

Imprint

Université du Luxembourg 2022

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ISSN 2535-8863

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Published online at

<https://doi.org/10.25517/jhnr.v7i1>

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GREGORY CALLAGHAN

Lindian Chronicle Connections

Contrasting Rhodian Networks Real and Imagined

Journal of Historical Network Research 7 (2022) 155–180

Keywords Hellenistic, Epigraphy, Rhodes, Memory, Trade

Abstract The votives described in the Lindian Chronicle, a late Hellenistic inscription from the Sanctuary of Athena Lindia on Rhodes, create a clear but largely fictitious network stretching across the Eastern Mediterranean. This paper diagrams the network captured by this text, and then seeks to explain why it was invoked by the Lindians at this particular historical moment (100 BCE). This secondary goal is accomplished by considering archaeological and textual evidence for Rhodian trade in the second half of the 2nd c. BCE, and comparing the resulting ‘real’ trade network with the ‘imagined’ network of the inscription. This comparison leads to the conclusion that the network of the Lindian Chronicle was invoked to reassure the local populace of Rhodes’ unshakable historical importance in Mediterranean interstate trade, at a time when that trade – the life blood of the island – had precipitously dropped.

Introduction: The Lindian Chronicle*

On the island of Rhodes, in the city of Lindos – the largest of the island’s three pre-synoecism communities – stood the Sanctuary of Athena Lindia.¹ Fittingly, this sanctuary overlooked the harbor of Lindos, whose position in the maritime trade of the Eastern Mediterranean helped bring wealth to the island, the city, and consequentially to the sanctuary. Locals and foreigners alike dedicated votives to the temple in honor of Athena Lindia. Many of these offerings were lost when the temple was ravaged by a fire in 392 BCE, and many more were sold or stolen in the chaotic political period of the following century. But the memory of those extravagant offerings lived on, a recollection of the sanctuary’s ancient and important place within an Eastern Mediterranean world.

Or at least this is what we are led to believe from the surviving text of a remarkable inscription conventionally referred to as the Lindian Chronicle. Dated to 100 BCE, the Lindian Chronicle is a 2.37 m high and 0.85 m wide stele uncovered by the Danish excavations of the Lindian acropolis and its environs, first published by Blinkenberg in 1912. Since its initial discovery, a number of thorough studies of the text have emerged, most recently – and definitively – that of Carolyn Higbie.² The first section of the text (Section A in Figure 1) tells us that the stele had been commissioned in order to record the many extravagant votive offerings made to the goddess that were lost in the fire of 342 BCE. In Sections B and C, the inscription goes on to describe these many offerings – 42 in total – most with attached stories describing why the offering was made, and by whom. The final section (Section D) recounts a series of divine epiphanies of the goddess.

The present study is predominantly concerned with the list of lost votives. The entry of each votive follows a general formula, stating who dedicated it, what the object was, a description of the object, and finally, where the existence of this

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* Versions of this article were previously presented as papers at Harvard’s Classics Department’s 2018 “Local & Global: The Literary Landscape and the Politics of Place in the Hellenistic World” conference and the 2018 “Connected Past: People, Networks, and Complexity in Archaeology and History” conference held at Oxford University. The author owes a debt to the many conversations and suggestions that resulted from participation in these conferences.

1 The exact nature and process of the *synoecism* is still somewhat uncertain. Overviews of these uncertainties, and what we feel confident claiming, may be found in Gabrielsen 1997, pp. 28–31; Jones 1987, pp. 242–252; or, for more detail, Papachristodoulou 1999.

2 Higbie 2003, along with an excellent commentary; see Blinkenberg 1912 for the first publication of the text.



Fig. 1 Stele of the Lindian Chronicle. (After Higbie 2003)

now-lost object was attested. For example, the second votive in the chronicle is listed as follows:

Τελχεῖνες κροσόν, ὃν οὐδεὶς ἐδύνατο /
ἐπιγ[νώμειν ἐκ] τίνος ἐστί, ἐφ' οὗ ἐπεγέγρα- /
πτο “Τελχε[ῖν]ες Ἀθάναι Πολιάδι καὶ Διὶ Πο- /
λιεῖ δεκάταν τῶν ἔργων”, ὡς ἀποφαίνεται /
Γόργων ἐν ταῖς Λ τὰν περὶ Ῥόδου, Γοργοσθένης /
ἐν ταῖς ἐπιστολαῖς, Ἱεροβούλος ἐν ταῖς ἐπιστολαῖς.

The Telchines, a vessel. Which no one was able
to determine from what it was made, upon which had been inscribed:
“The Telchines to Athena Polias and Zeus Polieus
A tenth of their labor,” as Gorgon writes
In the eleventh book of *About Rhodes*, Gorgosthenes
In his letter, Hieroboulos in his letter.³

Here, the Telchines dedicate an inscribed vessel of unknown material, as attested in Gorgon's history *About Rhodes* and in two separate letters by cult priests. The

3 Section B, ll. 9–14. Text of the inscription, unless otherwise indicated, from Higbie 2003; translations, unless otherwise indicated, are my own.

description of the votives' attestations have received a great deal of scholarly attention, recording 65 references to various historical works – mostly local – 25 references to letters of local priests, and 4 references to various public records. Given this wealth of information, it should come as no surprise that the Lindian Chronicle has been enthusiastically embraced by those studying the concept of museums, local memory, and historiography in the ancient world.⁴

Yet, the value of the Lindian Chronicle does not stop at its connotations for local memory making – it also boasts significant global connections. Indeed, I assert that it is impossible to fully appreciate the inscription's local aspects without appreciating the global character of the Chronicle and the votives it describes.⁵ Of the forty-two votives remembered in the stele, thirty-two were either dedicated by or evoked a foreign community or individual, with connections stretching across the Mediterranean. Multiple connections can often be found in a single votive, and some communities feature quite prominently. Even the most basic summary of the locations attested in these votive descriptions, as provided in the graph in Figure 2, quickly shows how certain locations, such as Crete or Egypt, were remembered as being especially well-connected to Lindos.

The global context of these votives has been noted by many scholars. For instance, Malkin mentions the Chronicle several times in *A Small Greek World* as a prime example of ancient networks.⁶ When reading the Chronicle, its appeal to network theorists is obvious: it lays out a clear conceptual package of Lindos' place in a larger Mediterranean world, confined within a single narrative text, with no need to piece together evidence from multiple independent sites to discern that the sanctuary was part of a network. But in some ways the obvious global character of the text has allowed scholarship to largely relegate explanations of that global character to a natural outgrowth of Rhodes' position as a major mercantile hub, and to date no one has fully developed the network and set the results in context.

In this article, I rectify this gap in scholarship and discussion of the Lindian Chronicle by fully diagramming the network evoked therein. As the network described by the inscription is, as mentioned, a self-contained narrative, several methodological challenges must first be addressed as to how to adapt a thor-

4 For prominent examples of which, see Dillery 2005 or Shaya 2005; and much of Higbie 2003's analysis and commentary is rooted in this theoretical lens. Notably, in his rallying cry to the importance of memory in the study of ancient Greece, Simon Price holds the Lindian Chronicle up as the best possible example for how objects can construct memory (2012, pp. 16–20).

