at Apollonius Rhodius 2.895 ('νῆα θοὴν ἄξειν') where it must mean 'to steer' or 'to guide' [sc. 'the swift ship'] since Ancaeus is here volunteering to take over the helm of the Argo. See also Kidd op.cit. p.79 s.v.'ἀγινεῖ'.

[36] Although it seems from this passage that the Phoenicians do not use Helice, this hardly makes a reliance on the constellation a diagnostic in itself of Greekness. In fact we will suggest that the Phoenicians do make use of Helice.

'ἵνα' could be selective ('**at sea in places where/at times when the ship is to be steered, Greeks are proved to be men by [steering] using a 'winding route'**'). Here our attention is turned to the negotiation of maritime obstacles by Greeks who, in the person of the helmsman, 'make a judgement by circling round' or who are proved [real] men by circling [the obstacle]'. The word 'ἑλικη' can mean simply 'anything winding'. Here Aratus may be on a moralising tack especially if we cite Odysseus' passage of the island of the Sirens as the reverse of the course of action recommended by Aratus. A true Hellenistic Achaean, who is specifically a helmsman, Aratus suggests, would show his mettle in avoiding, or in giving a wide berth to, or in circling such perils. Odysseus however directs the ship straight past the lips of the Sirens,

But Helike as well as meaning 'a circuitous route' was also, it appears, a name for more than one geographical location, locations which were amongst the most to be avoided by careful mariners. Firstly a retranslation of our passage will point in the direction of the city Helice discussed above. Thus '**Achaean crews also 'make a judgement' on the seas at Helike, as to 'where and when there is steering of ships to be done / Achaeans prove themselves true men on the seas at Helike where or when they must row'**. Here we are brought back to the tidal wave at the Achaean Helice which had left sloping roofs and streets visible in the water according to Ovid (Met 15.237). It was no doubt important to steer clear of the more obtrusive remains of the city just as we suggested in our previous discussion of the winding route of Helice. Once again discretion will be the better part of bravura in Aratus' book.

There was a harbinger of the disaster which overtook Helice the city. A bright light was seen in the sky, one which faded to the appearance of a comet[37]. Clearly the omen was only accorded weight after the event, when two thousand men were sent to find what must have been thought to be a plethora of corpses[38]. In the event no bodies were ever recovered .No doubt as a result, the local Achaean men, having become more omen-conscious, **began to indicate by signs when ships out at sea should be driven ashore /where ships should be steered at Helice'**. This seems initially to suggest an increased level of attention being paid to weather signs such as winds and atmospheric phenomena. This would make sense given that Poseidon, the god of winds, had considered Helice to be his consort (Callimachus Hymn to Delos 1000). At the same time this rendering of the sentence also evokes the profesedly didactic thrust of Aratus' work.

The theme of the remnants of Helice can be pursued further. .Anyonene who sailed close to the site of Helice's demise had to be particularly careful. Strabo (8.7.2) explains as follows: 'and Eratosthenes says that he himself saw the place, and that the ferrymen say that there was a bronze Poseidon in the strait, standing erect, holding a hippo-campus in his hand, which was perilous for those who fished with nets'. Clearly parts of the city remained at or near sea level as Pausanias himself remarked in 174 A.D[39].

If Eratosthenes' fishermen were having trouble, one can imagine the problems faced by ships. Our sentence now takes on a surprising exactitude of meaning. For, the Achaean locals who 'show by signs' may be placing some form of notices to warn off shipping. If 'Ἑλίκη' is understood as a locative[40], and if we revert to the original translation of 'ἵνα' ('to where'), and if we understand 'τεκμαίρονται' as 'they are guided'[41], then the sentence now reads: '**At Helice,**

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[37] Seneca, Natural Questions, 7.5. 7.16
[38] Strabo, Geography, 8.7.2 -
[39] Pausanias 7.24.12/13
[40] See Buckland Green *Green's notes on Greek & Latin Syntax* (1911) p.39 ch.74. See also Kidd op.cit p.176 s.v. 'οὐρανῷ ἕλκονται' for locatives in Homer, Sophocles, and Aratus (lines 20, 414).
[41] See line 18 and the discussion above on 'τεκμήρατε'. Note that the two main signs that we have argued point forward to the Helice passage, namely 'τεκμήρατε' and 'ἀγινεῖν' can both mean to 'guide' or 'steer'.

Achaean men at sea are guided as to where they have to steer/move their ships' or **'at Helice on the sea Achaean men ordain where ships must be steered'**. Our sentence has become an aside on the contemporary difficulties faced by those visiting, or passing by, the site of the ancient cataclysm[42]. We imagine local ferrymen (Achaeans) working as *ad hoc* guides to the ships that passed through the Gulf of Corinth. Or we imagine more formal safety measures being put in place. Perhaps floating cork was used to mark areas of risk.[43] It seems more likely however that poles will have been used such as those placed in the shallows between Leucas and Acarnania described by Arrian, or those topped by tall laurel branches on the coast north of Pisa described by Rutilius Namantianus[44]. Obedience of these signs will have been mandatory.

On a poetics level, we note in the Helice sentence how the phrase 'at sea' comes into sharper focus with this translation. In general, different versions of these lines lay different stresses on different words. Meanwhile, on an historical level, we may speculate how this advertisement warning of the dangers to shipping at Helice has entered the pages of Aratus. Perhaps the author obtained his information directly from his contemporary and fellow 'writer of the stars', Eratosthenes. Whatever his sources, it is Aratus' own methods of imparting information to others that interest us most. 'Τα φαινομένα' seems to afford 'signs' pointing both to that which lurks beneath the text, and to that which lurks beneath sea level.

This way of interpreting the text as a '*warning-to-shipping'* is not so far-fetched as might appear, leaving aside its poetics or allegorical application to the work as a whole..For Hesychius has preserved a particular nuance of 'χρη', namely 'χρησμωιδει'. This produces yet another perspective on the demise of Helike-the-City through the translation '**Achaeans are proved true men in the seas off Helike where the oracle inspires them to steer their ships'**). In ancient times obedience to the demands of augury was the equivalent of respecting the gods' will. Clearly after the comet and the disaster at Helice, the Achaeans will have addressed their concerns to one such divine oracle. It would be surprising if they did not. The reply, according to our translation here, seems to have insisted on the continuation of sea-borne travel over the site of the disaster. One assumes the sea god Poseidon, despite his statue constituting the major obstacle, will have given this sea-riendly, conciliatory response. The site of Helice was not to be condemned as a maritime 'bidens'. Again there is a moralising tone in Aratus' words. To be a true man is to respect the gods and their injunctions however much fear and insecurity may drive one in the opposite direction.

8. Helice as the Name of Further Geographical Locations

We should emphasise the point that 'Helice' may be in the Locative case'('in the sea at Helice where …'). This will prompt us to detail where we think other geographical examples of a maritime Helice might have existed. There was a second location called Helice opposite the Carambis headland in the Black Sea (Apollonius 2.360). Clearly 'opposite' does not mean 'above' which seems to discount the possibility that Apollonius is referring here to the Great Bear star sign. The place most obviously lying opposite Carambis (Ilyasbey, in today's Turkey) is the tip of the Crimean peninsula at Foros. This Cape is a 'rocky point'[45] and two Byzantine

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[42] We are reminded of our earlier point that Achaeans were proven real men in accepting the oracle to continue maritime activity in the area

[43] Cork was used on the sea surface to mark the site of an anchor on the sea bed. See L. Casson *Ships and Seamanship in the Ancient World* p.257, especially note 133 for the testimonies of the use of cork as a marker.

[44] For references see L. Casson op. cit. p.463 *corrigendum* on p.245. There are also grounds for supposing that Achaean men 'estimate' or even 'arrange' where ships should be steered at Helice.

[45] John William Norie *New piloting directions for the Mediterranean sea p.263*

wrecks have been discovered off the coast[46]. However any guidance given to shipping here may have been more concerned with highlighting the location of local sand banks. An 80-metre Bulgarian tanker the Irtysh-11 came to grief here on a sand-bank in February 2010.

At the risk of repeating ourselves however, it is the ancient reputation of the area that we should be exploring. In lying 'across from Helice, the Bear' ('Ἑλίκης κατεναντίον Ἄρκτου'), Carambis will be facing Crioumetopon on the Tauric Chersonese (the modern southern cape of the Crimea). This was a place notorious for its forbidding coastline and weather as Strabo points out ('[it] is rugged and mountainous, and is subject to furious storms *from the north.* And in front of it lies a promontory;… it is called Crioumetopon. And opposite it lies that promontory of the Paphlagonians, Carambis' ('τραχεῖα καὶ ὀρεινὴ καὶ καταιγίζουσα τοῖς βορέαις ἵδρυται. πρόκειται δ' αὐτῆς ἄκρα, … καλεῖται δὲ Κριοῦ μέτωπον. ἀντίκειται δ' αὐτῇ τὸ τῶν Παφλαγόνων ἀκρωτήριον ἡ Κάραμβις': 7.4.3). The location of Carambis as being 'opposite 'The Ram's Forehead' aligns Strabo's geography precisely with that of Apollonius at 2.360. The northerlies in the Black Sea are the prevailing winds both in summer and winter (the ancient meltemi and contemporary Romanian 'Crivat').Thus all the year round the seas off Helice presented a stiff challenge for a crew in the Black Sea. Meanwhile the myth of Iphigineia in Tauris must reflect at very least a likelihood of regular shipwrecks in the area, providing the material for human sacrifice.

The Orphic Argonautica (1102) meanwhile locates a rocky headland 'under Helice' at line 744. Here the constellation may be in the author's mind. But another Helice is located by the Orphic text (1104) near the 'last waters of Tethys ['Oceanus']'. Apollonius Rhodius too mentions this' last arm of Oceanus' and locates it around the Danube Delta ('ἔστι δέ τις ποταμός, ὕπατον κέρας Ὠκεανοῖο, // Ἴστρον μιν καλέοντες …': 4.282f). In the Orphic Argonautica just after the Tethys passage, there is mention of the Cimmerians whom we believe to have inhabited the Lower Danube (1118)[47]. Later the sources of the Danube are evoked by mention of the Riphean Mountains (Orphic Argonautica 1121; Apollonius 4.287). Thus, the Black Sea, and predominantly the Danube Delta, play host to what appear to be geographical manifestations of 'Helice'.

Evidence for the difficulties involved in negotiating the waters of the Danube Delta is not hard to seek. In a Victorian travel book by Edmund Spencer, there is the following entry: 'Within six or seven hours' voyage of Odessa, we fell in with the current of the Danube, and immediately after passed near Serpents' Island, the only one in the Black Sea[48]. The author had been travelling by steamer from Constantinople to Odessa. The ship is clearly skirting Serpent's Island to the west when the residual force of the Danube redirects it eastwards. An ancient ship without propulsion would inevitably be drawn along the same route as soon as it too reached the efflux of the Danube Delta. The most striking corollary of Spencer's account is the fact that the force of the Danube will have been strong enough to carry a ship like Odysseus' 35 kilometres 'sideways' to Leuce ('Serpents' Island').

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[46] See www.patabs,ge.com (2021 edition) Yana Morozova, Maria Tymoshenko, Sergey *Zelenk:o On a rare type of Byzantine amphorae from two shipwrecks off the Crimean coast*
[47] See introductory article at www.adstoma.com
[48] Edmund Spencer Travels in Circassia, Krim Tartary etc including a Steam Voyage down the Danube from Vienna to Constantinople and round the Black Sea (1836) p.213-214. He continues: 'As a land-mark it is of great service to the mariner, in consequence of the fogs which frequently hang over this part of the Black Sea, and the lowness of the coast about the mouths of the Danube'.

9. Helice as the Continuing Object of Prayer

We have seen how the multivalency of our passage can be increased by adopting a particular position viz-a-viz the word 'Helice'. Nothing prevents it from representing the cry of 'Helike'. It could, that is, refer to a cry or prayer uttered by an Achaean sailor, who would thereby prove his origins and identity. It scarcely matters whether such a cry is addressed to the circumpolar stars or (particularly) to the city of Helice. Either context would define the appellants as Greek-speakers, and/or Bronze Age Greeks, or specifically ethnic Achaeans (in the historical era). To consider the lines 36-38 as a reflection on Greek prayers are sea seems valid whether one assumes the cry is sent up as a precursor to 'steering the ship' anywhere on the ocean ('when') or whether there ate specific places on the ocean where 'steering' is vital ('where'). In these contexts Helice would be addressed in prayer or through invocation.

10. The meaning of 'Τα φαινομένα'

Given that Helice the city no longer existed in Aratus' era, the identification of Helice's *alter ego* ('the other Helice') with other locations becomes somewhat more tempting. Meanwhile, in this world of kaleidoscopic changes of sentence alignment and meaning, we are reminded that the phrase 'Τα φαινομένα', can be translated in a variety of ways, making it, in itself, a prime example of the tendency of Aratus' text to reformulate itself. One of those ways makes it a synonym of 'τα τεκμαίρομένα', namely 'things that are proven' [sc.'to be what they are']. In Sophocles' Ajax at line 1020, this nuance of the passive 'φαίνομαι' is well exemplified by the phrase 'δοῦλος λόγοισιν…φανείς' ('you have been proven a slave by your words'). Thus the coincidence in meaning between our fresh interpretation of 'τεκμαίρονται' and a nuance of 'φαίνονται', should be embraced as a secondary 'omen'. After all, in the minds of the Greeks and Romans[49], any 'first words' were replete with ominous significance. Aratus' title 'Τα φαινομένα' may be considered in this category.

Before moving on it will be useful simply to list the meanings of 'Τα φαινομένα' for future reference: 'things that are seen or observed' 'things apparent to the senses' 'things apparent to the imagination or mind' 'things [hidden] that become visible' 'things that are clear' 'things that are specious or false' 'things that seem to be [one thing or another]' 'things that shine' 'things that come into being' and 'things that are established or ordained'[50]. Aratus would have hoped that his ideal readers had absorbed these meanings and were therefore primed to ask themselves, at regular intervals (and among other things), (a) 'in this work are there certain things hitherto unseen by me which will appear before my eyes'? (b) 'Should I presume that my initial impression of the text is likely to be followed by other impressions which will be equally as valid as the first?'

11. By Helice

In earlier paragraphs we suggested the Achaean sailors' oaths were audible in the words '…Ἑλίκην. Ἑλίκη... '.However, we now leave ''Ἑλίκην' and the caesura behind and

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[49] See Ovid Fasti 1.178-179: 'Omens are accustomed', said he [sc. Janus] 'to wait for beginnings. At the first word you alert your anxious ears'.

[50] See LSJ op. cit. s.v. 'φαίνω' pp.1912/3. Note importantly that the meaning 'things that are appointed or ordained' can also be extracted from the use of the passive 'πέφαται' at Bacchylides 9.52 (Jebb). See also Iliad 2.122. This meaning ('ordained') has a synonym in the middle voice of 'τεκμαίρομαι' making the two verbs even more closely related. Furthermore, as a generalisation about Greek cultural beliefs, one would be hard pressed to deny that '*what is ordained comes from Zeus'.* Intriguingly this constitutes a translation of the title of the work 'Τα φαινομένα' followed by the first two words of the text 'Ἐκ Διὸς'. Meanwhile *'let us set in motion the things that are ordained by Zeus'* translates 'Τα φαινομένα' Ἐκ Διὸς ἀρχώμεσθα'.

concentrate on the word 'Ἑλίκη' in the context of the words that follow it[51]. We soon reach the position where [the city]' Ἑλίκη' is used an instrumental dative such that we may translate lines 35-36 as follows: '**It is by [the oath] 'Helice' that men are proved Achaeans at sea, when they have to drive their ships'**. The adjective 'Ἀχαιοὶ' now becomes a substantive in apposition to the noun 'ἄνδρες' whilst the word 'Helice', as the city of Helice, represents an oath that identifies either the Heroic Achaean sailors of any provenance, or the city's own historical Achaean population[52].

