

**Travels on the wine-dark sea: trans-regional networks in the
Eastern Mediterranean during the Early Iron Age (c.1200 - 700
B.C.)**

by

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Abstract

The present work examines trans-regional networks of interaction in the Eastern Mediterranean during the Early Iron Age (c.1200 - 700 B.C.), concentrating on the Levantine coast and the islands of Cyprus and Euboea. Moving away from the traditional emphasis on pottery and imported goods, the study proposes an alternative approach for measuring connectivity that incorporates Social Network Theory. The context of interaction is established by taking into account the potential, means, and motivation for trans-regional contacts. Maritime infrastructure (including harbor facilities, nautical technology, and established codes of diplomatic conduct) is used as the main indicator for measuring connectivity due to its potential for providing a more encompassing picture both geographically and temporally.

Le présent ouvrage examine les réseaux de communication au niveau transrégional dans la Méditerranée orientale durant l'Âge du Fer ancien (1200- 700 av. J.C.), en se concentrant sur la côte du Levant et les îles de Chypre et de l'Eubée. S'éloignant de l'accent traditionnellement porté sur la poterie et les biens importés, l'étude propose une approche alternative pour mesurer la connectivité qui intègre la théorie des réseaux sociaux. Le contexte d'interaction est établi en prenant en compte le potentiel, les moyens et la motivation des contacts transrégionaux. L'infrastructure maritime (y compris les installations portuaires, le développement de la technologie marine, et les codes établis de conduite diplomatique) est utilisée comme principal indicateur pour mesurer la connectivité en raison de son potentiel de fournir une image plus complète à la fois géographiquement et temporellement.

Acknowledgments

The focus of the present work was inspired by a recent book by Robin Lane Fox titled *Travelling Heroes: Greeks and their Myths in the Epic Age of Homer*. This work gave me assurance that as an alternative to endless analysis of pottery sherds, one can repopulate a largely proto-historic period with its lively actors, their priorities, aspirations, and outlook on the world. I would like to extend my thanks and appreciation first and foremost to my supervisor Hans Beck, for bringing this book to my attention, and for his counsel, guidance and unwavering support for nearly five years during my university studies. Above all, I am indebted to him for encouraging me to think independently and for supporting me and my interests. I am also very grateful to Professor Michael Fronda for his critical and constructive feedback, which prompted me to develop a robust methodology and to tread carefully through the evidence. I would equally like to express special thanks to Professor Christoph Ulf, who most graciously agreed to meet with me during the summer of 2011 to discuss my thesis, and who organized a graduate seminar in Innsbruck where I was given the opportunity to share my work. I am truly grateful to all my colleagues, Tanio Tanev, Darren Hunter, Charles Pitman and Brahm Kleinman for their comments and for the editing of my work. Finally, I would like to acknowledge my parents, for their unconditional support in all of my undertakings and their unfailing belief in my abilities.

Prologue

In late 2010, a piracy trial began in Hamburg for the first time in more than four hundred years. Somalia's 4,800 kilometer coastline has become infamous as pirate territory: the area is currently “considered to be the most dangerous stretch of the Indian Ocean.”¹ The development has caused many to reconsider our present attitude towards piracy as a ‘thing of the past,’ a perception which has been prevalent for many centuries. Piracy has not only resurfaced in Somalia but evolved into a skilled and well-equipped force that has provided a major challenge to governments and international organizations.

The causes for this re-emergence are particularly informative. With no government institutions and endemic civil war, Somalia has been in a state of anarchy since the early 1990s. Its social disorganization has been characterized by power struggles between independent clans, which are in turn divided into “a dizzying number of subclans, sub-subclans and even sub-sub-subclans.”² As the Somali Navy ceased to exist as a fighting force, the country’s waters became unpatrolled, leading to an increase in illegal fishing by foreign fishing trawlers, while waste dumping by multinational companies further led to the erosion of the fish stock.³ For political scientist Mathias Weber, it was the resulting loss of livelihood for local communities, that lies at the roots of Somali piracy.⁴

Besides the obvious hindrance on international commerce, the Somali piracy is an interesting social phenomenon to say the least. On one side, there is the supportive attitude of the locals. A vast majority of Somali coastal communities perceive piracy as a form of national defense of their country’s territorial waters, while the perpetrators themselves claim to be protecting their

¹ Hahn 2011

² Gettleman 2007

³ Axe 2009 ; Maliti and Muhumed 2009

⁴ Knight 2011 ; Weber 2010

fishing grounds while exacting justice for stolen marine resources.⁵ Additionally, the tremendous influx of wealth has meant that the incentives continue to outweigh the risks. Living in a country of constant struggle and violence, the pirates have nothing to lose, while government bodies have yet to find a viable legal solution to address the issue.⁶

Ironically, pirate activity has been steadily on the rise despite increasing international counter-measures. What is more, a veritable industry of profiteers has arisen, such as insurance companies and defense contractors.⁷ Rather than limiting its activity due to the piratical raids, international commerce in the dangerous region has continued full force, all the while boosting the security contractors sector.