5 A connection explored by Ampolo 2014, with special attention to the inscription's emphasis on connections to Sicily, though he fails to expand on why that particular aspect would be emphasized in local memory-making at that particular time.

6 Malkin 2011, esp. pp. 72 & 74.

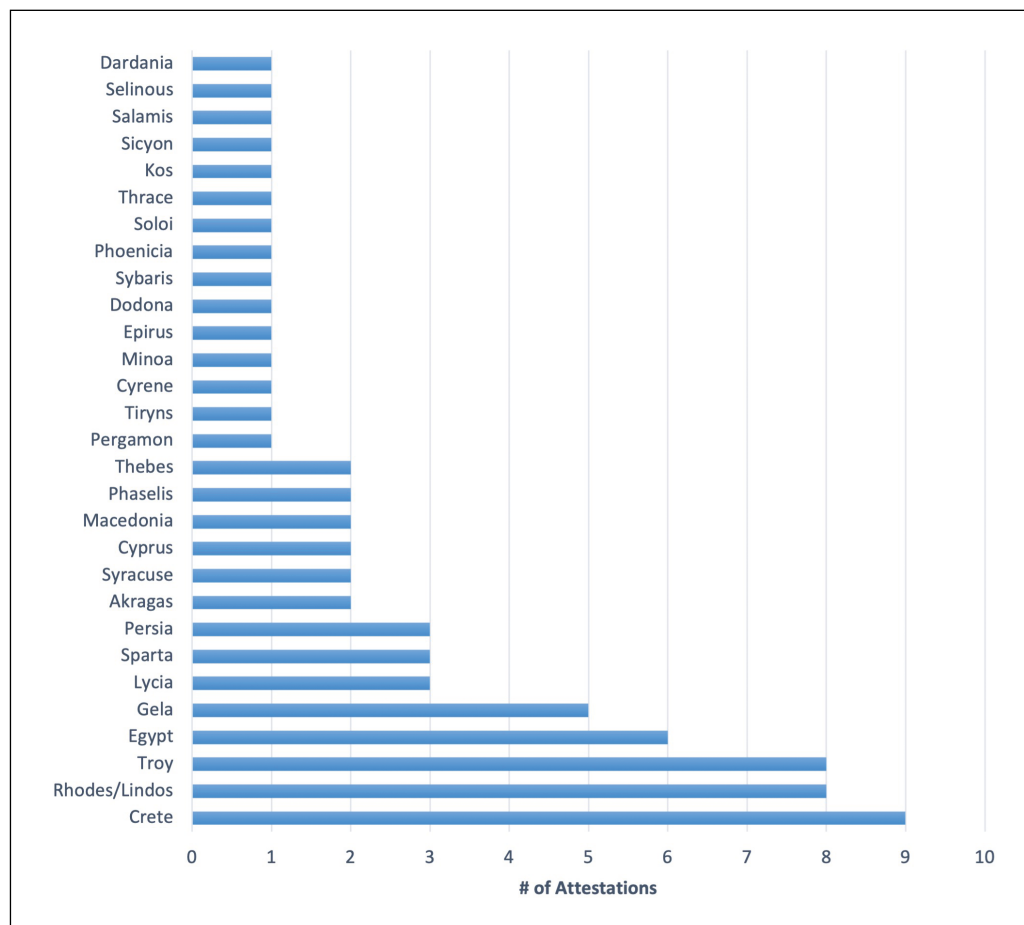


Fig. 2 A graph summarizing the number of times each community is attested in the Lindian Chronicle's description of votives.

oughly quantifiable tool such as social network analysis to the qualitative reading of a self-contained textual narrative. As will be shown, however, slight adjustments to our social network tools not only can overcome these challenges, but in fact allow for a more descriptive and informative graphical representation of the Lindian Chronicle's foreign connections. After diagramming the network, I will place it in its historical context, a task which raises its own interpretative challenges, as this discrete, self-contained network was artificially designed by the priests who assembled the document in 100 BCE. It is, as my title suggests, "imagined" rather than real, and this changes the types of questions we can and should ask of it.⁷ But by placing the imagined network visualized through the

7 Ampolo (2008, pp. 298–99) tantalizingly raises the question of how many of these votives and the global connections they invoked were real or imagined – "in un quadro in-

diagramming of the text alongside what we know of historical Rhodian connections abroad, we are able to better understand what motivated the authors of the *Lindian Chronicle*, and bridge the gap between the local production of the text and the global implications of its narrative.

Methodology

Most traditional deployments of network analysis tend to rest upon an underlying binary framework: is there a link between point A and point B, yes or no? Is there more than one link? With many data sets, this can be a relatively straightforward process: is there a pottery sherd located at this site, yes or no? How many? Or, is there a letter from X to Y? Is there more than one?

This binary assumption becomes a bit more entangled when social network analysts seek to combine different types of evidence, or evidence that requires a strong degree of subjective evaluation. Textual evidence can be especially difficult, as historical or literary interpretation of a narrative can greatly affect the evaluation of whether or how the evidence attests to actual connections. When applying network analysis to the *Lindian Chronicle*, this problem is magnified by the fact that all of the evidence for this robust network comes from a single, self-contained textual narrative – therefore, subjective judgments of how to interpret that narrative can strongly alter the final product.

At first glance, this complication in applying network analysis might seem to counter some of the generally accepted advantages of the approach. Indeed, in his concluding assessment of a collected volume of network theory informed studies, Davies singles out for praise the tendency for such studies to utilize collections of less fulsome and well-known inscriptions, the type where “each...signifies little if viewed on its own...but...the information they convey symphonically is infinitely greater than the single note.”⁸ The *Lindian Chronicle*, fulsome though it is, remains but a single note uttered at one particular moment in the historical record, at one particular place, by one particular set of actors. Yet, to quote, as Davies does farther on in his assessment, from an introductory handbook on the matter: “social network analysis is an orientation towards the social world that inheres in a particular set of *methods*.”⁹ Methodology is the key to any network-driven ap-

ternazionale molto vasto e mettere direttamente in relazione dati locali (reali o inventati che fossero)” – before largely setting the question aside to trace how the historical tradition of Rhodian colonization in Sicily gave a “real” grounding to the claimed local memory of such connections.

8 Davies 2015, p. 245.

9 Scott 2000, p. 37, quoted in Davies 2015, p. 246.

proach to ancient evidence. Applying network analysis to a single narrative inscription such as the Lindian Chronicle requires some inventive methodological solutions, but – as I will show below – alongside these challenges are opportunities, and the adaptive methodology necessitated by the nature of the Chronicle helps to open up new ways to understand this already much-discussed inscription. And, to echo Davies one final time, “the core judgement has to be whether it gives us a valuable extra tool for understanding the dynamics of ancient cultures.”¹⁰

These cautionary notes are not to say that all of the Chronicle’s remembered votives and the links they describe will require tricky subjective assessment and sorting. For instance, Votive XXVI offers a fairly straightforward description of a link:

Ἀμφίνομος καὶ τοὶ νιοὶ Βοῦν ξυλίναν καὶ μόσ-
χον, ἐφ’ ὧν ἐπεγέγραπτο· “Ἀμφίνομος καὶ παῖδες
ἀπ’ εὐρυχόρου Συβάρειος ναὸς σωθείσας τάνδ’ ἀ-
νέθεν δεκάταν”, ὡς ἱστορεᾷ Γόργων ἐν ταῖς Β
τᾶν περὶ Ῥόδου, Ξεναγόρας ἐν ταῖς Α τᾶς χρονι-
κᾶς συντάξις.