However we have also moved the textual kaleidoscope onwards. We have left behind the helmsman and have shifted the focus to the crew of oarsmen. When men are at sea and the wind drops (or becomes ungovernable), or when a particular mission requires a sudden head of speed (such as the passage of the Clashing Rocks) the rowers will be required to sit at their oars to 'drive' ('ἀγινεῖ') the ship under the guiding hand of the helmsman. We suggest that our text is evidence that at such times they will pray to their gods for assistance, just as Aratus has prayed to the Muses for assistance in his poetic journey[53]. It will be proven that such seamen are Achaeans, whether Homeric, Archaic, Classical, or Hellenistic, as soon as they utter a prayer 'by Helice', or (to flesh out the prayer) 'by Heliconian Poseidon'. Heliconian Poseidon is the Greek 'saviour of ships' *par excellence* in the Homeric Hymn to Poseidon ('ὅσθ' Ἑλικῶνα…ἔχει / … σωτῆρα τε νηῶν': '[Poseidon] who commands Helice / … [Poseidon] saviour of ships': 3 and 5). In Callimachus meanwhile the city of Helice is described as 'the female companion of Poseidon'[54]. Thus an oath 'by Helice' would make it instantly clear that the assistance of Poseidon was being sought, specifically by Achaeans, Heroic or otherwise. This manifestation of 'Helice' constitutes for the reader of Greek a 'pointer' in the same way as 'Helice' the star sign is used by Achaean sailors for orientation. The reader is directed to join an Achaean crew aboard a vessel at the very moment that they invoke their divine patron in the guise of his (once) favoured city.

12. An Overview

As we have seen then, the helmsman and the rowers are entitled to engage in (respectively) 'guiding' and 'driving' the ship in the Helice-as-city narrative ('ἀγινεῖν'). In this context however, other nuances of the subordinate clause 'ἵνα χρὴ νῆας ἀγινεῖν' can come to the surface to reconfigure the tableau. Thus if' ἵνα' means 'where' ('in places where *it is necessary* to drive ships by oars'), the narrative will refocus on a visual point of reference such as reefs against which a ship may be driven by the heavy seas, requiring some muscular 'rowing', some intricate 'steering', and, before all else, a prayer. Throughout the Helice-as-city interpretations, the sense of 'necessity' in 'χρὴ' is pivotal in conveying the fundamental motivation for the sailors' recourse to prayer. The prayer 'By Helice' must have sprung from Achaean lips at moments when challenges *had* to be faced and overcome. Such a prayer was required when the rowers and helmsman, acting in concert and as one, took the ship in their collective hands. All ancient oaths were sacred but, in view of the city-state's history, the 'Helice' oath must have carried enormous weight. One assumes it was the standard oath of all Greek rowers at sea, certainly in the Bronze Age. For, the city of Helice was Poseidon's most treasured possession in the pre-archaic period, as we know from the goddess Hera's outburst in the Iliad. At 8.201 she upbraids Poseidon for failing to support the Danaans to whom he had always hitherto 'wished victory'

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[51] One could suggest another version in which ''Ἑλίκην. Ἑλίκη' are governed by 'καλέουσιν' ('and by Helice they invoke the 'Other Helice').
[52] See A. W. Mair and G. R. Mair, trans., *Callimachus and Lycophron; Aratus,* Loeb Classical Library (2006), p. 186.
[53] See line 18.
[54] *Hymn* 4.101: Ποσειδάωνος ἑταίρη'

('βούλεο νικην': 204) due to the 'many and winning offerings they make' both at Helice and its neighbour Aegae ('δῶρ' ανάγουσι / πολλα τε και χαρίεντα': 203/4). So well-known was the Bronze-Age relationship between Helice & Poseidon, that nothing prevents us from applying our new interpretation of Aratus' text to a Heroic, Achaean context.

Thus, we may imagine ourselves on board the Argo[55] as it negotiates the Clashing Rocks. The necessity to both steer and drive the ship emerges from *Argonautica* 2.556-559 when the helmsman, Tiphys, times his command to perfection: 'οἱ δ' ὑπ' ἀνωγῇ / Τίφυος Ἀγνιάδαο θελήμονα ποιήσαντο / εἰρεσίην, ἵν' ἔπειτα διὲκ πέτρας ἐλάσειαν, / κάρτεϊ ᾧ πίσυνοι'; 'and they, at the word from Tiphys, son of Hagnias, rowed willingly to drive Argo between the rocks, trusting in their strength'. Later the importance of coordination between helmsman and crew emerges clearly from 2. 584-585: 'ἀλλά μιν ἔφθη Τῖφυς ὑπ' εἰρεσίῃ βαρύθουσαν / ἀγχαλάσας …'; 'but Tiphys made haste to ease the ship as she laboured under oars'. Thus our reading of, among other texts, the Argonautica, is enriched and enlivened as we imagine Achaeans, both crewmen and helmsman, praying to Poseidon of Helice, as they prepare themselves for a task that cannot be avoided[56].

13. The Historical Achaeans

But of course, in Aratus' text, the sailors' prayers could equally well betray them to be citizens of the Archaic, Classical or Hellenistic Greek city-state of Helice, a member of the historical Achaean nation. In fact our focus must now concentrate on the historical Achaeans because, on a literal level, the present tense of 'τεκμαίρονται' ('they are proven to be') brings us directly into Aratus' own era. By then the 'Helice' oath in the mouth of an historical Achaean (not a Helican, for obvious reasons) was, as we have noted, instinct with a sense of gravity given the awesome power of Poseidon, the Earth-Shaker, a power to which Helice's destruction had borne witness. It is as if we hear Achaeans, living people of Aratus' day, who had perhaps themselves lost relatives in the disaster at Helice[57]. We hear them invoke the most solemn oath possible for an Achaean at sea, an oath that had once been perhaps somewhat routine and even self-aggrandising particularly, one suspects, in the mouth of an inhabitant of Helice. But not any longer. There was a story that Helice had deserved its fate for refusing to grant an Ionian embassy's request to be given either Helice's statue of Poseidon or a model of Helice's temple[58]. That Helice had brought the god's wrath upon itself would have weighed heavily with an Achaean sailor of a later date as he addressed Poseidon apotropaically at sea. Other sources[59] mention the murder of the Ionian envoys by the inhabitants of Helice. This, allied to the fact that the Achaeans bore a collective and ancestral sense of guilt for wresting Helice and the rest of Achaea from the Ionians, would have instilled an intense sense of abjectness in the historical Achaean sailor as he laid his life, and his deserving of his life, before an implacable god.

To conclude this section, our sentence is now seen to contain three chronologically and culturally contrasting applications of the word 'Achaean' to Helice. Firstly, if 'Achaeans' means 'Heroic Greeks' we are returned to the texts of Homer where an oath 'by Helican

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[55] The Argonauts are frequently referred to as 'Achaeans' e.g. A.R. 4.1329: 'καί κεν ἔτ' ἠγαθέην ἐς Ἀχαιίδα νοστήσαιτε'; 'and may you hereafter return home to sacred Achaea'.

[56] For other Heroic contexts for such an Achaean prayer one might cite the rocks of Caphareus. See e.g. Ovid Metamorphoses 14.472; Tristia 1.1.83. In the Trojan Cycle, the foundering of the returning Greek fleet on the rocks of Caphareus is only the highest profile of the many shipwrecks that could provide an Heroic context for the word 'Achaean' here.

[57] As we have noted above, Strabo at *Geographica* 8.7.2 tells us that two thousand Achaeans were sent to fetch the bodies from Helice, but none could be found

[58] Strabo 8.7.2 quoting Heracleides

[59] See *Greek Sanctuaries: A New Approach* ed. N.Marinatos & R.Häag (1993) p.57 and note 29. See also Strabo 8.7.2

Poseidon' would have seemed entirely fitting in the mouth of even such as Agamemnon as he prepared to 'guide' his ships to Troy[60]. Secondly, in the mouth of an historical 'Achaean', indeed a Helican, who lived before the cataclysm at Helice in 373 BC, the oath would have a sense of due respect but also self-confidence, bordering perhaps on the arrogance that would have flowed from being Poseidon's preferred city-state since the Heroic Age. After 373 BC a darker tone is cast over the oath, a tone that allows us to empathise with Achaeans and their post-Helican self-image[61]. Finally, it should be noted that the use of the present tense for all three eras puts the reader dramatically at the scene of three very different moments in the history of the development of the 'Achaean' psyche. Yet there is also a fourth moment; the moment we readers resurrect this Achaean psyche from amid the pages of Aratus.

At this point we should mention again Homeric Hymn 22 to Poseidon where at line 3 it seems 'Helice' is intended by the word 'Helicon'. 'Helicon' is also the name of the mountain which was home to the Muses & the font of inspiration to Hesiod[62]. By allowing 'Helicon' to emerge implicitly from 'below the horizon' as it were, of his text, Aratus exploits a conflation of two names in order to insinuate, within the coils of 'Helice' as a 'constellation' and as a 'word'[63], a handsome, if unobtrusive, tribute to his famous predecessor who first told the stars in the didactic tradition in which Aratus is following[64]. Hesiod's presence constitutes one more gyre on the ever-spiralling astral phenomenon that is 'Helice'.

14. The Black Sea Helices

But we return to our principal reconfiguration of lines 36-37, namely the image 'that has become visible' ('phaenomenon') of sailors praying 'by Helice'. This sets the tone for the emotive content of much of what follows in the seafaring scenes[65] of the poem. In these passages Aratus describes the reactions of sailors to storms at sea in highly empathetic terms[66]. The formulation of our line as a scene of prayer at sea is instinct with extremely intense emotion for a host of reasons as we have seen. This throws its charge forwards into these later emotive contexts, where sailors experience situations and emotions in which prayer is an understandable response.

Now in many scenes of mariners in trouble on the high seas, emphasis is put on what it is to be a 'man'. The Helice line can reconfigure itself yet again in order to express this particular aspect of life at sea. This depends yet again on our interpretation of Helice as a geographical place and on taking 'Ἑλίκη' as a locative. It may be objected that to create a locative out of a place name

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[60] See Iliad 2. 575 for Helice's contribution as the climax to the catalogue of Agamemnon's ships.

[61] The reports of omens before the disaster are of interest. See Seneca *Quaestiones Naturales* 7.5: 'talem effigiem ignis longi fuisse Callisthenes tradit, antequam Burin et Helicen mare absconderet. Aristoteles ait…cometen fuisse'; 'Callisthenes records that just such long flames appeared before the sea took Buris and Helice. Aristotle said…it was a comet'. Other portents had been seen such as animals leaving the city before the earthquake (Aelian 11.19). Strabo (8.7.2) notes that the refusal of the Ionian request for the statue of Poseidon led to an Ionian delegation being sent to the Achaean League, who decreed that Helice should comply with the request. The Helicans however would not obey even this injunction. The disaster occurred in the following winter, and after this the Achaeans gave the Ionians the model of the temple. Clearly this was too little too late. The ominous history of Helice exists behind the text as another 'portent' or 'sign' to the reader. The Helicans prove how catastrophic the ignoring of signs can be, and Aratus' solemn warning at 1142: 'τῶν μηδὲν κατόνοσσο' ('do not despise any of these signs') may hint at their demise. Yet this warning also articulates a strategic or 'poetics' message ('It is wrong to ignore literary signs). See also Polyaenus *Strategem*s 8.46; Pausanias 7.24.6. 'Signs' and 'omens' are the stock-in-trade of Aratean poetics (see the 'σήματα' passage at 1142f where this word for 'signs' is repeated three times just as Aratus is telling us that three omens in a row should give us confidence to act).

[62] The two words share an adjectival form ''Ἑλίκωνος'. Hesiod *Theogony* 1-8

[63] Both are expressed by 'σῆμα' in Greek.

[64] See note 6

[65] The phrase 'νῆας ἀγινεῖν' at line 38 in the Helice passage is the first mention of seafaring in the work.

[66] See passages beginning lines 154, 294, 413, 769.

('Helice') is one thing. To do the same thing to a constellation might be thought cavalier. Yet Aratus, we argue, has already used such a Locative in reference to the 'sky' ('οὐρανῷ ἕλκονται πάντ' ἤματα συνεχὲς αἰεί: '[the stars] in the sky are dragged across every day, always, continuously': 20)[67]. Thus, in locating itself in the area of the Tauric Chersonese, the text is now empowered to express the 'arete' of the sailors who prove they are worth their salt, by behaving as 'true men', a meaning the word 'ανδρες' ('men') regularly carried in Greek[68]. The translation runs thus: '**At [the Black sea area identified as] Helice, Achaeans are proved men at sea when[69] they have to steer/drive[70] their ships**'. To be a Heroic Greek 'man' involved more than brawn, as Odysseus himself knew and could demonstrate. A 'man' could also be such as Tiphys, the helmsman of the Argo, who was respected for his consummate skill *and* application in 'steering' the ship (Apollonius Rhodius *Argonautica:* 1.561/2: 'Tiphys handled the tiller adroitly… to guide them unwaveringly'). When Tiphys dies in the *Argonautica*, Ancaeus is emboldened to volunteer to take over the helm. But we learn from him that there are other 'ανδρες δαημονες', or 'men of skill' among the crew who are just as worthy as he is to replace Tiphys (*Argonautica:* 2.874). To be skilful and unwavering is to be a man, and vice versa. As we have seen these qualities were most necessary to the helmsman during the negotiation of not only the Clashing Rocks, located at the entrance to the Black Sea but also (if Strabo is to be believed) the geographical region of Helice further north.

Of course manliness can manifest itself in other ways. If, instead of 'steer', we translate 'ἀγινεῖ' as 'make to move' or 'drive', then our Helice sentence is also capable of expressing the unquestioning faith, strength, and courage of the rank-and-file oarsmen who row the ship. At A.R. 2.660f a passage describes the rowers in terms of oxen straining at the yoke, with eyes rolling sideways with effort, and streams of sweat pouring down their flanks. The heaving breaths are conveyed, but their manly virtue shines through most of all in the last detail where we learn of the dogged progress of the oxen as they plant their feet deep in the soil ('…οἱ δ' ἐνὶ γαίῃ /χηλὰς σκηρίπτοντε πανημέριοι πονέονται / τοῖς ἴκελοι ἤρωες ὑπὲξ ἁλὸς εἷλκον ἐρετμά'; 'but all day long they struggle pushing their hooves down into the soil; like them the heroes kept dragging their oars through the sea': 2.666-668). The word 'heroes' here consciously recognises the unflagging constancy of the rowers as worthy in itself of renown, for they have been straining all day and all the 'windless' night 'tirelessly' (2.660-661). And we note that this passage follows shortly after the entrance of the Argo into the Helican zone of the Black Sea.

Given that our text refers to the region of the constellation Helice, the *specific* conditions obtaining in the Black Sea - the euphemistically named Euxine - must be further investigated in order to convince the reader that the display of manly or Heroic virtue was particularly required. At A.R. 2.971 the sea is 'too rough' ('προχοαῖς ἔπι Θερμώδοντος, / κέλσαν, ἐπεὶ καὶ πόντος ὀρίνετο νισσομένοισιν') near Thermodon, just opposite the area where 'Helice' had been located earlier[71]. Hence the Argonauts run ashore by beaching, for manliness is also

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[67] See also 414 for the same usage of the locative. Compare also *Iliad* 11.524 and 23.242 ('ἐσχατιῇ') and Sophocles *Philoctetes* 144 ('ἐσχατιαῖς')

[68] See Liddell & Scott op.cit. p.138 s.v. 'ανηρ' IV.

[69] It is possible here to read 'ἵνα χρὴ' ('where it is necessary') as depending closely on 'εἰν ἁλὶ' ('at sea') and producing the translation 'At the constellation Helice Achaeans are proved men **at sea where it is necessary** to drive/steer the ships'. As well as reinforcing the point about the manly virtue of Tiphys and the rank-and-file oarsmen at sea, this same translation, if seen from a slightly different angle ('ἵνα' ='at Helice to where'), prompts the reflection that the 'Argo' also sailed on stretches of water other than the Black Sea itself in order to reach 'Helice'. Obvious examples would be the river Hister (A.R.4.325f), the stream of Phasis (A.R.2.1277f). These would be places where a demonstration of 'manliness' by rowing or steering may *not be necessary*. On a river heading there is little chance of a helmsman losing his bearings.