These effects serve to expose long-held assumptions about the economic effects of piracy. Far from halting or deterring the redistributive process, Somali piratical activity has in fact revitalized it. Resources have been redirected to a number of actors previously excluded from the distributive chain. Chaotic and unregulated in nature, it nevertheless benefits various social strata both in Somalia and abroad, with a number of different actors partaking in the raiding, ranging from ex-fishermen to ex-militia.⁸ All in all, the Somali pirate phenomenon is a brilliant case of a creative adaptive response to adversity and socio-political breakdown, but what could it possibly have in common with the Eastern Mediterranean of the Early Iron Age?

I propose to use it as a thought experiment, and compare the Somali pirates to the equally famous ‘sea-peoples,’ which allegedly plagued the Eastern Mediterranean some three thousand years earlier. Like the Somali case, the end of the Bronze Age in the Eastern Mediterranean basin has been defined by historians as a period involving wide-scale political collapse. The crumbling of palace societies and empires left a widespread power vacuum. With the centralized infrastructure gone, so was the confidence in the previous authorities. Similarly to

⁵ Gettleman 2008

⁶ Knight 2011

⁷ Shortland 2011

⁸ Hunter 2008

Mogadishu, Somalia's once beautiful capital by the sea now reduced to "a pile of bullet-pocked bricks," Bronze Age palaces were burned to the ground.⁹ As in Somalia, the situation was exacerbated by natural disasters such as drought and earthquakes. And like the Somali pirates, the sea-peoples conveniently provide an umbrella term for a plethora of actors from various backgrounds, sharing in common a seizure of opportunity – profit and new possibilities made possible by the disintegration of the previous order.

Often their previously acquired skills could be put to use in their new occupation. Somali fishermen had vessels and practical knowledge of the sea just like Bronze Age small-scale merchantmen and their crews must have had. Somali soldiers from the dissolved militia provided the necessary military skill and tactics, not unlike the *basileis* and their private retinues of the kind that gathered before Troy in the *Iliad*. In a similar manner of the Somali pirates, Odysseus "raider of cities" takes pride in his marauding ventures, which earns him status and respect within his community. The influx of wealth from the endeavours in both case studies was invested in tangible symbols of power and newfound prosperity. On the Somali coast, "tin shacks and mopeds [...] have been replaced by villas and SUVs."¹⁰ Likewise, in the 12th century B.C. both on Cyprus and on the Levantine coast, new monumental architecture and expanding settlements rise in the midst of chaos and disintegration.¹¹ Instead of cars, the personal items of prestige of that period, including weapons and feasting ware, are displayed in some of the richest burials of the period.¹²

We have, then, two cases vastly separated through time yet similarly defined by socio-political collapse and instability, which provided an opportunity niche for a new set of actors who make the best out of the power vacuum and confusion. These opportunists are naturally blamed for causing great havoc and disruption, be it by the United Nations or an Egyptian pharaoh. The great Karnak inscription relating Merneptah's campaigns against the sea-peoples is not unlike

⁹ Gettleman 2007

¹⁰ Knight 2011

¹¹ Webb 1999: 288 ; Bauer 1998

¹² For specific burials, see Muhly 2003: 23

the reports from the international courts dealing with the Somali pirates: it presents an official version, one side of the story for and by the centralized powers whose carefully regulated authority is threatened. One may approach the question however from another angle, one where pirates operate in symbiosis with trans-regional redistributive networks, both symptoms and adaptive actors within profoundly altered socio-political conditions. The present work examines the Early Iron Age with such an approach in mind, exploring the vitality and creativity of a period traditionally presented as barren in terms of cultural achievement.