Amphinomos and his sons, a wooden cow and calf,
Upon which was inscribed “Amphinomos and his children
From broad-landed Sybaris, with a ship having been saved,
Dedicated this tenth,” as Gorgon recorded in the second book
Of *About Rhodes*, Xenagoras in the first book of *Annalistic
Account*.¹¹

The remembered dedication at Lindos was made by a man and his children from Sybaris, thus providing a standard link between the two communities.

Not all the offerings are quite so simple, however, as the descriptions of the votives often go into more detail. For instance, in Votive III, the description of the votive object adds another location to our mix than simply where the dedicant was from:

Κάδμος λέβητα χά[λ]κεον φοινικικοῖς γράμμα-
σι ἐπιγεγραμμένον, ὡς ἱστορεῖ Πολύζα-
λος ἐν ταῖς Δ τᾶν ἱστοριᾶν.

10 Davies 2015, pp. 246–47.

11 Section C, ll. 15–20.

Kadmos, a bronze *lebes*, with Phoenician letters
 Inscribed, as Polykalos records in
 The fourth book of his *Investigations*.¹²

The dedicant, Kadmos, was the mythological founder of the city of Thebes, which creates an obvious link between the city he founded and Lindos, where he made this offering. But slightly more information is present here. This *lebes* was inscribed, we are told, with Phoenician letters. It is not being dedicated by the Phoenicians, and so they are not such active agents in the forging of this connection as Kadmos is – but they still have a presence in the inscription. The location had been evoked, albeit not with the same level of active, conscious construction of a link to the sanctuary of Lindos as represented by Kadmos or any other foreign agents of votive dedications. To allow for the difference between a dedicant such as Kadmos here in Votive III versus a mere reference in the description, I added a classification system that identified links such as that between Kadmos/Thebes and Rhodes/Lindos as “strong links.” By comparison, I classify as “weak links” those such as the reference to the Phoenicians, where communities are mentioned without being assigned agency in the construction of an active relationship to Lindos.

That said, a careful and attentive reader might have found some Phoenician presence in this votive even if the Phoenician letters inscribed on the *lebes* were

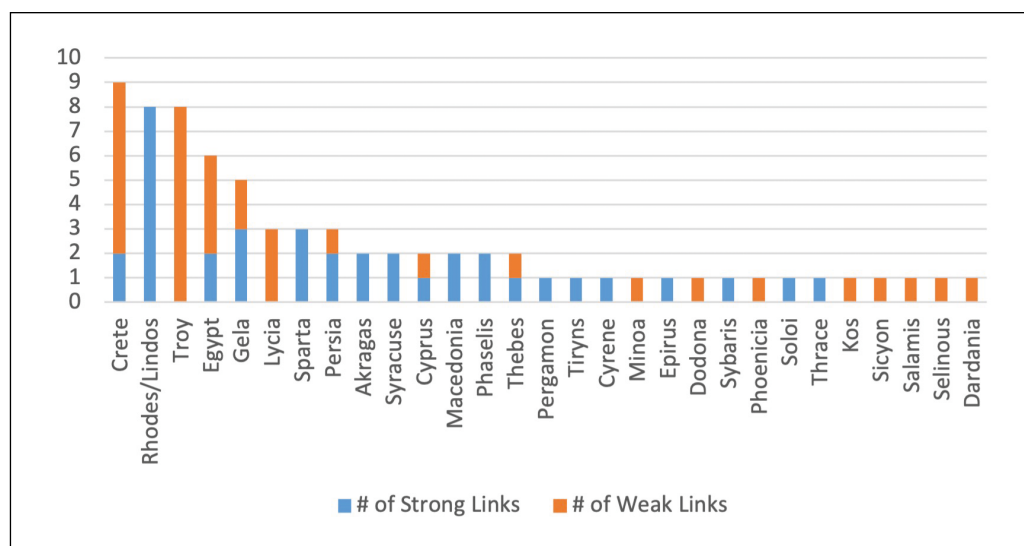


Fig. 3 Graph of the links attested by the votive descriptions of the Lindian Chronicle, color coded to indicate the number of weak and strong links.

12 Section B, ll. 15–17.

Location	# of Strong Links	# of Weak Links	Total Links
Crete	2	7	9
Rhodes/Lindos	8	–	8
Troy	–	8	8
Egypt	2	4	6
Gela	3	2	5
Lycia	–	3	3
Sparta	3	–	3
Persia	2	1	3
Akragas	2	–	2
Syracuse	2	–	2
Cyprus	1	1	2
Macedonia	2	–	2
Phaselis	2	–	2
Thebes	1	1	2
Pergamon	1	–	1
Tiryns	1	–	1
Cyrene	1	–	1
Minoa	–	1	1
Epirus	1	–	1
Dodona	–	1	1
Sybaris	1	–	1
Phoenicia	–	1	1
Soloi	1	–	1
Thrace	1	–	1
Kos	–	1	1
Sicyon	–	1	1
Salamis	–	1	1
Selinous	–	1	1
Dardania	–	1	1

Tab. 1 The number of weak and strong links associated with each attested community by the description of votives in the Lindian Chronicle.

not mentioned. Kadmos, though best known as the founder of Thebes, himself hailed from Tyre, in Phoenicia. A learned observer of the Chronicle would know this, and be able to situate Kadmos' dedication at Lindos as resulting from a stop-over on his path from Phoenicia to Thebes as he searched for his sister Europa. So, even if Phoenicia was not explicitly mentioned in this description, would it not still have a presence in the network?

Such interpretative questions frequently occur when reading a narrative text such as the Lindian Chronicle – especially given its production in a Hellenistic literary climate obsessed with obscure literary or mythological references. True objectivity was impossible in determining how many links were present in any given votive description: inference and subjectivity were a requisite part of the construction of the Lindian Chronicle's networks, and necessitated a series of assumptions about whether such references would be perceived by ancient audiences.

My solution to this methodological challenge was to confront it directly by centering my presentation of the network around the recognition of such subjectivity. I did this by introducing an additional subcategorization to the types of links found in the Lindian Chronicle. In addition to the classification of a link as either strong or weak, as seen in my example of Votive III, a link can be further subclassified as either explicit or implicit.¹³

To demonstrate this, I offer one last walkthrough of an example, this time for Votive XXX:

['Ακρα]γαντίνοι [Παλ]λάδιον, οὗ ἦν τὰ ἀκρωτήρ[ι]α ἐλε[φ]άν-
[τινα, ἐφ' οὗ ἐπεγέ]γραπτο· “'Ακραγαντ[ι]νοι τᾶ[ι] 'Α[θά]ναι
[τᾶι Λινδίαι ἀκρο]θίνιον ἐκ Μινώιας”, ὡς ἀποφαίνε-
[ται Ξεναγόρας ἐν] τᾶι Α τᾶς χρονικᾶς συντάξις.