[70] See above on ἀξων and A.R. 2.895 for 'αξειν' ('to steer')

[71] See A.R. 2.360 & 370

common sense. A little later the sea is described as 'inhospitable' ('Πόντον ες Ἄξεινον': 2.984). Ovid, in exile by the Black Sea, knew of the Heroic Age's fear of the Pontus area. At Tristia 4.4.55 we are given an extended description which allows us a snapshot of the terrors of the Euxine:

frigida me cohibent Euxini litora Ponti

dictus ab antiquis Axenus ille fuit.

nam neque iactantur moderatis aequora ventis,

nec placidos portus hospita navis adit.

sunt circa gentes, quae praedam sanguine quaerunt;

nec minus infida terra timetur aqua.

illi, quos audis hominum gaudere cruore,

paene sub eiusdem sideris axe iacent,

nec procul a nobis locus est, ubi Taurica dira

caede pharetratae spargitur ara deae.   Tristia 4.4.55-64

'The cold shores of the Euxine [literally 'Hospitable'] Sea hold me: it was called Axenus, [literally 'inhospitable'] by men of old, since its waters are tossed by immoderate winds, and there are no quiet harbours for a foreign ship to approach. There are tribes round about, seeking plunder by bloodshed, and the land is no less to be feared than the hostile sea. Those you hear of, men delighting in human blood, live almost beneath the axis of the same star as myself, and not far away from here is the place where the dread Tauric altar of the goddess of the bow, is stained with murder'.

Amongst the 'men of old' will be the heroes of the Argo. The passage succinctly summarises the tribulations which will have awaited such a crew, whose exhaustion following their efforts merely to enter the Euxine is, as we have seen, compared by Apollonius to that of labouring oxen. Most important for our purposes however is Ovid's allusion to the 'axis' of heaven, around which we know the constellation Helice circled. Whilst 'Helice' is considered a geographical place by Apollonius, the axis in Ovid is used as a point of repair[72]. Beneath it live flesh-eaters who are quasi-mythological (note the phrase 'those you hear of [in fables]'). They are certain to test the manliness of any heroic Achaean, just as mythological horrors test the Argonauts in Apollonius' epic[73]. This use of stars to pinpoint places in the Black Sea supports our interpretation of Ἑλίκη' as a locative. It allows us thereby gain further insight into the challenges that help to forge the 'manliness' of Aratus' Achaean men. Meanwhile the role of the constellation Helice as a point of geographical repair is a figure that is not restricted to (or merely expressive of) voyages within the mythic world. In Ovid's passage we note that the star of the 'axis' is used as a means of locating the poet's own contemporary predicament ('under the same star as me': Tristia 4.4.62). The cannibals live under the same star, and in the same epoch, as the very 'unheroic' Ovid in Tomis. In sum, a corollary of the use of' Ἑλίκη' as a

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[72] See also Accius *Trag.* 566–7 R2 'sub axe posita ad stellas septem, unde horrifer / Aquilonis stridor gelidas molitur nives'. ('[an area] situated under the pole, in the direction of the seven stars, from where the shuddering screech of the North Wind masses up icy snows'). The 'seven stars' refers to the constellation 'Septentriones' or the 'Bears' or 'Helice'. Note the reference to winds here. They were, and are, the most unpredictable problem facing sailing ships.

[73] For example, the encounter with Prometheus and the eagle A.R. 2.1247f

term that spans the Heroic and Historical eras, is that Aratus' contemporary 'Achaeans' must be thought to require the same courage as any 'Hero' in tackling the Black Sea area. Thus, with 'ἵνα' meaning 'to where' (38), the translation **'in the seas off Helice, to where they have to drive their ships, Achaeans are proved men'** has a point to make about (a) the arduous journey undertaken by the Argonauts who (i) are forced to sail the long distance to Colchis situated   'at the worlds' end' according to Euripides ('εἰ δὲ γῆς ἐπ' ἐσχάτοις, ὅροισιν ᾤκεις, οὐκ ἂν ἦν λόγος σέθεν': Medea 540-1) and who (ii) *en route* encounter adverse sea conditions close to Helice (Argonautica 2.971) and (b) the historical Achaean ships braving the difficulties of the environment to reach the colonies that traded, for instance, the grain, in which the Tauric Chersonese was very rich[74].

15. Helice the City

A comment on the efforts required to launch a new ship, is also retrievable from a slightly adjusted version of the latest translation of lines 34-35. A feasible construction of the syntax will produce the following: '**Achaeans are proved men at sea when they have to move[75] their ships from [the city of] Helice**'. It is from the *Argonautica* (1.367-391) that we learn of the relentless 'onward driving' ('προπροβιαζόμενοι': 1.386) of a new ship down its slipway 'to the sea' ('ἔσω ἁλός': 1.390). Alongside the work of rowing, the backbreaking efforts involved in launching a ship, requiring coordination and immense upper body strength, is itself a test of manhood. For the historical Achaeans this procedure will have been routine. Thus the vein of 'manly virtue' which we have unearthed from our Helice passage can be applied in this context to a crew's departure from the *city of* Helice.

However arrivals there interest us too, as do manoeuvres which have nothing to do with either departing or arriving. Now that our sentence has returned to city of Helice, we may reconfigure the text as follows: '**At Helice, Achaeans are proved men at sea when (or 'where') they have to drive the ships**'. Here the case of 'Ἑλίκη' is again a locative and again the sentence requires reformulating in certain respects. Certain words become brighter, as it were, whilst others recede somewhat, as we shall see. In general the accent here falls on the way historical Achaeans of Helice prove themselves men by taking to the local waters and rowing the city's ships in defence of the homeland[76]. It may well be that we are meant to assume that the driving of the ships expresses the ramming attacks which were such a feature of the early years of the Peloponnesian War. More generally, one thinks of the young Achaeans at Helice who have to (actively) 'prove'[77] themselves 'men'. Yet, as the word 'χρὴ' comes to the fore, the sense of 'necessity' adds poignancy. Rowing is the only way for the young to become men, for the city-state depended on it[78]. In this context the translation of 'ἵνα' as 'where' ('Achaeans prove themselves men at Helice at sea *where* they have to drive/steer ships') is not without force. Young men do not learn farming at Helice. Only one road to manliness lies before them. Furthermore, whenever the city of Helice takes over as the referent of 'Ἑλίκη' the poignancy of its demise is reawakened in the reader. The present tenses of 'τεκμαίρονται' and 'χρὴ' add to the poignancy. In 373 BC the young men of Helice, those on board ship and those not, were

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[74] See The Monthly Review or Literary Journal Enlarged, Volume 81 p.630 ('De Pauw's Philosophical Enquiries concerning the Greeks)

[75] 'ἀγινεῖ' is used simply to express the 'moving' of objects e.g. a tiller

[76] One also imagines the rowing practice that must have been a daily sight off the coast of Helice.

[77] Note again how a particular word thrusts its way into the limelight. This time the word 'prove' conveys an emotive charge.

[78] Note that Helice's coins depict Poseidon. Helice was 'Poseidon's female companion' according to Callimachus (see above). The bond between Helice and Poseidon/the sea was extremely tight, making the disaster particularly appalling to the Greek mind.

swept away by the tidal wave. None of the dead could be recovered (Strabo 8.7.2). They were a lost generation, snatched away by the sea, the element that gave them their identity.[79]

Yet this image of young men also conjures up the image in Homer where the youths of Helice are depicted dragging a bellowing bull round Poseidon's altar. In other words the Heroic Age Achaeans are not missing from this particular picture of Helice. The same youths that took part in the Homeric bull-sacrifices would have been expected to take their place on board ship. The ships' companies of the Heroic Age Achaeans[80] of Helice were clearly the pick of Agamemnon's fleet after all (Iliad 2.575). This Heroic perspective informs our understanding of the Hellenistic Achaean psyche. Helice's demise must have been a devastating blow to the self-image of contemporary Achaeans based which would have derived much of its inspiration from the 'youthful arete' displayed by their namesakes in the pages of Homer and the epic tradition.

16. Helice: the Beaching Manoeuvre

We mentioned arrivals at Helice. The text could be construed to mean that '**at sea the Achaeans are proved men at Helice, when they have to drive *in* their ships**'. This version allows us to suggest that the landing procedure of ancient ships could also be an occasion for a display of bravery, or perhaps bravado. The verb 'ἀγινεῖν' means 'to haul in' (to a specific point) when used of mule-carts that 'bring in' vast amounts of wood for a pyre in Iliad 24.784: 'ἐννῆμαρ μὲν τοί γε ἀγίνεον ἄσπετον ὕλην'. 'Bringing' ships 'into land' often involved beaching the ship stern to shore. In the environs of Colchis in the Black Sea, the Apollonius' Argo is at one point 'beached under oars on *terra firma*' (3.573-575: 'οἱ δ' ἐπὶ νηὸς / εὐναίας ἐρύσαντες ἐφετμαῖς Αἰσονίδαο / τυτθὸν ὑπὲξ ἕλεος χέρσῳ ἐπέκελσαν ἐρετμοῖς'). Yet this manoeuvre seems rather symbolic than required. Jason's reason for beaching is to declare his ship's open engagement with the Colchians[81]. Hitherto the Argo had been skulking ingloriously in a marshy backwater. Furthermore, Apollonius insists that the new venue for parking the Argo is no distance away ('τυτθὸν ὑπὲξ ἕλεος ').

The technical term for beaching is 'ἐπικελλω' or 'κελλω' (A.R. 3.575: 'ἐπέκελσαν') and it was a violent affair as Cicero's testimony reveals (Ad Atticum 13.21a). So violent indeed was it that the Phaeacians could drive their ship half ashore (Od.13.113-115). Yet, in the Argonautica, in a pre-announced show of bravura intended to cow the enemy, a beaching is used in preference to an unobtrusive, and indeed more serviceable, mooring. If Helice is related in some way to modes of 'driving in' and 'steering in' ships then beaching must be the prime suspect.

One tends to assume beaching was a more or less routine procedure for bringing a ship to land. We beg to differ for the following reason. The Phaeacians beaching at Ithaca had an exhausted passenger on board (Odysseus) who should have had a rude awakening. The fact that Odysseus sleeps through this extraordinary beaching reveals the exquisite oarsmanship of the Phaeacians for whom speed is nothing without consummate control. Yet at the same time this adds to the impression that this landing was both gratuitous and ostentatious, an impression which the deserted location only accentuates. At the same time, one might condone this daredevilry in the context of storming an enemy beach but not on an escort mission or (in Helice's case) on arrival

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[79] Note that 10 Spartan ships were also destroyed by the tidal wave (Aelian 11.19).
[80] Note that the actual ethnicity of any Bronze Age 'Helican' would have been 'Ionian'. This creates another level of interest in the appellation 'Achaean' as used by Aratus.
[81] 3. 571-173: 'ἀτὰρ αὐτοὶ ἐπὶ χθονὸς ἐκ ποταμοῖο / ἀμφαδὸν ἤδη πείσματ' ἀνάψομεν. ἦ γὰρ ἔοικεν / μηκέτι δὴν κρύπτεσθαι ὑποπτήσσοντας αὐτήν'.

back home[82]. Notwithstanding this, the skill and speed required in the manoeuvre demonstrate again what it is to be a man amongst the Achaeans 'at Helice' where Achaean men prove themselves at sea when they have to drive [in] their ships' [onto the beach]. This throws the spotlight onto the word 'χρη' which challenges the behaviour of both Phaeacians and the Argonauts. 'When or where', we must ask ourselves, 'was beaching necessary?' And are there ever occasions when a beaching in the context of 'Heroic' bravura can be considered necessary?[83] These questions are given much impetus and urgency by the realisation that beaching must have been dangerous[84].

Now the Apollonius passage in which (significantly) the Argonauts come to land not far from Helice in the Black Sea is confirmed as a beaching by the verb 'κέλσαν' (2.360: 'they beached'). The crew are clearly spending the night ashore for they then go 'next day' to the Chalybes arriving again at night (3.1000-1001: 'ἤματι δ' ἄλλῳ / νυκτί τ' ἐπιπλομένῃ Χαλύβων παρὰ γαῖαν ἵκοντο'). Clearly one aspect of necessity is that of time ('when'). The lateness of the hour encourages ships to seek land. Of course a mooring would be the responsible method by which to tie up for the night. However mooring demands certain conditions, which may not be to hand when night overtakes a ship. A painstaking mooring, as Aeschylus intimates (Suppliants 766-772), was very difficult in fading light, whatever the sea conditions. Meanwhile, the element of 'location' in beaching returns us to our key passage which now reads '**the men are proved Achaeans at sea (or 'the Achaeans are proved men') at Helice where it is necessary to drive the ships ['ashore'].** The location of the 'Black Sea' Helice is beset by turbulent seas (Argonautica 2.360) which necessitate (rather than prompt) a beaching. This is the only form of landing that can be described by the verb 'ἀγινεῖν'. Our point is that (a) 'at Helice' beaching will have been the norm for Greek ships and that Aratus' passage can be made to express this if' 'ἀγινεῖν' means to 'drive ashore' and 'steer ashore' but also (b) turbulent seas made beaching mandatory wherever those seas might be.

However a thorough-going understanding of all contexts of the word Helice would see the men being proved Achaeans when they beach ships by [*the light of*] Helice. That is, Helice, the constellation, is an indication of sunset ('**Achaean men are guided by [the appearance of] Helice as to when it is necessary to drive their ships in to shore'**). When Helice appears, as Aratus labours to underline, it is 'clear' 'easy to recognise' large' and [above all] '*prompt to appear as soon as it is dusk* (('πολλὴ φαινομένη Ἑλίκη πρώτης ἀπὸ νυκτός': 41). These qualities render Helice a 'sign' ('indication'), that *it is time for* the ship to lay up for the night (by beaching). The Achaeans did use Helice for guidance if they were at sea during the night (as our earlier version of these lines suggests), but in the normal run of things, Helice was a sign that it was time to beach. In fact, with 'ἵνα' meaning 'when', the arrival of Helice in the sky could have been (for instance) a sign of slackening winds (at which point the ships would be driven by oar-power whether beaching or not)[85].

17. Aratean Poetics

To review where we have reached in the history of Helice, Aratus' presentation of the Achaean sailors, *qua* 'ανδρες', whose qualities illustrate the Greek concept of manly 'arete' ('manly virtue'), is articulated on many levels. Its aspects seem to drift in and out of our purview as we

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[82] See below
[83] See below on the Herodotus passage
[84] See on Cicero's letter to Atticus.(13.21a)
[85] Stars are often thought to bring a change in wind patterns through their behaviour or appearance e.g. Phaenomena 429-430: [on the constellation Altar] 'with this sign fear a southerly wind until …'

switch between the Heroic and historical eras, and between Helice *qua* constellation[86], Helice *qua* location within the Black Sea, Helice *qua* city-state, and now also Helice as a feature of landing a ship by beaching. Yet we must also endeavour to keep our eyes fixed on the poetics strategy Aratus is embedding in these gyres of meaning. The Helice sentence rings the changes of its meanings, in the manner of a star that has set but which rises again almost immediately, a phenomenon that Aratus observes in the case of Draco's head in lines 61/2 ('the risings and settings blend with each other')[87]. The movement of the heavens provides the structure which underpins Aratus' poetics. The behaviour of the stars, planets, constellations, and weather signs, and their functions as 'signs' are, on one level at least, to be interpreted as an allegory of the way the words of Aratus behave. Meanings that were hidden, come into view ('rise'); others that had been prominent, retire ('set'). If we observe the signs, *and act on them,* we reap the 'ten thousand-fold reward of heedfulness' (761/2), just as Aratus' sailors do when they 'heed Night's favouring signs' (420). If we act in this manner we distinguish ourselves from such as the citizens of Helice, who ignored omens to their peril.[88]

There is a noticeable dichotomy in Aratus' schema for the sky. There are bright stars that are ever-visible and there are dim stars that come and go. As we have seen, Aratus' words at lines 40-41 where he observes that the sight of Helice at night is 'transparent', 'extensive from the beginning of the night' and 'easy to be observed' take their place in this schema. On the one hand the qualities ascribed to Helice here are those that will most interest and delight a helmsman. Helice is the clearest and most significant ('sign-making') guide in the steering of a course through the engulfing darkness. The reader is a figurative helmsman who finds it easy to steer by very bright stars that he or she knows are circumpolar. However if this cosy relationship allegorises anything it is the progress of the superficial reader through the text. This reader is guided by signs writ large (the obvious text). But he or she has a narrow, unnuanced appreciation of a text that is in fact rarely monothematic. For example Helice is 'easily recognised' but also 'available to be pondered' (thereby, through its double meaning, exemplifying an aspect of the poetics we are discussing here). The fact that there are no hidden signs in the circumpolar region which resurface unexpectedly allows one to ponder the significance of Helice as allegorical of the glaringly obvious. Helice's readers inhabit a world of unreflecting certainty. In their eyes there is one monolithic text.

Aratean allegory is pervasive and will also illuminate the metapoetic aspect of the ideal *Aratean* reader. For example there is a scene at 761-762 in the course of which we are told a little effort goes a long way ('μόχθος μέν τ' ὀλίγος, τὸ δὲ μυρίον αὐτίκ' ὄνειαρ / γίνετ' ἐπιφροσύνης αἰεὶ πεφυλαγμένωι ἀνδρί': 'whilst the toil is minimal, yet the rewards of heedfulness are at once ten thousandfold for the man who is ever careful'). This consummate seamanship allegorises the ideal attitude of the reader to the text. The reader has to be a Helican reader, one who is prepared to invest effort but one who is also able to identify by careful attention to the signs where that effort needs to be expended. This is the condition of a ship at sea in the night. The helmsman's powers of observation and attentiveness are married to the toil of the sailors[89]. The

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[86] See note below.
[87] See Kidd op.cit p.199 note on lines 61/3.
[88] See note above
[89] A useful summary of a helmsman's various talents is contained in the Argonautica 1.106-108. The order and content is interesting. He should be (a) skilled in foreseeing the rising wave (b) skilled at using astronomy to predict the storms and (c) using the signs to predict the times to sail. Thus the avoidance of danger is paramount. That is followed by using the stars not to steer by, but as omens of the weather. Last comes the interpretation of other omens relating to the most suitable time for a voyage. The accent here is on using 'sight' in the interests of 'foresight'. Sight provides the raw material. Thought shapes the 'seen' in the interests the achieving of an ulterior, intellectual end.

complementary qualities of the crew very precisely delineate the qualities that the committed reader must have and must demonstrate

18. Helice the Beaching Manoeuvre (continued)

Aratus' sentence has still several laps[90] to run and we return again to the chameleonic words of lines 37-38. If we explore the word 'Ἑλίκη' further we find it bears the (probably original) sense of a 'spiral' shape in Aristotle's descriptions of the gut and long ears of quadrupeds. More easily visualised is the spiralling conformation of the trumpet shell to which Aristotle also gives the name 'Ἑλίκη' (Historia Animalium 4.1.10 [of a gastropod's innards]: 'ὅμοιον τηι ἐν τοις κηρυξιν ἑλικηι'). It seems we can translate 'Ἑλίκη' as in general 'that which describes a winding or spiralling course'[91] and, specifically, the shape which gives the trumpet-shell its winding configuration.

Now, given the proven capacity of 'Ἑλίκη' to move between different meanings we should not be surprised, in principle, that it seems poised to begin another gyre in its spiralling motion. And this fresh gyre is not plucked from thin air. For just as 'τεκμήρατε' (18) had earlier provided a clue to the interpretation of the main verb in the Helice passage, so too 'περι … ἀγινεῖ', by imparting its character to 'ἀγινεῖ' (38), alerts us to the 'spiralling movement' ('propelling around') that lies at the heart of 'Helice' the trumpet-shell. Indeed such a meaning has the potential to be the most significant, given the potential for this 'Helice' to articulate the literary spirals to which the meanings of Aratus' lines on Helice are subject.

But to understand how else 'a spiralling motion' (similar to that of a trumpet-shell) can get a foothold in this sentence, we need to consider certain aspects of Homeric seafaring. In general, a Heroic Age Achaean ship made landfall at places that were not constructed by man to receive boats. Apart from the docking installations at Scheria in Phaeacia there is no other reference in Homer to constructed harbours. This suggests that ancient harbours were simply long beaches, bays, or coves. Even Scheria, blessed with its twin harbours, has only a hole bored through stone through which a stern cable could have been passed to secure the ship which was still afloat. Mooring a ship meant leaving it afloat in a natural harbour or an anchorage (a protected cove), with a beach to hand. It was a tried and tested, if laborious, means of leaving the boat

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[90] It is difficult to put a full stop to Aratean complexity. If we are allowed to bring Helice into close contact with the subordinate clause then another possible translation of the line is as follows: 'At sea Achaeans are proved men when it is necessary to steer/drive ships by Helice' (i.e. the reference to 'steering by Helice' simply defines 'when' as meaning generally 'by night'). Night sailing was the biggest challenge facing the helmsman and our line, in the way it is normally rendered, specifically addresses the issue of steering by the stars. As far as the rowers are concerned, in the Argonautica, night brings a rushing wind (1.1017) or no wind at all, obliging all to row (1.668) such as they did two nights running approaching Crete (4.16434/5). Later they row through pitch blackness and are so relieved to reach land that they set up an altar to Apollo, the 'Gleamer' whose dawn ray showed them to a tiny Sporades island, henceforth named Anaphe 'the Gleamer'. (1718/9: …Ἀνάφην δέ τε λισσάδα νῆσον / ἴσκον, ὃ δὴ Φοῖβός μιν ἀτυζομένοις ἀνέφηνεν'; 'And that smooth-cliffed island they called 'Anaphe' which Phoebus had revealed to them when they were distraught with fear'). The night has pushed them to the brink, and their 'manly virtue' is proven more by the conquest of their human psychological frailties as by any merely physical perseverance (see above). Similarly the doggedness needed to row all night trusting in the helmsman is revealed by the ox simile at 2.662f. The heroes 'drag' their oars relentlessly like oxen digging their feet into the earth'. Discipline and belief in simply 'carrying on' derive ultimately from trust in the helmsman. The oxen too are understood to be guided, in their case by the ploughman. The men are spent with exhaustion at dawn and again the relief is palpable in their erecting of an altar to Phoebus of the Dawn (2.686). The famous evocation of night at 3.745 prepares us to understand Medea's anxiety by its reference to sailors charting their way by Helice. The details add to our picture of the stresses of night and can be applied to the sailors as much as to the distracted Medea. There is the unsettling quiet of night adding a doom-laden note. There is also the description of the traveller and night-watchman which conveys the burden of unfinished business (and travel) lasting the whole night. The image of the mother of dead children injects a note of unnatural horror. This picture feeds in to our understanding of the strain on rowers at night. Conquering jittery nerves, tiredness, and fear of death, whilst concentrating, exerting oneself, and trusting in the helmsman gives the label 'Achaean heroes' renewed vigour. They are the epitome of blind faith.

[91] See Liddell & Scott op. cit. s.v. 'Ἑλίκη' for references

accessible in the water (or surf) with anchors down at the prow and stern cables wrapped around a tree or rock at the back of the beach[92].

Thus Homeric harbours were simply naturally-protected bays, or even just stretches of beach. Another aspect of Homeric seafaring however relates to the ship's configuration on making land. As it approached its harbour (or anchorage) the galley presented its stern to land. In Bronze Age Greece the evidence for ships approaching land stern-first is incontrovertible. In the Iliad Homer mentions Odysseus bringing Chryseis back to her father by ship. They arrive by boat and, having secured the stern cables ('πρυμνήσι[α]': 1.436) they step off on shore. Later everyone lies down to rest beside these cables ('παρά πρυμνήσια' : 1.476)[93]. Clearly the boat had come in backwards and moored. Elsewhere we hear that Hector, during fighting on the beach, twice grasps the stern-post of an Achaean ship in his hands[94] and even 'holds the decorated stern ornament in his hands' ('ἄφλαστον μετὰ χερσὶν ἔχων…'; Iliad 15.717). The Greek ships at Troy all present their sterns to shore.

There is also support for the stern-first approach in the visual record. On a Geometric Black Figure Vase from 750-700 BC, the embarkation of a hero and his female captive, whom he clasps by the wrist, takes place by a set of rudder oars which were at the stern of the ship[95]. Meanwhile, on the eponymous Red Figure vase of the Talos Painter[96], Jason embarks from Crete on a ladder next to an 'aphlaston', or 'stern ornament'. The departure point may be thought to be the anchorage, or 'Δικταίην ὅρμοιο… ἐπιωγήν' ('the haven of Dicte's roadstead') which Apollonius mentions at A.R.4.1640f as the Argo's (eventual) landfall on Crete. As a rule then Bronze Age Greek ships were brought to land stern-first at spacious but natural harbours (e.g. at Phaeacia), or in small anchorages (e.g. Dikte's roadstead).

Conversely the evidence for other civilisations suggests they moored their ships prow first whatever the conditions ashore. A picture of a ship from the navy of Queen Hatshepsut of Egypt (1500 BC) shows a crew member using a sounding pole at the prow to detect the water depth as the boat approaches some form of dry land[97]. Regarding Egyptian practices Samuel Mark comments, 'The Egyptians at Punt…moored from the bow'[98]. Rashi, the commentator on the Talmud, describes a similar procedure in the Levant[99]. L.Morgan Brown states: 'Whereas in Egypt and the Levant landing and boarding took place at the bow with portable ladders, the Aegean tradition appears to have been to beach ships stern first'[100]. The destruction of the Minoan civilisation would have left the Heroic Age Achaeans as the only practitioners of the stern-first method in the Aegean. The importance of this will be apparent later.

By contrast with mooring there was another method for bringing a ship to land which allowed the crew to get ashore without following pernickety procedures at the end of a long day. This

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[92] The most rudimentary form of 'haven' or 'cove' was an 'ἐπιωγήν' such as was lacking from the coast of Phaeacia when Odysseus was desperately seeking landfall there. The Odyssean passage (5.404) contrasts harbours with such roadsteads ('οὐ γὰρ ἔσαν λιμένες νηῶν ὄχοι, οὐδ᾽ ἐπιωγαί'; 'for there were neither harbours to take ships, nor roadsteads').

[93] The *Argonautica* is full of landings & departures involving the securing or cutting of the 'stern cables' or 'πρυμνήσια' (e.g. 3.1278; 4.208).

[94] Iliad 15.704 & 716

[95] See L.Casson op.cit. fig.74. The scene may be an early attempt to depict Theseus removing Ariadne from Crete. See also Boardman *Athenian Black Figure Vases* (1974) p.43 fig.46.4 for the Francois Vase , where the Athenian sailor, near whom is the name 'Phaidimos', leaps ashore past the stern as his crew prepare to take Theseus and Ariadne back from Crete.

[96] Patai *The Children of Noah* (1998) p.36 fig.9

[97] Patai op.cit. p.49 fig. 12.

[98] Samuel Mark *Homeric Seafaring* (2005) p.154 with figure 62 on p.155

[99] Patai op.cit. p.61 for landing procedures from Rashi's commentary on the Talmud.

[100] L.Morgan Brown 'The Ship Procession in the Miniature Fresco' in 'Thera and the Aegean World vol.1' (1978) p.638 and note 4.

was to beach the ship stern-first. Cicero witnesses this procedure first-hand at his villa in Asturia in August 45BC. The ship's actions were observed by the orator and reported to Atticus in a letter (13.21.3f). Cicero witnesses the vessel backing water during its approach to land. The manoeuvre the ship carries out involves, as he says, '… a motion, and a particularly violent motion at that[101], caused by the action of the rowers turning the ship sternwards' ('…motum… et vehementiorem quidem remigationis navem convertentis ad puppem')[102]. Lewis & Short state that the nautical term 'inhibere' means '*To row the ship backwards without turning it round'*[103]. This seems to conflict with the precise meaning of Cicero's words here. The word 'ad' in Cicero's phrase 'ad puppim' should rather be understood in the sense of the Greek 'κατα' ('following the direction of'). The best one-word translation therefore of 'ad puppim' is 'sternwards' not 'backwards'[104].

Cicero can be trusted to relay the evidence of his own eyes. Clearly this ship heaves into sight of land prow first, as every ship must. The ship is then oriented stern-first to shore. The 'particularly violent motion' Cicero sees must be in some way germane to the way the ship turns round. Since Cicero states that the ship 'was driven to land' ('appelleretur'), it seems likely that the violent speed was maintained until the ship reached shore. Such speed is not a prequel to a mooring. Rather one imagines the ship embedding itself in the shingle.

Such a landing may remind the reader of St Paul's shipwreck in the Book of Acts (27:27ff). There however, sail power is used to drive the ship prow first on a rudder-guided course towards what may have been a sand-bar[105]. On impact, the front of the ship remains intact while the stern section disintegrates. One might suppose that the clay deposits in the supposed location, along with mud deposited by the two adjacent creeks, will have made the landing less jarring, allowing the prow to survive[106]. However in our view sand, especially compacted sand, will have been avoided by those wishing to land a craft at speed. Shingle and pebbles are much better shock absorbers than sand. The reason the back portion of St Paul's beached ship disintegrates is probably because the shock is transferred to the unsupported stern. Ancient sea-traders were in general pessimistic about the chances of their merchantman surviving such an impact. Yet crews of ancient galleys seem to have beached regularly. No doubt some crews will

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[101] The verb 'appelleretur' is used of ships being brought to land in general, though the nuance it carries of 'driving' may have influenced Cicero's choice of word. For the date of the letter to Atticus, see M.Griffin *The Composition of the Academica* in Inwood and Mansfield (1997) *Assent and Argument* p.31-32.

[102] *Ad Atticum* 13.21.3f. Note the variant reading 'vehementissimum'. For 'vehementior' see e.g. Morrison and Williams *Greek Oared Ships 900-322 BC* (1968) p.322. In general see D.B. Gain *The Aratus Ascribed to Germanicus Caesar* p.99 note on line 347, and Marcus Tullius Cicero*: Epistulae Ad Atticum II (versiunea românească)* ed. Prof.C Popescu Mehedinți (1979) pp. 437/8 with notes. Mehedinți reflects on Cicero's coming to awareness of the meaning of 'inhibere', a verb which, according to Mehedinți, marks two stages in the nautical manoeuvre of backing water (a) 'lifting the oars' followed by (b) 'rowing in the opposite direction with a head of speed so that the prow turns in the direction of the stern'. It is not clear whether this commentator has grasped the essence of the manoeuvre. If he had said 'the stern turns in the direction of the prow' one would be more reassured. See OLD s.v. 'puppis'. In general on the problem of 'inhibere' and on what follows; A.S.Wilkins *Cicero De Oratore* (1895) note on 'inhibuerunt' p.152; R. Y. Tyrrell and L. O. Purser *The Correspondence of M. Tullius Cicero* (1890) Vol.III. p.166-167 note on Ad Atticum 13.21.3.

[103] Lewis & Short *A Latin Dictionary* s.v 'converto'.

[104] The phrase 'remigationis navem convertentis ad puppim' is mistranslated by the Loeb as 'rowers driving the vessel backwards' with no nuance of turning. See also Morrison and Williams op. cit p.311 who translate: 'as the oar power drives the ship sternwards'. Cicero's passage here is cited by OLD to illustrate 'converto' 4 where the meaning is given as 'direct the course of…to a specified goal'. It is unclear how the 'stern' can be 'a specified goal' of a ship. The correct nuance for our passage is expressed at OLD *s.v.* 'converto' I and 3c.

[105] Literally 'the place of two seas'.