-
- 13 Here, a useful comparison might be made to Eidinow 2015, who uses the term “conceptual network” (p. 58) to describe the more abstract and expansive notions of *asebeia* which Athenian orators would seek to invoke in a jury from a starting point of the more technical and legalistic definitions of *asebeia*. Though a useful theoretical comparison, it also highlights one of the advantages of adapting a special methodology for the network analysis of a single text such as the Lindian Chronicle. In his assessment of her contribution, Davies (2015, p. 253) questions to what degree such a conceptual network can be rooted in any actualized, intersubjective network “rather than being the mental assemblage of a single person.” The baseline assumption of my approach to the Chronicle is that it is precisely such a singular mental assemblage, one that may vary from reader to reader. The proposed solution of implicit/explicit links, then, allows us to assess how much of that conceptual network is subject to that variability, but it is a solution that would be all but impossible to map on to the multiple different types of evidence, narrative and otherwise, from which Eidinow infers her conceptual networks.

Akragantines, a Palladium, of which the ends were ivory
 Upon which had been inscribed: “The Akragantines to Athena
 Lindia, spoils from the Minoans,” as
 Xenagoras wrote in the first book of his *Annalistic Account*.¹⁴

Here, we see citizens of the Sicilian city of Akragas dedicated spoils from a war against the Sicilian city of Minoa to the sanctuary at Lindos. This provides an explicit strong link from Akragas (as dedicant) and Lindos (as recipient), and an explicit weak link from Akragas to Minoa – the former’s connection to the latter having been expressly stated in the description. A knowledgeable reader might be able to infer more when reading this text, however: they might recall that Gela – mentioned elsewhere in the Chronicle – is the mother-city of Akragas, or that Selinous is the mother-city of Minoa, thus providing implicit weak links between these cities and their colonies. Or, a reader might know of the mythical history of Minoa that links it to King Minos, providing an implicit weak link from Minoa to Crete. Thus, this one votive provides one explicit strong link, one explicit weak link, and three implicit weak links.

These four possible categorizations of discernible links to foreign communities in the Lindian Chronicle do not undo the subjectivity inherent in interpreting this narrative text, but they do make the degree of subjectivity within each claimed link immediately recognizable. Using these categories, I examined each votive description in the inscription in order to determine how many and what type of links were attested by each votive. This assessment of attested links, and their types, is summarized in Table 2, below. Yet, one of the greatest values of network analysis is to graphically present information about connections. Thus, translating the four possible categories of links into an actual network diagram was the next challenge.

When performing network analysis, one possible method of accounting for differences in the types of links – whether those differences stem from the evidentiary source or the character of the link itself – is to give a different weight to each type of link. By assigning varying values to each category of links, the resultant edges in the network diagram will be weighted according to the degree of strength ascribed to each type of link that constitutes a given edge.¹⁵

14 Section C, ll. 56–59.

15 For an application of such a solution, and a discussion of its merits, see Blakely 2016, esp. 31–33.

Votive #	Dedicated By	Strong Link	Weak Link
I	Lindos	Rhodes/Lindos	
II	Telchines	Rhodes/Lindos	<i>Crete, Cyprus</i>
III	Kadmos	Thebes	Phoenicia
IV	Minos	<i>Crete</i>	
V	Herakles		Kos, Troy
VI	Tlapolemos	<i>Tiryns</i>	
VII	Rhesos	<i>Thrace</i>	<i>Troy</i>
VIII	Telephos	<i>Pergamon</i>	<i>Lycia, Troy</i>
IX	Men who Marched with Telephos		Troy
X	Menelaos	<i>Sparta</i>	<i>Troy, Egypt</i>
XI	Helen	<i>Sparta</i>	<i>Troy, Egypt</i>
XII	Kanopos	<i>Sparta</i>	<i>Troy, Egypt</i>
XIII	Meriones	<i>Crete</i>	Troy
XIV	Teucer	<i>Cyprus</i>	<i>Troy, Salamis</i>
XV	Three Phylai	Rhodes/Lindos	
XVI	Aretakritos and sons		<i>Sicyon, Thebes, Crete</i>
XVII	Lindians colonizing Cyrene	Cyrene	
XXIII	Those Serving Under Kleoboulos	Rhodes/Lindos	Lycia
XXIV	Phaselitai	Phaselis	<i>Lycia</i>
XXV	Geloians	Gela	<i>Ariaiton (?), Crete</i>
XXVI	Amphinomos and sons	Sybaris	
XXVII	Phalaris	Akragas	<i>Gela, Crete</i>
XXVIII	Deinomenes	Gela, Syracuse	
XXIX	Amasis	Egypt	
XXX	Akragantines	Akragas	<i>Minoa, Gela, Crete, Selinous</i>
XXXI	Uncle of Hippokrates	Gela	<i>Crete</i>
XXXII	Persian General	Persia	
XXXIII	Soloians	Soloia	
XXXIV	Lindians	Rhodes/Lindos	Crete
XXXV	Demos	Rhodes/Lindos, Persia	
XXXVI	Lindians	Rhodes/Lindos	Egypt

Votive #	Dedicated By	Strong Link	Weak Link
XXXVII	Demos	Egypt	
XXXVIII	Alexander	Macedonia	Persia
XXXIX	Ptolemy	Egypt	
XL	Pyrrhos	Epirus	Dodona
XLI	Hieron	Syracuse	
XLII	Philip V	Macedonia	Dardania

Tab. 2 The links attested by each votive description, with implicit links denoted by italics.

While such a solution has merit in certain circumstances, I felt it was inappropriate for the Lindian Chronicle network and the categories of links developed herein. Although the weighted edges would account for the differences in the character of each link, the diagram itself would obfuscate what those differences are and how they influence the network as a whole. Hypothetically, if I were to assign weights of four, three, two, and one, respectively, to explicit strong links, implicit strong links, explicit weak links, and implicit weak links, then the edge between Sparta and Lindos would have a weight of nine, one more than the weight of eight for the edge between Akragas and Lindos. Yet, the links between Lindos and Sparta, although categorized as strong, are all implicit, reliant upon the reader being able to infer the presence of Sparta. The two links to Akragas are both strong and explicit, the city of Akragas openly named in the text. Simply weighting the edges would allow for a similar position of the two cities in the visual presentation of the Lindian Chronicle when, in fact, it is clear that the two communities held different roles within that narrative. Any system of assigning degrees of value to the link categories would open up similar such erasures.

It was important, therefore, to devise a system wherein the different natures of the links were discernible just by looking at the graphic realization of the network diagram. Accordingly, I kept the weight of each category the same, and instead encoded two layers of graphic signals into the network diagram. First, the strength of links was signaled by the type of line used for each edge, with solid lines representing strong links, dotted lines weak links, and dashed lines a combination of the two. Second, the edges were color-coded according to whether or not the underlying links were implicit (purple), explicit (blue), or a combination thereof (red). Admittedly, the choice to visually depict these categories, rather than to ascribe them a numerical value in the weight of the edges, precludes some of the statistical analysis that is so often a useful feature of network analysis. In light of the fact that any such numbers would have been generated from a single piece of subjectively interpreted evidence, however, no confidence could be as-

cribed to any statistical analysis of the Lindian Chronicle's network, irrespective of the choices made in the valuation of the links. Thus, the value of a visual shortcut to the nature of the links that constitute the network's edges far outstrips the loss of any statistical calculations.