[106] St Paul's Bay, Malta. See Jefferson White (2001) *Evidence and Paul's Journeys: the Shipwreck* (available at http://www.parsagard.com/shipwreck.htm)

have drawn confidence from the fact that their destiny lay in their own capable hands[107]. This further suggests there was a tried and tested formula for arriving on a beach stern-first and at speed. To summarise, the 'inhibitio' described by Cicero involves a ship arriving prow first before reversing at speed towards land.

Clearly there is much still to be defined and delimited here. Ships that initially moored could be pulled ashore ('beached') at some later stage. The Greek ships at Troy are stacked along the beach and as far as the plain of Troy. They may have beached and then been dragged further ashore or they may have moored initially before being subsequently hauled into position on dry land. Whether a ship approached land to moor or to beach, the configuration of the crew and the method for turning the ship are also aspects of Homeric seafaring that require further elucidation.

Alec Tilley's article 'Rowing Astern – an ancient technique revived'[108] has illuminated the organisation and discipline required of an ancient ship's crew to change from rowing ahead to rowing astern preparatory to landing stern first. Our own account differs in some respects from Tilley's however. The helmsman at the stern must first stow one of his steering oars[109] to avoid it grounding on the beach on arrival. Then he stretches out his hands towards the stroke men (one on each side) to seize their oars. Even as the stroke men present their oars to the helmsman they are already standing facing inwards towards their counterpart on the far side of the ship. In getting to their feet they have thrown their right leg (if to starboard) over the bench. They face across to their bench mate on the other side of the ship. They will be straddling their own bench. The stroke- man grasps the oar of the rower immediately forward of him using the relevant hand depending on which side of the ship he is on. At that moment, the rower forward of the stroke man is himself turning to the rower forward of him and doing exactly the same thing. And so on down the whole length of the boat on both sides.

Thus, at one moment, all rowers are facing inwards with one hand about to grasp the oar of the rower in front, whilst their other hand releases their own oar to the rower behind. All, that is, except the rowers nearest the prow who lose their oars to the rowers to the rear but have no one to give them an oar when they turn to face the bow. Happily, however, these bow men will be available to act as look-outs during the initial stages of the manoeuvre. To return to the rest of the rowers, having seized a new oar in one hand and released the old one with the other, they now complete their manoeuvre by swinging their remaining leg over the bench and settling down at their oar to row facing the opposite direction. At the stern the helmsman has to quickly stow the two oars he had been handed by the stroke men, as well as having previously disposed of one of his own steering oars. The operation demanded timing, concentration, and coordination, and all this at the end of a long day at the oar. Once everyone had settled to their new positions however, the ship was properly configured to row stern first towards the beach. All the rowers were now facing the prow.

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[107] In Acts 27.30 the crew of St Paul's ship consider using the skiff to make a run for shore in the dark. Such a desperate act reveals how little expectation they had of surviving the ship's landing. See also Strabo 2.3.4: 'ἄκοντα ἐπουρίσαι πρὸς γῆν δεδοικότα τὰς πλημμυρίδας καὶ τὰς ἀμπώτεις. καὶ δὴ καὶ συμβῆναι ὅπερ ἐδεδίει· καθίσαι γὰρ τὸ πλοῖον, ἡσυχῇ δέ, ὥστε μηδ᾽ ἀθροῦν διαλυθῆναι, ἀλλὰ φθῆναι τὰ φορτία σωθέντα…καὶ τῶν ξύλων τὰ πλεῖστα'; 'They…sailed with a fair wind towards land, but against his will, as he dreaded the surges and ebbs. What he feared actually occurred. For the ship grounded, but gently, so that it did not break up at once, but the cargo and most of the timbers were saved'.

[108] *International Journal of Nautical Archaeology* (1992) vol. 21.1 pp.55-60

[109] Judging by, *inter alia,* the pictographic evidence, ancient ships had two 'steering oars' (a term used interchangeably with 'rudders' in this work). Samuel Mark confirms this (*Homeric Seafaring*; 2005; p. 93) but also points out (p.122) the use of only one rudder at time by Odysseus, and this is supported by Lucretius 4.903 ('gubernaclum…unum'). One may assume there were two rudders therefore, though only one was used at certain times. Our discussions will sometimes mention two, sometimes one.

In the above account we have already corrected Tilley's conception of what happened. We now clarify the sequence of events. The boat arrives offshore, bow first. It needs to swing round so that it faces the beach stern first. According to Tilley, it is possible to turn a ship by having the oarsmen turn to face the prow along one side only while the other side continues to row facing the stern, as normal[110]. Thus we imagine the above oar-swopping procedure taking place on only the right of the ship, whilst on the left the oarsmen row as normal. This would indeed turn the ship, but why have two separate arrangements of the crew, one for the turn itself, and another for the approach to shore? Under Tilley's arrangement for turning the boat, once it was lined up stern on to the beach, there would have been a delay whilst the crew along the other side turned to face the prow before all rowed in to land facing out to sea.

There is a much better solution. Let everyone go through the oar-swapping procedure detailed above while the boat is at rest, still facing prow-on to the shore. The only difference is that the helmsman, having stowed the strokes' oars on the 'ikria'[111], remains at the helm with one of his own steering oar(s) still in place. There then follows a moment of calm while the crewmen compose themselves. No doubt all the oars are poised. The helmsman will have made his decision already whether to go left or right. He will have taken account of the physical configuration of his surroundings as well as the wind. If he is to go left, he will have positioned the boat out to the right of the bay. Suddenly, at a signal, the rowers put on a burst of speed away from the beach and out to sea. At a given moment the helmsman pivots the relevant steering oar at a sharp angle to turn the boat. As the boat spins in a gyrating movement and the stern swings round to face the shore, the helmsman, his work at the helm done, stows his steering oar to avoid it being damaged on impact. The helmsman being effectively now at the front of the boat, faces the shore to orchestrate the work of the oarsmen behind his back. Of course the crewmen are now with their backs to the helmsman and cannot see him. However one assumes there would be a 'keleustes' or two standing near the helmsman who were there to relay the helmsman's rowing instructions to the crew. Their role will now be more crucial than ever[112].

Such a manoeuvre makes sense in other ways. The ship will be heading back out to sea against the onshore current. This will allow the helmsman's steering oar to grip on the water. With the steering oar fully deflected the ship will throw plumes of water skywards and over the rowers at the bow, as it turns as sharply as it can. Furthermore the speed generated will give the ship the required momentum to continue its charge to land so that it beds firmly in the sand. To back water using the 'portegee' method, that is simply 'pushing on the oars', is slow, time-consuming, and energy-sapping. It is not well-adapted to stern-first landings when time is of the essence[113].

Of course, without rearranging the oarsmen at all, one can still attempt to turn the ship stern-to-shore whilst still rowing forwards towards the beach in the normal way. But this will put the

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[110] Such a manoeuvre is slow, time-consuming, finicky, and requires precise coordination.

[111] See below on the spears of Theoclymenus and Telemachus

[112] See Prof.C Popescu Mehedinţi (ed.) *Marcus Tullius Cicero: Epistulae Ad Atticum II (versiunea românească)* (1979) pp. 437/8 with notes. Here this commentator reflects on Cicero's coming to awareness of 'inhibere', a verb which, according to Mehedinţi, marks two stages in the nautical manoeuvre of backing water (a) 'lifting the oars' followed by (b) 'rowing in the opposite direction with a head of speed so that the prow turns in the direction of the stern'. This commentator seems to have grasped the essence of the manoeuvre whilst omitting to mention the oar-swopping procedure, and the (perhaps all too obvious) role of the helmsman.

[113] See Jeff Bennett *The Complete Whitewater Rafter* (McGraw-Hill Professional; 1996) p.85 '...the portegee, or forward stroke, is not as powerful as the back stroke, so the forward ferry is more energy-consuming and difficult to maintain than the back ferry'.

ship at risk of overrunning if the onshore current is strong. Even if the helmsman is able to perform such a feat, the turning circle will be much, much wider, given the current and the forward motion. It would be difficult to carry out close to the confines of a roadstead. In any case, such a turning manoeuvre will necessarily be followed by a pause to arrange the rowers for the stern-first approach. It makes more sense for the rearrangement of the crews to have been carried out while the boat was at rest facing the shore, and for the whole manoeuvre to have been of a piece from beginning to end.

To sum up, the manoeuvre to beach an ancient vessel stern first involved (a) the ship stopping (b) the rowers repositioning themselves with backs to the stern (c) the ship speeding stern first back out to sea under oars (d) the helmsman using the rudder to turn the ship one hundred and eighty degrees towards the shore[114] (e) the ship being rowed onto the beach stern first.

Morrison and Williams mention two sources in the ancient literature for the manoeuvre of 'going astern under oars'[115]. One is the Ciceronian context we have examined above. The other relates to a passage from Thucydides which mentions a sudden stern-first beaching being carried out by the Syracusan navy.[116] One assumes the Syracusan oarsmen turn in their seats to face the bow, because the manoeuvre is 'sudden', suggesting speed, and the Syracusans manage to convince the Athenian enemy they are retreating[117]. Yet the Syracusans back water from a position in which the stern is already facing the beach. There is no turn of the ship here. The subsequent actions of the Syracusans reveal the advantage of beaching stern first, for, the ships being bow-on to the sea, they are able to launch a sudden, surprise attack on the Athenians.

19. Helice the Manoeuvre and the Homeric Epithet ἀμφιέλισσα'

This brings us wheeling back to our Helice sentence, but on a different tack. For Aratus can now be interpreted as saying, with perfect accuracy, that **'at sea men are proved Achaeans by their winding or circling motion ('Helice') when (i.e. 'during which') they have to steer/propel their ships'**[118]. Note the way the word 'ἵνα' modulates here into the meaning 'during which'. This is typical of Aratus' kaleidoscopic technique. His pictures advance with each element remoulding itself to fit the new discourse.

We will concentrate for a moment now on the clause 'when (or 'where') they have to propel/steer their ships'. The sense of 'propelling' in the verb 'ἀγινεῖ' in Aratus meshes well with the sudden increase in tempo that Cicero noticed. In the meantime, implicit in Aratus' 'χρὴ' is the notion that speed is of the essence. To be successful the circular manoeuvre actually *requires* ships to be driven (hard), as Cicero realised to his surprise. As we have seen the word 'ἵνα' in this context becomes rather more specific ('**men are proved [Heroic Age] Achaeans at sea by a circular manoeuvre *during which* it is necessary to propel the ships'**). Indeed

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[114] One could term this a nautical handbrake-turn in reverse gear.

[115] Morrison and Williams *Greek Oared Ships 900-322 BC* (1968) p.311

[116] Thucydides *The Peloponnesian War* 7.40.1: καὶ οἱ Συρακόσιοι ἐξαίφνης πρύμναν κρουσάμενοι πάλιν πρὸς τὴν πόλιν ἔπλευσαν 'The generals… sent the message, and the market was brought down to the shore. Suddenly the Syracusans backed water and rowed towards the city; then disembarking they at once took their meal on the spot The Athenians, regarding their retreat as a confession of defeat, disembarked at leisure, and among other matters set about preparing their own meal, taking for granted that there would be no more fighting that day. Suddenly the Syracusans manned their ships and again bore down upon them'.

[117] See the problems involved in using the 'portegee' method above

[118] At Od. 13.113f. it seems the Phaeacians, knowing their harbour well, drive their ship onto the beach. See Samuel Mark *Homeric Seafaring* p.153-154. The Phaeacians use such speed that half the ship comes to rest on the sand out of the water. Samuel Mark assumes this manoeuvre was performed prow first although there is no clear proof of this. A fierce head of speed is very typical of a stern-first approach. At Iliad 1.485-486 the same deep penetration of the beach is achieved. One would assume the ship here has beached stern-first, as it seems a routine landing.

the sterling efforts of the crew seen by Cicero encourage us to allow another translation to come into focus, namely **'the Achaeans prove themselves men at sea by their winding course when they have to propel the ships'**. Again we find Achaeans proving their seamanship, using brains and brawn, to judge a difficult and risky manoeuvre to perfection. The brawn is not hard to imagine but there is also the skill and coordination that we saw is also part of what it means 'to be a man' in the Greek world.

In this regard we recall that 'ἀγινεῖ' also means 'steer' and the role of the rudder will be literally pivotal during this landing procedure. On this note, we are called back again to the Aratus passage that examines the two Helices[119]. We should return to the original meaning of 'τεκμαίρονται' and translate as follows: '**Achaean men judge from the circular manoeuvre at sea when (i.e. For how long) it is necessary to steer their boats in (to land)**'. The end of the turning manoeuvre created a sling-shot effect of sorts and it must have required judgement on behalf of the helmsman to know exactly when to stow the rudder before continuing the dash to land. Furthermore, if the ship turned too far with the fierce momentum of the oar strokes, the whole manoeuvre could be jeopardised. Another translation therefore suggests itself: '**at sea, in [performing] the wheeling manoeuvre, Achaean men make a judgement as *to where* they ought to drive/steer the boats'**. No doubt the helmsman determined in advance the precise place to beach the ship. No doubt too, when the manoeuvre was in full swing, some fine-tuning will have been required.

However this last translation also brings a much-disputed Homeric epithet into view for the first time. The word 'ἀμφιέλισσα' ('turning both sides') is generally thought to refer to the design of Homeric ships which on Greek Vases have a sinuous profile at both stern and prow. But its etymologised meaning ('twisting either way') is much more accurately reflected in the capacity of these ships to be 'driven in a circle' ('περὶ … ἀγινεῖ': 23) in either a clockwise or anti-clockwise direction when performing the Helice manoeuvre. The helmsman would position his ship to the left of the bay if tuning right and vice versa. One corollary of this finding is that the Homeric ship must have been provided with two steering oars in order to be equipped to perform the manoeuvre in either direction.

This epithet 'ἀμφιέλισσα' occurs seven times in the Iliad and twelve times in the Odyssey. On almost all occasions the context is of a beached ship that may have arrived through performing the Helice manoeuvre. It is not directly associated with landings but rather seems to inject or reflect an ironic note of tragedy into an onshore scene already replete with death. This will make it a subtextual touchstone of the beaching of Aratus' Argo as we shall see. Our view is also that the Helice manoeuvre constitutes a conscious act of heroic bravura.

At this juncture it will be worth examining two episodes in which 'ἀμφιέλισσα' occurs. The first derives from the aftermath of Odysseus' disastrous foray against the Cicones immediately after his departure from Troy. At Odyssey 9.73f the fleet seems to be making a prow-first approach to land. The morale of Odysseus' crews has been devastated both by the deaths of their comrades at the hands of the Cicones and by the violent North Wind which has subsequently shredded their sails. They make hurriedly for land under oars. When they re-embark two days later no mention is made of stern cables. This suggests that the Helice manoeuvre was not employed, which in turn will reflect back ironically on the use of 'ἀμφιέλισσαι' at 9.64.

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[119] See below on 'σκεπτομαι' and note 77

For, it would seem to inject a great deal of literary depth into the adjective 'ἀμφιέλισσαι' at Odyssey 9.64 if we were to suppose it related to a heroic stern-first arrival. Odysseus leaves the land of the Cicones in ships that had been, one presumes, rowed in stern first and beached in the heroic manner, we think to mark the fall of Troy. The sacking of the Ciconian city constitutes a heroic exploit, but the subsequent indulgence of Odysseus' men serves to compromise it by their failure to respect the due limit imposed by their leader. Thus when the ships are dubbed 'ἀμφιέλισσαι' on departure, the adjective (as its meaning indeed emblematises) points paradoxically and simultaneously in two directions: towards the fleet's self-defeating victory through excess. Now if the next landing of Odysseus' ships were achieved prow first amid 'fear of death' and 'weariness and sorrow' (9.73-75), then the echo of 'ἀμφιέλισσαι' in the background would serve to comment upon the decidedly unheroic pass to which the sailors had been brought, not only in their near shipwreck but also in the overwhelming sense that they had let their 'stern-first bravura', as it were, get the better of them. In any case, as we have seen, there seems to be little heroic about any prow-first beaching. It is usually a sign of desperation.

Our other example of 'ἀμφιέλισσαι' at Odyssey 6.264, has perhaps the most potential to pass judgment on hybristic seamanship, as practised on this occasion by the Phaeacians. The adjective occurs in a context in which proper and due care is expended on ships which are maintained in a purpose-built harbour. Nothing is excessive. Everything is organised, down to the orderliness of the ships set side by side according to the gaps between the mooring stones, gaps which will be great enough, we can assume, to prevent ships colliding in a storm. Yet the juxtaposition of 'ἀμφιέλισσα' with this scene creates a jolting contrast. The word, it is suggested, anticipates the Helice manoeuvre, a manoeuvre which, in advertising and declaring the Phaeacians' mastery of the sea transmits itself as arrogance to the god of the sea. The Phaeacian gift for seamanship is ultimately a gift with which they over-preen themselves. The Phaeacian flair for organisation and their dexterity at the oar constitute the seeds of their own demise, for, once beyond their own harbour, they are no longer constrained, but free to express themselves. The Phaeacians parade their élan at the oar gratuitously in just the wrong place. In beaching their ship up to half its length in the Bay of Phorcys, the Phaeacians are culpable of disrespecting the home of the nymphs and of the Old Man of the Sea (Od.13.113-115). Meanwhile a harbour, particularly one so well-appointed for mooring as that in Scheria, constitutes a place of refuge and safety. It is not an arena for self-absorbed self-expression, such as we find practised in the bay in Ithaca.

But the Helice manoeuvre was also a viable tactic when the sea conditions were hostile to mooring. The performance of the manoeuvre was sometimes necessary and often expertly performed and long trained-for. The detail of this 'turning' manoeuvre allows us to appreciate the importance of the different aspects of male 'arete'. **The Achaeans** do indeed **prove themselves 'men (of skill, and strength) at sea when it is necessary to drive the boats into land'**. The sudden burst of speed would be draining after a long day, never mind the concentration needed for the oar-swopping drill to start with. But 'ἀγινεῖ' also refers to the action of the helmsman in 'guiding' the ship, and we have seen how much the (already exhausted) helmsman has to consider in performing a successful 'inhibitio'. On the strength of our analysis the helmsman emerges as the Achaean hero *par excellence*.

We may assume the Achaeans of Aratus' day would have been concerned to merit their name's heroic reputation. Whilst 'Achaeans' of any era were proved by the manoeuvre to be both 'real men' and 'Greeks', yet the Achaean nation will have derived rather a form of closure from knowing that the Helice continued to test the mettle of contemporary 'Achaeans'. The Achaeans

as a people must have found the disaster that overwhelmed the city of Helice deeply disturbing to their psyche, moulded as it will have been by self-comparisons with their famous Homeric namesakes. In performing this beaching however, they can feel at one with themselves and their history. Life goes on. Stern-first approaches still need as much cooperation, skill, and endurance as ever they did in Homeric times, just as Cicero records. And, as they now stand, Aratus' lines also allow us, the contemporary reader, to enter the world of the *Argonautica* and of the *Homeric Cycle* as never before. No longer will the daily grind of the Argonauts as they toss the hawsers onto yet another foreign beach seem quite as mundane to the reader. The Heroic world, and its values, have gained new immediacy and even a new relevance[120].

The steering oars of an ancient ship, such as we have been describing, pivoted on an axis. The brackets which held the oar firmly in position are shown on a relief of Odysseus' ship in the Sperlonga Museum[121]. As Lionel Casson points out, 'the demonstrably asymmetric construction of ancient rudders makes sense only if they are *pivoted*; moreover a steering oar *fixed* in brackets could only have pivoted'[122]. This should encourage us to see a convergence between the steering oars and the axle of heaven in Aratus' text. Both are fixed tightly and thereby exert their action (on the heavens or on the ship) through pivoting. But a nuance of the word 'ἄρηρεν' ('attached') also puts the reader in mind of the helm's human extension, the helmsman, who is the model of dependability ('steadfast'). 'Attached' ('ἄρηρεν') to the rudder through his hand on the tiller, he rotated the entirety of sea, crew, and ship around himself, even as the celestial axle rotated the heavens around itself.

To sum up, the intense, centripetal focus on the axis of heaven of lines 22/23 casts its light forward, through the repetition of 'ἀγινεῖ', to lines 36-38 where it illuminates the pivotal role of both the tiller and its helmsman, not simply in the mechanics of the manoeuvre we have described at sea, but also in the mechanics of the human relationships that obtain amongst a crew on the high seas. This picture of the axis of heaven, holding the earth in equipoise around itself, constitutes, as it were, a proleptic image for the Helice passage to come. The celestial passage also contains 'signs' (= 'stars' in Greek) alerting us to the coincidences between itself and the Helice manoeuvre. For example the heavenly axis, in 'driving' the stars 'around' itself ('περι … ἀγινει'), etymologises the subtextual word 'ἀμφιελισσα'and describes the helmsman's role ('steering [ships] round') by means of a deft sideways movement between the nuances of 'ἀγινει'. This emboldens us to feed forward the messages it contains into our picture of the ship at sea. This 'feeding-forward' of the celestial into the earthbound informs our cognitive and emotional understanding of the scene at sea, with the water poised on all sides around the pivotal and pivoting helm which yet remains utterly still thanks to the controlling hand. We could turn the direction of literary flow on its head however and conceive of the heavenly axis as acting as a rudder around which the ship of the universe is rotated through a medium ('water') that equates to the all-encompassing aether. And our image of the ship turning on its axis also supports the presence of a cosmic helmsman in the vignette of the rotating earth. The heavenly axis is itself held firm, or held fixed in place, by the unseen finger of this helmsman whose presence is hinted at in the reading of 'ἄξων 'as a present participle and in his role in the performance of the 'Helice' manoeuvre[123].

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[120] See Casson op.cit. p.279 note 34 for references to 'inhibere remis'. See also OLD 'inhibeo 3'
[121] L.Casson op. cit. fig. 170
[122] L.Casson op. cit. p.225 note 5.
[123] See above on 'ἄξων'.

20 The verb 'μετανίσσεται' and other textual omens

At this point we should include another phrase in our analysis of the heavenly axis. Lines 21-22 run as follows:

'αὐτὰρ ὅ γ᾽ οὐδ᾽ ὀλίγον μετανίσσεται,ἀλλὰ μάλ'αὔτως / ἄξων αἰὲν ἄρηρεν,   τα φαινόμενα 21-22

'yet [the axis] does not shift one iota, but is absolutely fixed where it is…'

The verb 'μετανίσσεται' can provide a range of different meanings, and in this sense, it lives up rather ironically to its primary meaning of 'shift'. For it rings the changes of its alternative meanings namely 'go in quest of' 'get possession of' 'flow into a river'[124] 'pursue' 'pass over to'. In considering these alternatives, what stands out is their sense of movement. This gives us a major clue to Aratus' world view. For, the majority of Aratus' constellations are involved in a perpetual game of hide-and-seek (and capture). An example of 'capture' occurs in lines 663/4: '…καὶ Θηρίον ὅ ῥ' ἐνὶ χειρὶ / δεξιτερῃ Κένταυρος ἔχει' 'and the Beast which the Centaur holds in his right hand'. An example of 'to pursue' or 'to go in quest of' comes earlier in lines 226/7: 'ὅς ῥά τε καὶ μήκιστα διωκόμενος περὶ κύκλα / οὐδὲν ἀφαυρότερον τροχάει Κυνοσουρίδος Ἄρκτου' 'the [Ram] who, pursued around the longest circuit, runs equally as fast as the Bear Kynosura'. Next comes an example of 'to flow into' (634): 'καμπαὶ δ' ἂν Ποταμοῖο … ἐμπίπτοιεν εὐρρόου ὠκεανοῖο' 'the meanderings of the River will straightway sink in fair-flowing Ocean'. Finally we come to an example of 'to pass over to' (898/900): 'Φάτνη ,… γίνετ' ἄφαντος ὅλη' 'the Manger completely disappears'. This latter meaning comes from Homer, for he too uses the verb 'μετανίσσεται' of a star, the Sun, setting in the West[125].

Thus the verb 'μετανίσσεται' encapsulates the manifold ways in which Aratus' universe constantly reconfigures itself. All we need to do with this passage is to allow the verbs on which the (word) 'heavenly axis' depends, namely 'οὐ … μετανίσσεται …' and '… ἄρηρεν …' (= 'it does not shift … it is fixed'), to express their resistance to the tendency of the stars to be in continuous motion and constant interaction with each other. Thus an extrapolated meaning of the line would run as follows: 'but yet the axis stands where it has always been, ('μάλ' αὔτως'), wholly apart from the changeability of the Phaenomena ('οὐ… μετανίσσεται'), a work which treats of the ever-rotating cycle of activity and relationships to which the stars are programmed to adhere'. This sense perfectly meshes with the next sentence, where the axis is said to be 'ever fixed holding the Earth in equipoise'.

In conclusion this extra line defining the axis contains a verb 'μετανίσσεται' which perfectly emblematises the 'Helican' swerve of Aratus' universe, where everything is in the process of turning but also reconfiguring. The manifold senses of the Helice sentence 'shift' like a kaleidoscope where one word's movement begins a gyre that eventually, and only after several intermediate phases, arrives at a point where it is transformed into a new gyre which repeats the process. These gyres of meaning rotate, just as the spiral of the trumpet-shell returns to the same point, but at a different trajectory. We use the trumpet shell as an image for the very reason that 'Helice' also means 'the gyre of a trumpet-shell'.

A further word about poetic strategy would not be out of place here. Many passages of Aratus seem to allegorise his technique of planting verbal signs that echo one another and allow intermutual light to be cast on the respective contexts of the words. The one that seems to best

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[124] Liddell & Scott s.v.'μετανίσσεται'
[125] Iliad 16.779

encapsulate the way the two passages[126]in question inform each other is the passage 921-923. The sea here would represent the depth of meaning that lies unexpressed ('silent') beneath the surface (not inappropriately, given the marine context of lines 36f). Our guides to wh at the text holds (when the wind stirs the ocean, as it were) are the signs (such as the 'abundant', 'thistle'), the settling of which on the sea's surface allegorically indicates either what is just behind in the text, or what is just around the corner. In ancient times cork was used on the sea surface to mark the site of anchors at sea, suggesting the Greeks would have been sensitive to the significance of this passage:

Ἤδη καὶ πάπποι λευκῆς γήρειον ἀκάνθης, / σῆμ' ἐγένοντ' ἀνέμου, κωφῆς ἁλὸς ὁππότε πολλόι / ἄκρον ἐπιπλώωσι, τὰ μὲν πάρος, ἄλλα δ' ὀπίσσω.   τα φαινόμενα 921-923

'And before now the seeds of down too have been a sign of the wind, the down of the white thistle, whenever in abundance they float on the top of the silent sea, some in front, some behind'.

Meanwhile, it is incumbent to summarise the Phaenomena's celestial 'anchoring' as established above. The 'heaven' that the axis guides and drives around itself can represent none other than the ship in our Helice sentence. The puniness of the axis which yet can drive and guide the might of heaven 'itself' in a circle has already been highlighted. But we can now appreciate fully its role as a perfect 'proleptic image'[127] for the way in which the helmsman's rudder spins the huge, and apparently unwieldy, boat around itself. Luckily our ancient sources are very voluble about this extraordinary paradox. Thus Lucian[128] expresses wonder that some puny old man can bring the vast ship Isis to safety, 'pivoting' ('περιστρέφων') the huge steering oars 'with a fragile tiller' ('υπὸ λεπτῇ[129] κάμακι'). Aristotle[130] was similarly astounded that a vast ship can be moved 'by one man and one little tiller' ('υπὸ μικροῦ ὄιακος και ἐνὸς ανθρώπου'). In modern times it has been shown that a single finger on the tiller of a Viking ship would have been enough to frustrate rowers trying to swing the boat in the opposite direction[131]. The deftness of the helmsman's touch seems to have fascinated Aratus too. The stillness of the heavenly axis in our proleptic image lends an almost epic quality to the pivot point on which the boat swivels. Meanwhile the constancy of the helmsman is expressed through the 'αἰὲν' in the proleptic image, and the vastness of the ocean and the towering mass of the boat are given a cosmic dimension from the image in lines 22/3 which serves to enhance the status of the helmsman even more. The message that lines 22/3 are transmitting forward to lines 37/8 is that the helmsman is a universal 'man'. The Achaean world rotates around him.

It is reasonable to suggest that the reader has to become a helmsman to Aratus' text in order negotiate the dizzying gyres. Towards the close of the poem Aratus sends out his final warning to the reader:

'Τῶν μηδὲν κατόνοσσο Καλὸν δ' ἐπὶ σήματι σῆμα / σκέπτεσθαι· μᾶλλον δὲ δύοιν εἰς ταὐτὸν ἰόντων / ἐλπωρὴ τελέθοι, τριτάτωι δέ κε θαρσήσειας.'   Τα φαινόμενα 1142-1144

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[126] 21-23; 37-38

[127] A form of image that is not explicit and only becomes apparent in retrospect through verbal allusion

[128] Lucian *Navigium* 6

[129] Note that 'λεπτῇ' is a key word in Aratean poetics, given the famous acrostic from lines 783-787 first noticed by J.M. Jacques in REA 62 (1960) 48-61.

[130] Aristotle *Mech* 850bF

[131] Casson op.cit pp. 225/6 notes 1 and 2 for further references. See notably Lucretius at 4.903f: et manus una regit quantovis impete euntem / atque gubernaclum contorquet quolibet unum' ('and one hand controls the [ship] no matter its speed, and one steering oar twists it round in any direction'. The notion of 'wrenching' in 'contorquet' and the intensity of the speed will become important when we consider the 'Helice manoeuvre' again below.

'Scorn none of these signs. And it is good to look for sign following sign. When two match, the hope is greater, and with a third you should be emboldened'

Aratus does not leave the reader in the dark. He leaves signs, some faint, so faint ('λεπτῇ') they do not inspire self-confidence in the reader. So Aratus is prepared occasionally to plant three signs of which two are confirmatory. Even in the vicinity of these lines quoted above, the word for 'sign' ('σῆμα') has occurred three times (1142, 1142, 1136). In lines 47, 50, and 52 we should be sure and even 'emboldened' by the repetition of 'σπείρης… σπείρη … σπείρη'. The meaning of this word, 'coils' or 'twist', is entirely appropriate, even necessary, to the description of the constellation Draco, the snake. But repetition in Aratus is not some form of otiose Alexandrianism. The word 'coil' is planted to remind us of, and encourage us to examine, the tortuous 'spires' of the poetics of 'Helice-the-trumpet-shell'. One of these spires leads back to the word 'spiral' itself. Thus the word 'Helice' ('gyre') stands as a touchstone of Aratus' poetics of gyroscopic shifts of meaning, which, as we have seen, are as gyroscopic as the two-dimensional trumpet-shell course described by our Achaean ship as it pulls round to face the shore during the manoeuvre we think was termed 'Helice'. We must be alert to these signs and explore their potential to lead elsewhere or to confirm us in our suspicions. The verb 'σκέπτομαι'[132] is extremely common in Aratus but less common is translators' interest in its various meanings. It means 'look about carefully for' or 'spy out'. But it also warns us to 'consider' or 'reflect, even to 'plan' and 'prepare'.