With the categories established, I used Excel to create a table of the various edges between communities to be found within the Lindian Chronicle. Importing this data into Visone, I then coded each edge according to the type(s) of links which constituted it. To provide some order to the abstract diagram and to further help the viewer identify patterns and anomalies, I arranged the nodes into rough geographic groupings. This geographic visualization is made explicit in Figure 5, where I used Visone to overlay the diagram on a Mercator map, having uploaded a secondary data spreadsheet with coordinates for each location – fixing a generalized spot for nodes that are representative of regions rather than specific cities. As an acknowledgement of Lindos' prominence in discussions of colonial networks, I also chose to visually key in nodes that are attested – either in the Chronicle itself or elsewhere – as colonies of Lindos.¹⁶

The resultant network diagram (Figure 4) of the Lindian Chronicle thus shows not only the path of connections between the nodes (the various ancient communities), but also provides a significant amount of information about how such paths are presented in the narrative of the Lindian Chronicle. For instance, the node representing Troy has a relatively high betweenness centrality, with many communities connected through the city; however, the graphic coding of those edges shows that all of the links to the city are weak, and many of those implicit. This informs the viewer that Troy itself does not feature directly in the Lindian Chronicle's narrative, instead lurking in the background of many other communities' expressed relationships to the sanctuary of Athena Lindia. A reader of the Chronicle would know that this is because of the famed city's mythological history, and how many other mythological figures touch upon Troy in some way – but even without reading the text, an observer of the network diagram would likely be able to infer the same conclusion due to the visual signals built into the network by the choice to visually code the categories of links. The choice to graphically present those categories, rather than giving a numerical valuation of them, thus not only clarifies where the network relied more upon my own subjective decisions about what links could be inferred, but also allows users to easily pick out patterns and anomalies in the network that are rooted in the underlying links and the character of the text itself.

16 As per Malkin 2011.

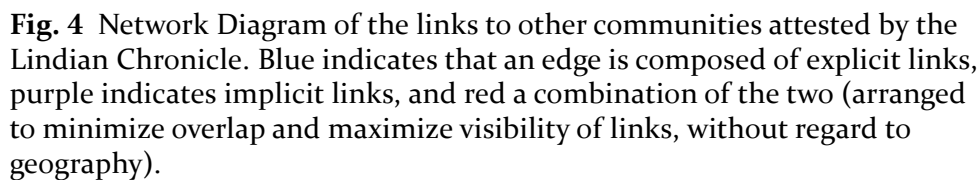
Results

Even when statistical analysis is unreliable, networks are immensely powerful tools by virtue of their graphic organization. Network diagrams allow us to conceptualize entire systems of information – in this case dozens of attested links that can be derived from an incredibly dense textual narrative – with a single glance. This allows anomalies and patterns to emerge from such jumbles of information much more easily. Admittedly, the conclusions we reach are often possible without network analysis, but network diagrams not only ease the path to such conclusions, but also make it easier to convey our findings to others who are not as immersed in the details of our data, and allow us and others to better stress test any hypotheses we might develop from a consideration of that data.

In the case of the network diagrams of the Lindian Chronicle, shown here in Figures 4 and 5, several key patterns and points of interest emerge from a visual study of the diagram, which prompt a closer examination of the data underpinning such visual standouts. First, the basic observation should be made that Rhodes/Lindos is the most connected node by a significant margin. This is an obvious reflection of the nature of the Lindian Chronicle: a narrative of a local sanctuary, produced by locals using largely local sources, will naturally center the local point of origin in the narrative of the text, and any visualization of the text – network or otherwise – will reflect this.¹⁷

After Rhodes/Lindos, however, the next three most connected nodes that stand out are Crete, Troy, and Egypt. Yet, each node's high degree of connectivity is unique. Troy's weak and implicit connectivity has already been explained above. In the case of Crete, the geographic mapping of the diagram helps to elicit at-a-glance at least some of the explanation for its centrality: links from Rhodes

17 At first glance, this may seem to be another drawback of applying network analysis to the Chronicle – a negation of another of the generally accepted advantages of network analysis. In the introduction to her study of Roman religious networks, Collar (2013, p. 3) lists as her second reason for applying network analysis to religious data that “there is no assumption of centre. Centres and peripheries arise from interactions on the network, not from judgement made by archaeologists and historians.” Here, Lindos and Rhodes are, of course, the assumed center – every facet of the Chronicle is only included because of its relevant connection to the sanctuary. Yet, importantly, it is not we as archaeologists or historians who are making that assumption. Instead, we are merely recognizing the assumptions of the ancient generators of this religious data. In this way, we sidestep one of Collar's later expressed fears that networks may accidentally include active manipulation of the religious network on the part of those ancient agents who generated the utilized data (p. 37). In the study of the Lindian Chronicle, we are able to take that active manipulation, and its centering of Rhodes, as the starting point for analysis. Rather than hoping for objectivity and fearing bias, we are able to embrace that bias and objectively assess its cause.



The third best connected foreign node in the network, Egypt, stands out. Note that the edge to Egypt is formed by a combination of strong and weak, explicit and implicit links. However, unlike other heavily connected nodes like Crete or Troy, Egypt is grounded in the network by a single edge, all of its links connected directly to Lindos. This means that Egypt has the heaviest and most diverse ties directly to the sanctuary. From this, it should be clear that any interpretation of the Lindian Chronicle must address the evident importance of Egypt to the global character of the inscription's narrative.

eISSN: 2535-8863
DOI: 10.25517/jhnr.v7i1.103

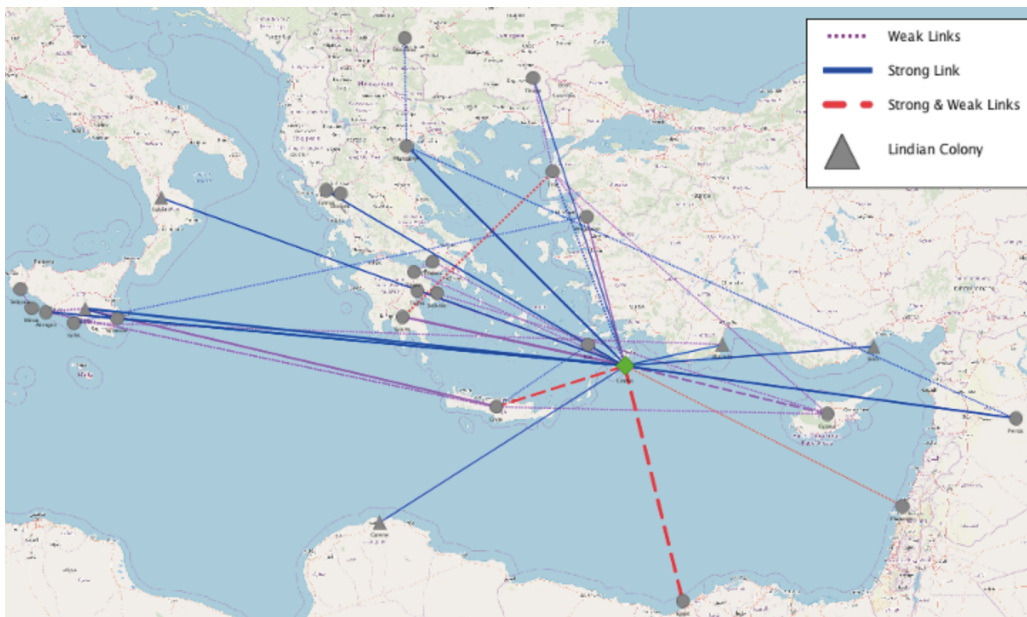


Fig. 5 Network Diagram of the links to other communities attested by the Lindian Chronicle, overlaid on a geographic map. Blue indicates that an edge is composed of explicit links, purple indicates implicit links, and red a combination of the two.