21. The Diosemeia

Bearing all this in mind, we might wish to answer Aratus' ominous first question in the 'Διοσημεῖαι' section, namely 'Οὐχ ὁράᾳς'? ('Do you not see?': 733). 'Διοσημεῖαι'[133] is the section that means 'signs from Zeus'. Or perhaps 'signs *of* Zeus' or even 'signs of weather'. Are the words 'Διοσημεῖαι', or 'Zeus' as easy to translate as we suppose? For Zeus was the source of rain,[134] the bringer of drought[135] and the blower of wind.[136] In many ways, as with the Latin use of the word Jupiter[137], the Greek Zeus was 'the sky' and what came out of it, namely the weather[138]. Aratus himself uses 'Zeus' to mean 'the sky' at line 899 ('πάντη Διὸς εὐδιόωντος'; 'when the sky is completely clear')[139]. Furthermore if Zeus is the sky then 'signs from Zeus' could equally well spill over into 'constellations in the sky'. This makes us think again about Aratus' famous opening words 'Ἐκ Διὸς ἀρχώμεσθα' ('Let us begin with Zeus'). They are all too famous for their own good as they are rarely given a second look. But they could also be translated 'let us be guided by Zeus' or 'let us be ruled in accordance with Zeus'. All we have to do is adopt the passive of the verb and allow 'ἐκ' to adopt different nuances[140]. This has been our methodology with the words in our Helice sentence and it has served us well. If adopt the first translation here, the title becomes a perfect introduction to an avowedly didactic work. Aratus has a job to do and he seeks inspiration from the god most likely to afford him help with the sky and weather. However the sense of 'guiding' dovetails perfectly with the

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[132] See lines 778, 799, 832, 880, 892, 894 where it always introduces a new question.
[133] Kidd op. cit. pp.425 and 438 however for the disputed starting point of the 'Διοσημεῖαι'. See the same reference for evidence of 'Διοσημεῖαι' as the title of the second section of 'τα φαινόμενα' and for evidence that this second section is an integral part of the whole work. Given this latter point, we should be concerned to apply the literary messages emanating from the word 'Διοσημεῖαι' to the entire work, not just to section two.
[134] Alcaeus frag 34; Theophrastus *Characters* 14.12; Aristophanes *Clouds* 368.
[135] Isocrates *Busiris* 13.
[136] Catullus 4.20-21.
[137] OLD s.v. 'Jupiter'
[138] See Ken Dowden 'Zeus' (2006), especially p.54f, from which much of the evidence of Zeus as 'the sky' has been gleaned
[139] See Kidd op. cit p.484 note on line 899: '**Διὸς** Strictly the sky'.
[140] Liddell & Scott s.v. 'ἐκ' 5 & 7

major theme of this entire article, namely that the guidance offered by the axis of heaven and the helmsman on the earthly ship are central themes to emerge from the analysis of Aratus' Helice. We simply require ourselves as readers to be 'guided' by Aratus' poetic strategy of 'signs'. More specifically, this translation also dovetails in ring composition with the end of the proem where 'guidance' ('τεκμήρατε': 18) is requested (for Aratus' song) from Zeus, the Muses and such as, we presume, Hesiod (lines 15-18)[141].

Yet the translation of Aratus' first three words could also run as follows: 'let us be guided by the sky'. Such an opening title would constitute an unerringly accurate description of the didactic aims of the two sections of the work, assuming the sky is both the source of night-time guidance at sea, and the source of weather. This also makes one wonder about Theocritus and his presumed borrowing[142] of these three words, ' Ἐκ Διὸς ἀρχώμεσθα' ('let us begin with Zeus'), with which to start his panegyric of Ptolemy II in Idyll 17. The words in Theocritus have a slightly hollow ring as they do not come at the beginning of Idyll 1. They do not, in other words, come at the very start of the Idylls, considered as a unified work. That might encourage the reader to look for alternative meanings in Theocritus ''Ἐκ Διὸς ἀρχώμεσθα', since the obvious meaning is not (strictly) true. The phrase instead could be interpreted as harbouring hidden flattery of Ptolemy if translated 'Let us be governed by Zeus'. The accommodation of Ptolemy to a god is very strong in Theocritus' poem. Such a compliment is not out of place[143].

22. Merchant vessels and 'The Snail'

Returning to lines 35-38 of Aratus, the verb 'ἀγινεῖ' at line 38 need not be straitjacketed by its earlier context alongside 'περὶ' (23) which lent it its *circular* driving' or 'steering' nuance. In fact the most common use of 'ἀγινεῖ' is to describe the delivery of goods or chattels, often by transport. Thus Herodotus uses 'ἀγινεῖ' of the Ethiopians bringing tribute and gifts to the Persians, such as tusks, gold, and ebony (3.97). Nothing prevents us from simply using this nuance to open up a fresh window of meaning. One can understand an Accusative and Infinitive construction after 'χρὴ', with 'νῆας' providing the accusative. Thus one can translate: '**Men are proved Achaeans at sea by their circular movement when it is necessary that their ships deliver [sc. 'goods']).** The verb seems to have found its perfect home in this scenario, particularly since the notion of necessity ('χρὴ'[144]) emphasises that the ship *has to* unload its goods, come what may. Unloading will be its purpose, if it is a freighter. Its goods may in any case be perishable, meaning that money is at stake.

At line 111 Aratus himself uses the frequentative of the verb 'ἀγινεῖ' in articulating the bringing in of imports by sea, a practice which he describes as pernicious and one unknown to the Golden Age in which Justice reigned on Earth and all needs were supplied locally ('… Χαλεπὴ δ' ἀπέκειτο θάλασσα /καὶ βίον οὔπω νῆες ἀπόπροθεν ἠγίνεσκον; 'distant lay the cruel sea and the ships were not yet bringing in their livelihood from distant parts'). More importantly this text-yet-to-come at 111 can be reimported, as it were, into our understanding of the Helice line at 38. The role of ships as the Nominative in 111 steers us towards the use of an Accusative and Infinitive construction after 'χρὴ' in 37. This will empower 'ships' there to govern the verb 'import' just as they do at 111. If we now look at lines 111 and 38 from this angle, the new

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[141] Kidd op.cit. p.172 on the reference to Works and Days 160.
[142] Kidd op. cit. p.40/1 and 162/3
[143] See particularly lines 130/1 relating the marriage of Zeus and Hera to that of Ptolemy and Arsinoe. But the accommodation is also subtle as in the ring composition evident in the proem in lines 2 and 12. Thus 'the best of gods' is Zeus in line 2, whilst 'the best of kings' is Ptolemy in line 12.
[144] Note also the etymological link between 'χρὴ' ('it is necessary') and 'χρήματα' ('money')

translation of 'ἀγινειν' at line 38 ('to import') can be seen as a 'phaenomenon' that reconfigures line 38 entirely. Our translations are now the following:

(a) 'men are proven to be Greeks by Helice when it is necessary that ships bring in [goods] by sea'

(b) 'at Helike Achaean men indicate where/when it is necessary that ships bring in goods by sea.

(c) 'Achaeans are proven to be men at sea when it is necessary that their ships bring in ['goods'] from Helike'

(d) 'Greeks are proven to be men in the seas at Helice to where/when it is necessary that ships bring in [goods]'

(e) 'at sea the Greeks make a judgement by Helice as to where/when their ships have to bring in goods'.

In general the picture of decline from the Golden Age at line 111 is fleshed out by reference back to the scenarios that line 38 produces, scenarios which inject 'enargeia' into the succeeding story. Any ship, particularly one that makes deliveries, particularly a merchant vessel, will constitute a symbol of the Bronze Age. But how, why, when, where they make those deliveries is explored in the various renderings of line 37

In (e) above the ship's helmsman is using Helice-the-constellation to navigate towards the markets the crew has identified as consumers of the goods they carry. No doubt weather and delays mean that original destinations have to be rethought especially given the perishable nature of the goods carried. The translation could also suggest the use of Helice as an indicator of the arrival of dusk. This would warn the ship's captain that it was time to moor. Helice's appearance may have been a better indicator than the sun which of course may have already disappeared behind the landscape to the west.

In (d) above Helice becomes one of the cities that bore the name Helice. The rough seas around the Helice of the Tauric Chersonnese (never mind the journey to get there) had to be faced by Athenian or Achaean ships, the former bringing Black Figure ware in exchange for the grain and wine that was abundant in the Crimean hinterland. One should consider the exigencies of the Peloponesian War when the very survival of Athens dependent upon keeping the Black Sea grain routes open.

In (c) above we are brought to a similar appreciation of the vast round trip made by Greek ships in the interests of servicing their communities with the staples of life.

In (b) above we return to the subaquatic ruins of the Achaean city of Helice, the waters of which presented a danger to ships intent on delivering goods. Local Achaean men must have patrolled the waters there after 373 BCE their remit being to escort ships through the treacherous waters and to bar access at times when the area became impassable due to local tides or even piratical raids launched from the southern shore of the Corinthian Gulf .

In (a) above we reach the most intriguing rendition of this line. The beaching manoeuvre or 'Helice' constituted a means by which a ship could come ashore. The method used as explained above marked out the ship as Greek viz-a-viz any other Mediterranean nation. But there is an obvious difficulty if we were to impute the violence implied by 'ἀγινεῖ '('drive in') to a merchant ship. Such ships could not have undertaken the violent assault on the beach described

in previous pages. The precious goods were not to be risked in the accomplishment of an always risk-laden procedure. Nor was the weight of a loaded merchantman conducive to such a landing. Yet we are committed to the 'delivery of goods' as one of the meanings of 'ἀγινεῖ'. There is a solution which is brought to our attention by Cicero's translation of Aratus which we investigate extensively below. Suffice it to say for the time being that merchant vessels did undertake a circular manoeuvre in their approach ('a Helice') but this was a sedate affair during which the crew manoeuvred the vessel so that it turned 180 degrees and presented its stern to shore. The sterns of such ships and indeed of 20-man vessels such as those of Noemon and the suitors in Odyssey 4, were, we suggest, fitted with cross-joists which then became the undercarriage of the stern hatch-doors when the latter were lowered into the surf. These joists kept the gangplanks reasonably horizontal so that the crew and their livestock could exit onto the beach in some comfort. Thus the word Helice qua 'winding movement' may not be entirely of the species witnessed by Cicero at Asturia. Cargo vessels had to deliver and had to offload safely. Their method was long-winded but reliable. It described a 'winding' course and is as entitled to claim the title 'Helice' as its twin manoeuvre with the same basic profile. At the same time this sober method of bringing a ship to shore makes it deserving of the title 'an Other Helice'.

The arrival of Telemachus on Ithaca in Odyssey 15 may reflect this form of arrival and may even be intended to promote such procedures in military contexts. After all a furtive arrival on one's home soil is highly to be recommended when there is a price on one's head. We examine Telemachus' arrival in the article 'One Long Saturnalia' (forthcoming). In essence it involves (a) 'parking' the ship still afloat along, let us say, the seawards flank of a northerly headland within an east-facing bay, with prow to shore, (b) having the rowers swivel on their benches and swap oars so that all are now facing the prow and are a bench width's further towards that prow (c) the port oarsmen push on their oars while the starboard rowers pull on their oars, slowly and in synchronicity with their port colleagues (d) the ship spins on a sixpence as it swings round stern first to line up alongside and parallel with the southerly headland of the bay with the stern now facing land. The crew are available to bring forth the goods from the hold onto the beach using the gangplanks to negotiate the surf.

We would argue that Aratus spends the two lines 40-41 emphasising the size and clarity of the 'first Helice' in order to state clearly the allegorical message that Helice represents the superficial text. It is 'clear' 'easy to be seen' and 'its size being visible as soon as it is dark' ('ἀλλ᾽ ἡ μὲν καθαρὴ καὶ ἐπιφράσσασθαι ἑτοίμη /πολλὴ φαινομένη Ἑλίκη πρώτης ἀπὸ νυκτός'). Granted this allows Aratus to draw a strong contrast between it and the fainter and smaller Kynosura (39), yet the antithesis is presented hand-in-glove with the assumption that, in steering ships by night, the Greeks follow Helice whilst the Phoenicians follow Kynosura. Yet the line 'τῇ δ᾽ ἄρα Φοίνικες πίσυνοι περόωσι θάλασσαν' does not necessarily bear this meaning. The conjunction 'τῇ' could refer back to 'Ἑλίκηι'. Its most logical meaning is that the Phoenicians follow Helice when crossing the ocean.

We should point out that the Phoenicians' use of, we suggest, Helice (not Kynosura) as a constellational direction-finder, will complement the use of the same constellation by the Greeks. At the same time the appearance of Helice will be a universal harbinger of dusk. It is a sign of the approaching darkness when ships will need to seek land[145]. As we have seen, in line 39 the relative 'τῇ' should naturally refer to the constellation most latterly mentioned, namely Ursa Major. This echoes the use of 'τὴν' in the Homeric passage where 'Ursa Major' is again the constellation to which the pronoun alludes (Od.5.476). Meanwhile 'δ᾽ ἄρα' will mean

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[145] Aeschylus Suppliants 772ff

'whereas' marking a rhetorical increase in demand on the reader's credulity ('in fact [rather than merely using Helice as an indication that it is the time and place to beach ship] the Phoenicians actually rely on it to cross the ocean')[146]. Here Homer's verb 'ποντοπορευέμεναι' is precisely glossed by Aratus' 'περόωσι θάλασσαν' ('τὴν γὰρ δή μιν ἄνωγε Καλυψώ, δῖα θεάων, / ποντοπορευέμεναι ἐπ᾽ ἀριστερὰ χειρὸς ἔχοντα': Od.5.276-277).

In sum, we believe that the Greeks used Ursa Major as a sign that it was the time to bring a ship to land, whilst the Phoenicians used it to orient themselves as they crossed the sea. Thus Calypso's instructions to Odysseus in Odyssey 5 may reflect not a Greek but a Phoenician way of route-plotting by night on the open seas. This brings us to the nexus 'ἀλλ᾽ ἡ μεν' at the start of line 40 which articulates the postponement of a qualification to this ('yet, whilst on the one hand … '). The concessive clause explains the very good reasons why Helice would be ideal as a guide to benighted sailors. That is, Helice is a constellation that is bright, available permanently, and visible as soon as it is dark. Following this we have what must be 'The Other Helike' or 'Kynosura'. This is small, and indeed somewhat secretive in comparison. That is because the letters of the words 'ἡδέτέρηὀλίγ**ημένἀ**τὰρναύτησινἀρείων' in line 42 contain a word nested amidst other words, namely '**ημένἀ**' which must be supposed to share a common letter with 'ὀλίγη' and to reduce '**ἀτὰρ**' to '**τὰρ**'. The new meaning is now the following: **'the other one is small, lying hid/lurking/sitting still, and, as it seems, better for sailors'.** Interestingly the provenance of these sailors is not remarked upon, suggesting this is a well-known truism amongst all seafaring nations. However if the word 'ἀρείων' remains fixed in its monolithic sense of 'better' then 'ημένἀ' cannot stand even on the cryptic level at which it unashamedly exists. For, if Kynosura lies hidden it is of no value to any sailor. However 'ἀρείων' does have another meaning, namely 'snail'. This will alter the meaning of line 41 to the following: 'the other Helike is small, secretive and termed 'snail' by the sailors'.

Such a meaning sheds much light on lines 40-41. For now one can insinuate the meaning of 'trumpet-shell' in translating 'Helike'. This meaning finds full expression in the next two lines. That is, this enormous gastropod 'as soon as it is dark' is found 'in the open' ('καθαρὴ') on the sea floor (unlike the Areion' which is described as 'lying hid'). It comes into view in all its size. It now remains for us to translate the verb 'ἐπιφράσσασθαι' which occurs elsewhere only as a Passive and a Middle, and is always active in meaning. The phrase 'ἐπιφράσσασθαι ἑτοίμη' ought then to mean '[Helice] on the alert to recognise or ready to make contrivance'. The two lines 40-41 have now metamorphosed into a discussion normally reserved for Aristotle's History of Animals. The Charonia or Trumpet-Shell is indeed very large, growing up to half a metre in length. As soon as it is dusk it occupies the sea floor in the open looking for food such as the Crown of Thorns Starfish. Thus, like its counterpart, the constellation Helice on the ceiling of the sky, the large Charonia stands out bold at night with its bright markings ('καθαρὴ') on the sea floor. It is alert and 'ready to observe' and then 'to plot against' its food sources which it paralyses with its sting. It is also much faster than the snail and faster too than the Crown of Thorns Starfish.