Graecia.¹⁸ When grouped together, the various communities of the region represent twelve links in total, the majority of which are both strong and explicit. Indeed, taken as a whole, these links to the region help give a fairly clear east-west axis to the appearance of the Lindian Chronicle's diagram, with the exception of Egypt to the south. Although it is certainly possible to discern such relationships simply from reading the text, the diagram allows such patterns to emerge even without a detailed understanding of the lengthy inscription.

Discussion: Networks Real and Imagined

Having identified some of the patterns and points-of-interest in the network evoked by the Lindian Chronicle, it is time to recall that this network is evoked. As a single and lengthy narrative text, rather than an amalgamation of disparate bodies of evidence, the Lindian Chronicle presents a neat and discrete network. But this network does not necessarily reflect reality. Instead, it reflects connec-

18 A prominence explored by Ampolo, although his focus on votives dedicated in the "historical period" leads him to include fewer possible connections than I do here (Ampolo 2014, pp. 310–311)

tions that the chroniclers wished to demonstrate. And so, for this network, the “what” is only half the question. Having established what network the Chronicle evokes, the next question becomes: why this network, and why now?

To determine why the Rhodians would evoke this particular network in 100 BCE, we must first consider what a more factually-based network would look like for the Rhodians in the 2nd century BCE. As Rhodes was the preeminent mercantile hub of the Eastern Mediterranean, the answer to this must lie in trade.

Polybius tells us in no uncertain terms that the success of Rhodes was built on its advantageous position and mercantile endeavors:

ὥσθ' ὅταν μὲν τις εἰς τὸν χρόνον ἐμβλέψῃ καὶ τὴν ἀρχήν, ἀφ' οὗ συμβαίνει τὴν πόλιν αὐτῶν συνωκίσθαι, καὶ λίαν θαυμάζειν ὡς βραχεῖ χρόνῳ μεγάλην ἐπίδοσιν εἴληφε περὶ τε τοὺς κατ' ἰδίαν βίους καὶ τὰ κοινὰ τῆς πόλεως: ὅταν δ' εἰς τὴν εὐκαιρίαν τοῦ τόπου καὶ τὴν ἔξωθεν ἐπιφορὰν καὶ συμπλήρωσιν τῆς εὐδαιμονίας, μηκέτι θαυμάζειν, μικροῦ δ' ἐλλείπειν δοκεῖν τοῦ καθήκοντος.

So that when one looks at the date of the foundation of their city [e.g. Rhodes] and its beginnings one is very much surprised at the rapid increase of public and private wealth which has taken place in so short a time; but when one considers its advantageous position and the large influx from abroad of all required to supplement its own resources, one is no longer surprised, but thinks that the wealth of Rhodes falls short rather of what it should be.¹⁹

Polybius' observation that Rhodian wealth actually falls short of what it should be is worth highlighting, given the customary belief that Rhodian trade was greatly damaged after 167 BCE, when Delos was made a free port and when Polybius was writing. But I will return to this in a moment. Although this description strongly connects Rhodes' local success to its global network, it does not reveal the exact shape of the Rhodian trade network.

For much of the Hellenistic period, the Rhodians enjoyed their position as the hub of three major trade routes (Figure 6).²⁰ The first, and presumably the oldest, ran from the east, from Syria, Phoenicia, and Cyprus, to Rhodes.²¹ This route seems to have mostly carried luxury goods, first to Rhodes, then around the Aegean and to the West, or even south to Alexandria.²² The second ran from the north, and the Black Sea region, down through the Hellespont and to Rhodes,

19 Plb. 5.90.3–4. Trans. Paton.

20 For a more detailed discussion of these trade routes, see Gabrielsen 1997, 64–84.

21 Evidence of substantial contact with the east dates back to the archaic period, see Triantafyllidis 2008.

22 Rostovtzeff 1941, p. 228.

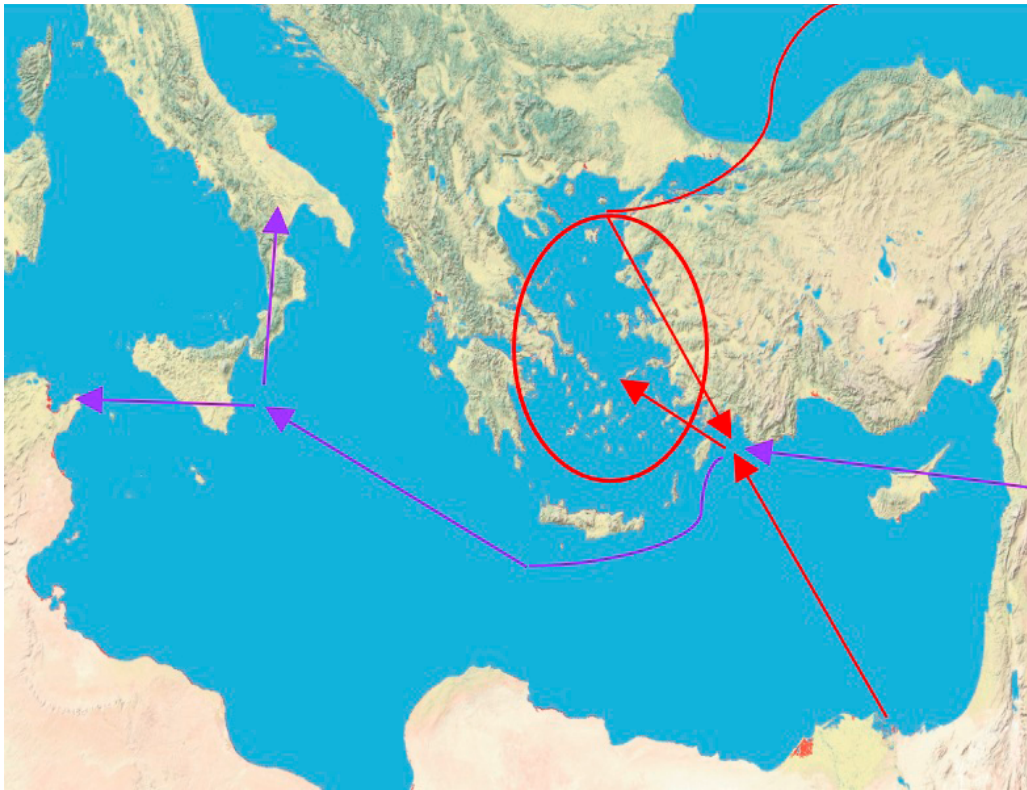


Fig. 6 Sketch of the trade routes that defined Rhodian trade for most of the Hellenistic period.

alternatively exporting grain in years of surplus or importing grain in times of crop failure. The final trade route, and the most important, ran to and from Alexandria, mostly carrying wine and olive oil to Egypt, and exporting grain from there to the north. Due to favorable climatic factors, this route was open year-round, allowing for multiple trips each year, greatly increasing profit.²³ Diodorus places Rhodes along this north-south route as an example of the interconnectivity of the Mediterranean world, telling us that from the Sea of Azov one could make Rhodes in ten days, and from Rhodes one could make Alexandria in four.²⁴

This all, of course, refers to the traditional Rhodian trade networks. A narrative still common in general histories runs that when Rome made Delos a free port in 167 BCE, Rhodes suffered economically as a result. But, in reality, this is

²³ Dem. 56. 3.