Thus the Helice passage ends with a log-jam of different spirals all competing for the reader's eyes. Meanwhile Helice-qua-trumpet-shell has a good claim to represent the ultimate embodiment of Helice's allegorical persona. The metapoetical concept of Helice-the- trumpet-shell has provided gyre after gyre of meaning, culminating in the sense of Helice-the-beaching-

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[146] Compare the rhetorical antithesis in this Iliad passage (24.454-456) which also includes a 'μὲν … δε' antithesis as in the Aratus passage: 'τὸν τρεῖς μὲν ἐπιρρήσσεσκον Ἀχαιοί,/τρεῖς δ᾽ ἀναοίγεσκον μεγάλην κληῗδα θυράων / τῶν ἄλλων: Ἀχιλεὺς δ᾽ ἄρ᾽ ἐπιρρήσσεσκε καὶ οἶος, …'. Practically speaking δ᾽ ἄρ᾽ here means 'whereas' or 'by contrast'. Hesychius meanwhile considers 'δ᾽ ἄρ᾽and δὴ to be synonyms.

manoeuvre, which is allegorised by the form of the trumpet-shell in its profile. This profile describes two gyres of different circumferences just as the two methods of turning a ship, one fast, one slow, are defined in essence by the dimensions of their turning circles. When 'the other' Helice is described as 'small' we should have in mind the diameter of the turning circle required by the alternative Helice manoeuvre. Yet the passage leads a triple life as (a) the constellation Ursa Major at dusk and (b) as the Helice manoeuvre at dusk and (c) a voracious mollusc at dusk. The Helice manoeuvre displaces Aeschylus' mooring at dusk. It is the opposite of laborious, slow and secretive. Its cryptic presence in the subtext allows us to interpret 'ἀρείων' in its meaning of 'snail'. This stands in direct antithesis to the Helice mollusc. Not for the first time a substantive in apposition to an understood Nominative hijacks the passage at least temporarily. In lines 40ff we had been in the throes of a discourse in which the helmsmen, negotiating the seas at night, found the miniature proportions of the Little Bear ('ἡ δ' ἑτέρη ὀλίγη': 42) simultaneously 'better' or rather 'more calibrated 'for way-finding. Here 'ἀρείων' as an adjective closes ranks with the Little Bear understood (Iliad 4.407: τεῖχος ἄρειον';'a more compact [wall]'; 19.33: 'χρὼς … ἀρείων' ['better … skin ']). But the lack of a tangible Nominative leaves the door open for the slow Helice manoeuvre to intrude itself on the basis that it is a 'snail to [in the jargon of] sailors'. Suddenly we find ourselves listening to the common slang for a landing manoeuvre that is laborious if not as long as Aeschylus' mooring in the Suppliants. Thus, 'sailors' ('ναύτῃσιν') come to be treated as a Dative of Reference or of the Person Judging. Meanwhile, the word 'snail' now becomes a nickname given to the [quite]'Other Helice' by sailors in mockery of the painstaking execution of a merchant vessel's slow and deliberate turn in towards the beach where its goods will be off-loaded and displayed (unbroken). The use of such flippant language as 'snail' is common in our own intercourse today. The Romanians will call a person who commonly lags behind a 'melc' ('snail'). However Aratus may also be insinuating that the [military] sailors' usage of the term 'snail' is reflective of a certain assumed heroic hauteur or arrogance viz-a-viz rowers whose daily chores prioritised the safety of crew and cargo. The passage can be read as an implied authorial attack on the elites and their self-regarding Heroic self-image which is massaged at the expense of the rank and file by performances of the rapid Helice when the sailors are already exhausted.

Aratus makes a further point namely that the 'snail-paced' Helice is 'better for the sailors' (' ἀτὰρ ναύτῃσιν ἀρείων') in the sense that it is not reckless. Meanwhile the concluding line of the passage is vulnerable to a redivision of the letters: thus 'τῇ καὶ Σιδόνιοι ἰθύντατα ναυτίλλονται' could be understood as follows: 'τῇ καὶ Σιδόνιοι ἰθύντατ' αναυτ' ίλλονται'.This now means that 'by using the 'Snail' [approach to land), even the Sidonians wind/turn round/pivot on the spot most straightforwardly'[147]. We take this to mean that even nations such as the Phoenicians that did not customarily approach land in the course of a Helice manoeuvre ('καὶ Σιδόνιοι'[148]) found the Greek 'snail' manoeuvre simple and useful. The Aratus passage goes on to describe the Snail's tight wheeling manoeuvre as operated by a skilful helmsman ('μειοτέρη γὰρ πᾶσα περιστρέφεται στροφάλιγγι': 'for the whole of 'The Other Helice' (Kynosura) all turns in a smaller circle' or 'on a sixpence'). The phrasing hints at the ostentatious rotation of the much more expansive beaching manoeuvre which Aratus appropriately infers is akin to the gyre of a 'Trumpet-Shell'.[149]

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[147] 'ἀναυτα' = παραχρημα = 'on the spot' 'forthwith'; for 'ίλλονται' see Hippocrates 'περι ἀρθρων ἐμβολης' 42

[148] Apropos of 'even the Sidonians', as the ancient trading nation *par excellence* in ancient times, the Phoenicians will have absorbed new practices if those practices improved on the safe delivery of goods.

[149] There is verbal play between 'steer' and 'very straight' articulated through 'ἰθύνω' ('I make straight' and 'I steer a boat'). See Herodotus 1.194.

Aratus' line 43 provides an excellent example of the use of words as 'omens' of what is to come. Thus the phrase 'of a piece it turns round in a smaller turning circle' perfectly brings out the force of the cryptic text of the following line (44: 'ἄναυτα' = 'on the spot'; 'ἵλλονται' = 'they pivot'). Indeed Hippocrates' use of 'ἵλλονται' ('**they pivot** on the sound leg') makes Aratus' phrase very precisely applicable not only to the behaviour of the ship as it rotates on the point of the rudder, but also to the 'turning around', as one, of the crew who also individually pivot on one leg when they swivel in their seats prior to either the 'fast Helice' or the 'slow Snail'. The word 'πᾶσα' (43) meanwhile tends to confirm our suspicion that all the oarsmen swivelled in their seats in the fast and slow versions of the manoeuvre.

Our view then is that this densely- worded passage has been profoundly misunderstood. From our perspective the Greeks did not sail at night (if at all possible). Instead they tended to beach ('drive the ships in') as soon as Helice emerged at dusk. By contrast Phoenicians used the slow Helice as a way of ensuring their goods reached the customer intact. Meanwhile the reckless sprint towards the beach favoured by Greek crews is implicitly criticised by Aratus who notes that it is the richest trading nation, the Phoenicians, who make most use of the small 'other Helice' option[150]. The moral here for the Greeks is not hard to seek.

Aratus' 'snail' procedure then is one and the same as the procedure used for turning merchant vessels. This will be examined in greater detail below. Meantime, as we have seen, on land being reached stern first, the hatches in the stern will have been lowered to allow their livestock to disembark. Greek Geometric vases show protruding 'shelves' on the stern of Greek vessels. These must be the struts on the hatches that support the lowered hatches as they metamorphose into gangplanks. The supports allow the gangplanks to remain horizontal as men and animals disembark.

Aratus' preference for the 'peaceable' Helice manoeuvre is also a comment upon the word 'χρη' (line 38). The courage, skill and general 'arete' of Achaeans may well be proved by their undertaking of the expansive Helice manoeuvre at certain times and places, but the undertaking of the manoeuvre must be deemed unavoidable. The nexus 'χρη ἀγινεῖν' is clearly important here. It asks the question 'Is the 'driving' of the ship necessary (under oars)'

23. The Hamaxai

The two constellations of Helice are also known as the 'Bears' and it is to the 'Bears' that we turn now. There is a clear hint in lines 26-27 of something etymological afoot ('… δύω δέ μιν ἀμφὶς ἔχουσαι / Ἄρκτοι ἅμα τροχόωσι· τὸ δὴ καλέονται Ἄμαξαι'; 'and while they hold it [sc. 'the axis of heaven] on both sides, the two Bears wheel: they are therefore called 'the Waggons'). It seems that Helice *qua* the Great Bear, holds the axis, much as our story of Helice has been shown to hold or rather incorporate, deep within its narrative hold, the heavenly axis (*qua* rudder), by dint of an alternative meaning of Helice, namely the 'winding movement [of

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[150] The word μειοτέρη is an unusual comparative but it is chosen on the basis of the verbal gymnastics it can provide. Within its parameters is the word 'ιοτέρ' which is meaningless unless anagrammed into the Latin word 'terio'. A 'terio' was the Varronian spelling of 'trio trionis' or 'draught ox'. The Great and Little Bears in Latin were both Arctoi or Hamaxai, or 'the twin triones' according to Virgil ('geminos triones'). As twins these teams of oxen will be individually 'trio', which is the later spelling of 'terio'. In a word Aratus has buried a spiralling reference to the Latin for Ursa Minor inside the word that defines Ursa Minor viz-a-viz Ursa Major. This nesting of 'terio' also exactly parallels the inner orbit of Ursa Minor within the larger ambit of Ursa Major. It also allows the 'ox' to rotate around the middle of the word (the pole). For in order to integrate itself into its proper form the 'terio' starts heading right ('te') then it heads left ('r') after which it heads back right ('io'). This precisely reflects the circling movement of Ursa Minor hard against the pole star. Cicero was not slow to recognise Aratus' legerdemain. In his translation of Aratus he uses the word 'in**terio**re'. Meanwhile 'στροφάλιγγι' looks forward to Aratus' 'door-hinge' episodes involving Cassiepeia and Penelope. Furthermore, in its meaning of 'axle'στροφάλιγγι' also evokes the 'hamaxa' ('waggon') which is another of the names of 'Kynosura'.

a ship]'. But an etymology of Ἅμαξαι' from 'ἅμα' and 'ἄξων' (= 'together with/the axis') has been suggested to us by the introduction of 'ἅμα' which both <u>means</u> *together with* and also <u>is</u>, as a word, *together with* 'ἄξων' as both of them are considered to be compressed *together* inside the word Ἅμαξαι' as that word's etymological components.

But a much clearer picture emerges if we simply apply the rules we have learnt when dealing with Helice. If we revert to the alternative, indeed original, meaning of 'ἄξων', namely that of an 'axle of a waggon' then the entire sentence seems to come into focus very readily. We usually translate the lines as follows: 'the two Bears, holding it [the axle] on both sides, wheel round along with it'. That is why they are called the Waggons [or, etymologically, 'along with the axle']'. However the phrase 'ἀμφὶς ἔχουσαι' ('holding on both sides') occurs in the Iliad of two horses 'holding' both ends of a yoke[151]. This perfectly reflects the arrangement of a waggon axle having two, not 'bears' but 'wheels', attached to its two ends. Thus, as in the Homer passage, the phrase 'ἀμφὶς ἔχουσαι' in Aratus better translates as 'attached to both ends'. The picture that has emerged of an axle with two wheels now accommodates itself easily to the rest of the sentence. The Bears 'wheel round together' ('ἅμα τροχόωσι') because they are behaving like wheels under pressure from the fixed 'axis' which insists on behaving as 'a waggon axle' in the sentence. The real (verbal) reason the Bears are called Ἅμαξαι' is because the Bears, behaving as wheels, are 'rotating in synchronisation with the axle' which is what the etymology of Ἅμαξαι' suggests ('ἅμα' + 'ἄξων' = 'along with the axle'). That is also why Aratus uses the verb 'τροχόωσι' ('they wheel') for it is derived from the word 'τροχός' ('wheel'). As commentators have noticed however, Aratus is anxious that we consider the etymology to derive from different nuances of the same words, namely 'beside the axis of heaven' (also = 'ἅμα' + 'ἄξων'), a translation which accurately reflects the geography of the two constellations that rotate 'alongside the axis'.

24. Disguised Etymologising

We have tried to demonstrate above that the Helice passage is far from being the only one that is subject to reformulation. And Aratus seems to have a keen interest in insinuating discussion of word etymologies into his reformulations. Another etymological excursus may be operating when the word 'ἲς' occurs. Thus at line 286 there is the phrase '… ἵνα τε τρέπετ' ἠελίου ἲς' which seems at first unremarkable. It means *where the force of the Sun turns* and refers to the Winter Solstice in Capricorn, where the Sun reaches its turning-point in its annual march across the twelve signs of the Zodiac. Once there the Sun starts to track back to Cancer in Mid-Summer. But the word 'ἲς' is a synonym of 'δύναμις' ('force' or 'power') which is used of the 'force' of a word, or, we might say, its etymology. Plato uses 'δύναμις' in this sense in the Cratylus, most clearly at 405C where people are said to not have proper regard to the 'force' ('δύναμιν') of the name 'Apollo' which they consider derives from 'ἀπολῶ', transliterated as 'Apollo' and meaning 'destroy'. Clearly Plato is interested in the etymological essence of the word 'Apollo'. Now in our line above one could adopt this meaning for 'ἲς' ('etymology') which, along with 'ἠελίου', would create the phrase 'the etymology of the (word) Sun'. We could then understand the verb 'to be' and use 'τρέπετ'' ('turn') as the predicate. The whole phrase would mean 'and when the force (or 'etymology') of the (word) 'Sun' is 'turn''. In fact this is precisely the etymology of the word 'Sun' which Socrates gives us in the Cratylus at 408E. Here Socrates, when asked about its etymology, first suggests it should be converted into its Doric form, namely 'ἅλιον', rather than the Attic form used by Socrates in Athens, namely 'ἤλιον'. Socrates then proceeds to offer three alternative etymologies of the word, of which the

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[151] Iliad 3.486

middle one is of interest to us. Because, says Socrates, the Sun is 'going around the Earth' the word could be derived from 'ἀεὶ εἰλεῖν'[152] ('to always turn' or 'pivot')[153]. Thus Aratus, at the point where he is discussing the constellation Aegoceros ('Capricorn'), and its location as the Sun's winter turning-point, may be considered to be insinuating a small etymological diversion which simply uses the words of his narrative in a different sense. And perhaps the minute word 'τε' is a clue. It may be read as inviting us to consider that there is the received meaning of the sentence **and** another less obvious meaning. One should always be attentive to even the faintest 'signs' in Aratus.

25 Conclusion

Aratus' text is around the length of a book by Lucretius or Apollonius Rhodius. However its capacity to gyrate or pivot around different nuances of the same words renders it many times longer than the 1154 lines of apparent text. The reason we feel impelled to explore the text as a treasure trove of inexhaustible, verbal threads resides in the celestial poetics constructed by the author. In lines 569-589, to give one example, during June and July the sign of the Crab is described as rising in the company of many other constellations. At the same time an equal number of constellations set in the waters of the western ocean. Whilst scientifically this is a symptom of the rotation of the sky, in Aratus' hands it bcomes an allegorical schema which can be applied to the coming to prominence and sinking from view of the words of the text. One of these words is Helice which not only has a plethora of meanings that are subject to the poetics described above but also through one of those meanings namely 'trumpet shell' constitutes a touchstone of the apparently ever-circling but never-quite-returning movement of the text

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[152] 'ἀεὶ' means 'always' and 'εἰλεῖν' is a variant of 'εἴλω' ('I turn, pivot'). Liddell & Scott p.487 s.v. 'εἴλω' C.
Socrates is being disingenuous here. There are two identical words 'εἰλέω' meaning (a) I pivot (b) I sun (Liddell & Scott p.486). There was no need for him to introduce 'ἀεὶ'. And '**ἀεὶ**' must have motivated the introduction of the Doric form of 'Sun' in the first place. Socrates seems overeranxious to insinuate 'ἀεὶ' into the etymological explanation. The permanence of heavenly bodies in their courses across the sky weighed heavily with the ancients.

[153] The significaBut of course, in Aratus' text, the sailors' prayers could equally well betray them to be citizens of the Archaic, Classical or Hellenistic Greek city-state of Helice, a member of the historical Achaean nationce of a hidden reference to 'pivot' may be that it should be taken as another echo of what may be described as the 'axis' of Aratus' 'Helican' poetics, namely the 'fixity of the axis and the ship's rudder' around which all (including meanings) rotates.

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