²⁴ Diod. 34.7.

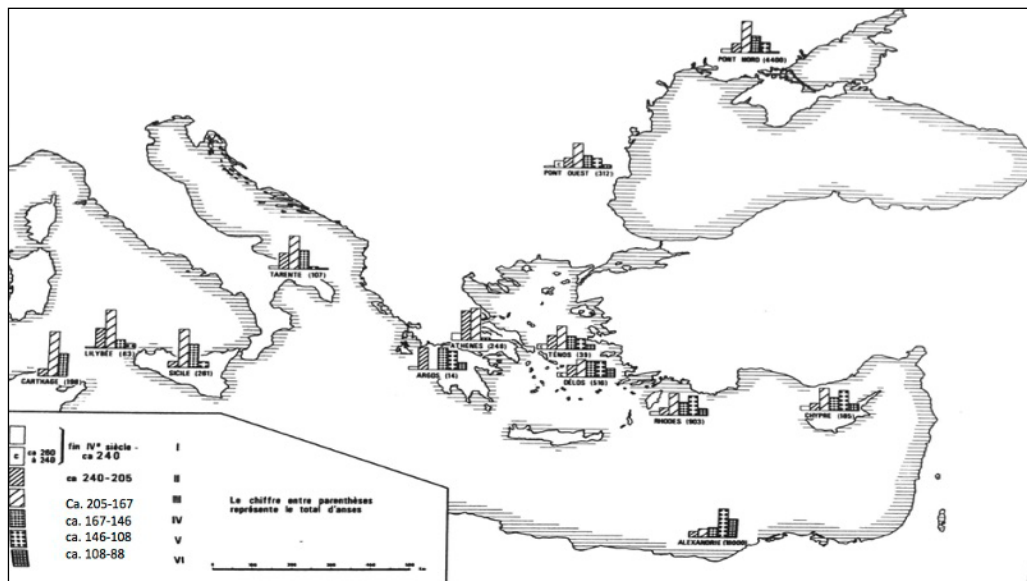


Fig. 7 Distribution of Rhodian Amphorae in the Mediterranean (after Étienne 1990, with an approximate adjustment of the dating to reflect the new chronology proposed by Lawall 2002)

only partially true. If we turn to archaeology, the distribution of Rhodian amphorae across the Mediterranean (figure 7) does not support a precipitous collapse of the Rhodian economy in 167.

This map shows the distribution of Rhodian transport amphorae across the Mediterranean. I should include the requisite caveat that amphorae data is an inexact measure of trade, and host to a number of potential pitfalls. But barring the sudden discovery of a trove of inscriptions or papyri detailing exports to and from Rhodes, transport amphorae remain our best means of approximating Rhodian trade. And while individual sites can be misleading, when we see a similar pattern across sites from all over the Mediterranean, as we do here, the data becomes more reliable.

And the pattern here shows that, with the exception of exports to Argos and Athens, the drop after 167 is fairly measured, and is actually higher than trade levels prior to a spike in exports that ended circa 180 BCE. It is after 146 BCE when we see truly dramatic drops in trade across the West, undoubtedly due to the razing of Carthage and Corinth, both important trading partners for Rhodes. But Rhodian trade in the east, along its north-south trading axis from Alexandria, up through the Aegean islands, and into the Black Sea, remained more stable. Thus, rather than a complete collapse of Rhodian trade, we seem to have a gradual decline and collapse of western trade, so that post-146, Rhodian trade was based along an almost entirely north-south trade axis.

It is not until the turn of the century that Rhodian trade seems to decline across the board, even with Alexandria. This is shown a little more clearly in the graphs in Figures 8a and 8b, which zoom in on the specific decline of Rhodian amphorae – relative to their previous prevalence – in Lindos itself and in Alexandria. These show that there is a precipitous drop in Rhodian trade around 100 BCE, at the exact time that the Lindian Chronicle is commissioned.

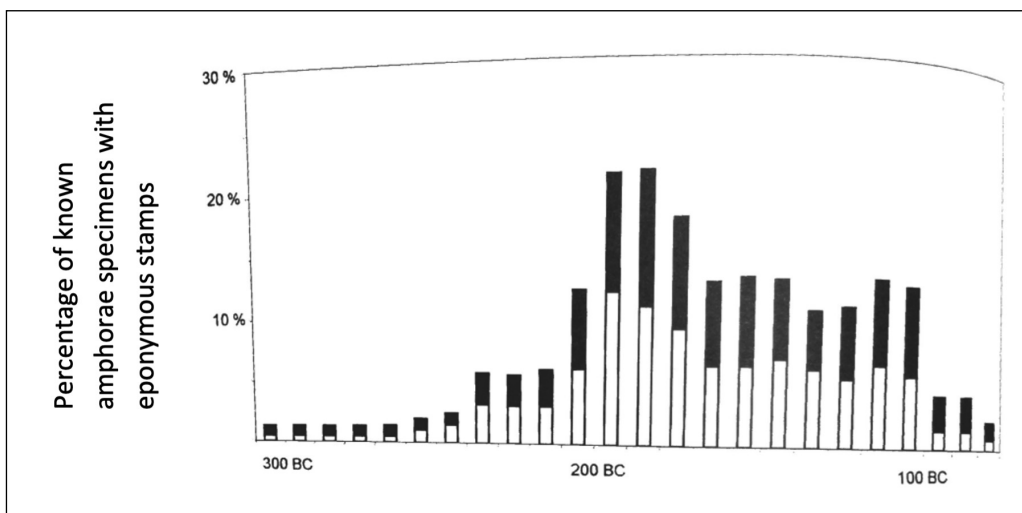


Fig. 8a Chronological distribution of Rhodian Amphorae stamps at Lindos. (After Lund 1999)

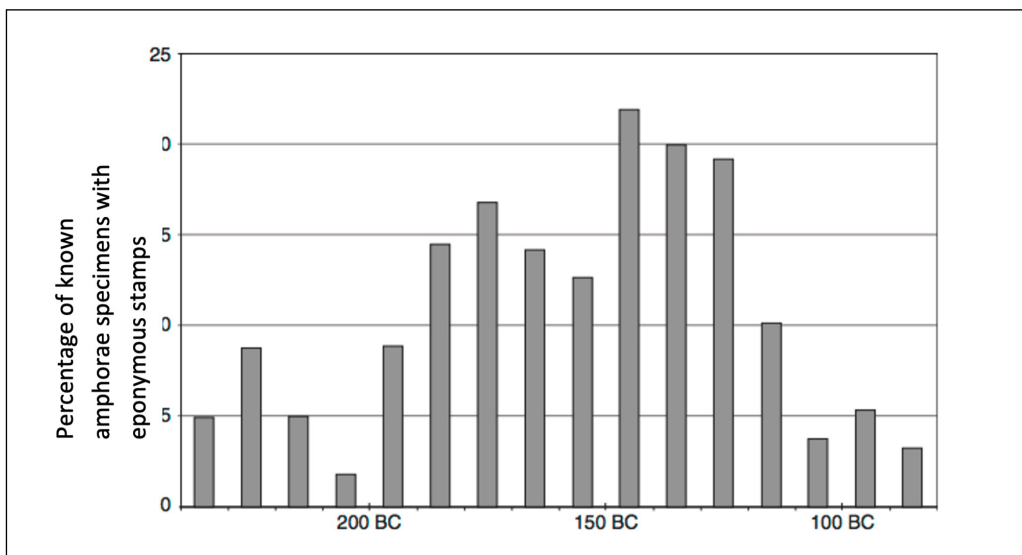


Fig. 8b Chronological distribution of Rhodian amphorae stamps at Alexandria. (After Lund 2011)

It is difficult to determine what the cause of this crisis may have been, and ultimately beyond the scope of this article.²⁵ Whatever the cause, it is clear that there was a crisis in 100 BCE, one that created a substantial decline in Rhodian trade that was approximately concurrent with the creation of the Lindian Chronicle. Thus, the Lindian Chronicle came about at a time when the north-south trade axis, which had sustained Rhodes since the collapse of its east-west axis half a century earlier, was itself collapsing. Surely, this timing is more than mere coincidence. At a time of great anxiety for the people of Lindos and of Rhodes, the Lindian Chronicle would have been an assurance of Rhodians' embeddedness in the connections that defined the Eastern Mediterranean, a promise that what once was could be again.

At first glance, it might seem unnecessary to connect the Lindian Chronicle specifically to a longed-for revival of east-west trade, or even to any specific crisis in Rhodes' global standing. Hypothetically, the fact that many of the links represented in the network here were not reflected in Lindos' contemporary, realized networks is merely a point in favor of the genuine historicity of the dedications, an outgrowth of genuine donations made by trading partners of the past.

Against this suggestion, though, we may lay another substantial anomaly in the imagined network of the Lindian Chronicle. In the historical networks of Rhodes, Corinth and Carthage were extremely important trading partners for the island.²⁶ Yet, neither appears in the Lindian Chronicle, through any type of link. Corinth's absence is particularly striking, as not only is it deeply connected to Rhodes' mercantile network, but also because there was, historically, a strong connection between the two locations' sacred networks. Scholars have often noted the strong similarities between dedicatory practices at the Sanctuary of Hera at Perachora, near Corinth, and the votive assemblages at the Sanctuary of Athena Lindia, from the Archaic period onward.²⁷ Consequently, Corinth's absence from the votive assemblage and sacred network remembered in the Lindian Chronicle demands explanation.

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- 25 Lund (2011) links this decline to damage to Rhodian wine production as a result of climatic factors. Although a possibility, positive evidence for this is scarce, and climatic fluctuations would have been an expected part of ancient agricultural life and connected trade, and thus unlikely to spur a deep-seated anxiety that the Lindian Chronicle seems to be addressing. It is, perhaps, also worth noting that this is also the exact same time when piracy reached a crescendo in the Eastern Mediterranean, prompting the naval triumph of Marcus Antonius. Similarly, Mithridates was beginning to maneuver around the Aegean in this period, which may also have had ripple effects for regional trade.
- 26 For the archaeological attestations of substantial trade between Rhodes and Carthage, see Lund 1993.
- 27 E.g. Kilian-Dirlmeier 1985, p 228; Baumbach 2004, p. 21, 23, 26, & 29; Verger 2011, p. 32.

Nothing presented here would counter Boardman's assertion that almost all of the objects included in the inscription were plausible dedications and need not have been invented.²⁸ Yet, this does not mean that all of the objects that could have been included were. Without any objects from Corinth or Carthage, the Lindian Chronicle seems to evoke a network that is neither true to its contemporary reality, nor wholly reflective of its historical reality. Instead, the Chronicle evokes an imagined network through the careful curation of which of its many candidates for remembrance were included in its catalogue. Price is correct to herald the inscription as a powerful exemplar of the ability of an object to generate a "memory network;" however, it is a network that includes telling gaps and skips in its memory.²⁹ This network is rooted, ultimately, in its historical past, as preserved in the bevy of local histories and texts that the Chronicle cites, and this is a past that is invariably defined by the island's long-standing global connections. But those historical roots have been specifically cultivated and shaped to highlight a historical past that could have contemporary meaning.³⁰

The network that this curated past evokes is one that not only reemphasizes its connections to Alexandria, but also to its previous trading partners in the West, particularly in Sicily. More bluntly, it emphasized connections that could potentially exist again. Following their destruction by Rome, Carthage and Corinth would not represent a potential resurrection of trade, regardless of how closely linked the two cities had previously been to Rhodes and Lindos. Therefore, in answer to our earlier question as to why this network at this time, the Lindian Chronicle appeared to evoke this particular network at this particular time in order to reassure its citizenry: Rhodes is deeply embedded in the Mediterranean world; its identity is inseparable from those global connections, but no less so are those global connections separable from Rhodes; although the situation is bleak now, the old networks will recover and keep Rhodes strong. Thus, the Lindian Chronicle represented the hope that the network it imagined would become reality, in order to counter the sudden decline of the island's actual trade network.

28 Boardman 2002, pp. 115–117.

29 Price 2012, pp. 17–18.

30 It would be putting too much weight on a single example of memory generation to evaluate to what degree this might be an example of the mnemonic "crowding" that Price discusses (2012, pp. 28–29, with reference to Carruthers 1998) as an expected – even necessary – part of a society forgetting aspects of its cultural memory. Yet, given that the destruction of Carthage and Corinth occurred well within the living memory of the writing of the Lindian Chronicle, it is difficult to believe that their absence was anything other than an active choice of exclusion on the part of the Chronicle's authors.

Conclusion

For too long, discussions of the Lindian Chronicle have either focused on its contributions to our understandings of local memory-making and historiography, or referenced its obvious global character without tracing the exact content of that character. Network analysis allows us to flesh out the global character of this remarkable narrative. The network diagrams that give shape to the many links attested by the votive descriptions remembered in the Chronicle reveal a number of features, patterns, and anomalies that are easy to overlook in a straightforward literary reading of the text. Patterns such as the east-west preference of the attested links, or anomalies such as the absence of Corinth and Carthage, push us to ask not just what the Lindian Chronicle was trying to evoke in its localized memories and how it was doing so, but also why it was doing so.

In answering these questions, with our networks as a guide, it is clear that the global reach of the Lindian Chronicle's narrative is, in fact, inseparable from the local context of its production. We cannot address one without the other. Connections across the Mediterranean define the Rhodian sense of self. And when the Rhodian standing within that Mediterranean interconnected context was threatened, the Lindian Chronicle turned to memories of the island's past to reassure its citizens of their global destiny. But it did not do so indiscriminately. The activation of the local memories and histories of the sanctuary were designed to evoke a network of interconnectedness that was rooted in the past, but not defined by it. It was a network imagined by contemporary concerns to express hope for the future by evoking – but not recreating – the past.

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