Introduction

Given the current interest in the social sciences in general on the effects of globalization, it is not surprising that cultural contact and exchange have become major topics of interest within ancient history and Mediterranean archaeology in the past twenty years, with several studies emphasizing the benefit of examining the ancient Mediterranean both cross-temporally and cross-regionally.¹³ The historical transition between the Bronze Age and the ensuing Early Iron Age period (henceforth EIA) of the Eastern Mediterranean has been under a major process of revision in the past decade in the field of Classics. An increasing number of scholars have challenged the notion that this period was defined by collapse, introversion and poor cultural achievement.¹⁴ The evidence from Lefkandi has illustrated how a single site can initiate a shockwave forcing the reassessment of an entire period, particularly one where the current research is largely built on *argumentum e silentio*. As with any well-established idea, the concept within Classics of a “Dark Age” is far from discarded, although no longer the sole narrative.¹⁵ One of the ways in which the period’s achievement has been measured is in terms of trans-regional connectivity, or the lack thereof. Traditionally, scholarship on the EIA Eastern Mediterranean has denied any significant supra-local interaction during this period of supposed decline and abatement.¹⁶ Part of the problem of this standpoint stems from a primary focus on high commerce, and the privileging of trade routes and high bulk resources by which it is defined. However, the largest portion of resource redistribution in the

¹³ Karageorghis and Stampolidis 1998; Bonfante and Karageorghis 2001; Stampolidis and Karageorghis 2003 ; Deger-Jalkotzy and Lemos 2006

¹⁴ Papadopoulos 1993; 1996; Niemeyer 2000; Lemos 2001:218; 2002; Muhly 2003: 23; Sherratt 2003: 37; Nijboer 2008: 365; Smith 2009: 3

¹⁵ Desborough 1972 ; Tandy 1997 ; Coldstream 1998 ; Boardman 1999 ; Snodgrass 2000; Morris and Powell 2006 : 72-92. For succinct summaries on the notion of Dark Age, see Whitley 1991: 5-8; 2001:55–7 and Dickinson 2006

¹⁶ for instance Tandy 1997: 59

ancient world was conducted on a much smaller, local scale: “little and often usually outweighs big and rare.”¹⁷

Another difficulty is that Archaic Greek trade continues to be defined by two contrasting perspectives. Summing up three decades of work by substantivist-minded ancient historians such as Finley and de Ste. Croix, Cartledge argued that the Archaic society was overwhelmingly agrarian, with the ruling class drawing its wealth and prestige from landowning. This model criticized the projection of modern understanding of market relations on a world of low commercial and manufacturing activity.¹⁸ There has been however another trend in scholarship, one that stresses the importance of commerce for the shaping of the Archaic period and the direct implication of ruling elites in trade.¹⁹ This standpoint naturally opens for serious consideration the role of the Near East in relation to the Aegean. Although there have been recent studies on the actors responsible for exchange between these regions, they seldom examine the question further back than the 8th century B.C.²⁰ The 700 B.C. mark has become just as overused and misleading as the 1200 B.C. one, which conveniently marks the collapse at the end of the Late Bronze Age.²¹ This is largely due to the uneasiness of approaching the topic of agency for a proto-historic period: once the Homeric epics and the Old Testament are no longer there for support, the historian feels left at sea with his maritime travellers and their business. Even for archaeologists, Papadopoulos aptly remarks that “because this “Dark Age” does not readily belong [...] in the intellectual realm of the prehistorian nor is it firmly in that of the classical archaeologist, it floats rather uncomfortably in between.”²² Some scholars such as Raaflaub concede that, using the kinds of actors evidenced in the

¹⁷ Horden and Purcell 2000: 366

¹⁸ Cartledge 1983. Cartledge argues that pre-industrial trading states had no more than 1-2% of their total product generated abroad. Contra Tandy who thinks this is impossibly low (Tandy 2004: 187)

¹⁹ Redfield 1986: 31; Coldstream 1994: 53; Osborne 1996: 31; Donlan 1997: 666; Tandy 1997: 4

²⁰ Raaflaub 2004; Luraghi 2006; Fox 2008

²¹ All dates are B.C. unless otherwise specified

²² Papadopoulos 1994: 438

later written sources, “we are able to make a plausible argument that such forerunners were active many decades earlier.”²³

I want to argue that the EIA can be repopulated with its travelling agents, without being limited to an exercise of simple conjecture. The Homeric epics remain invaluable in this endeavor in particular due to their genre. Unlike state archives which are meant to service select administrative bodies, or official edicts focused on conveying very particular information, epic poetry relies on its appeal to a large and versatile audience, and its ability to engage meaningfully with broader social concerns and practices. It is not personal in nature like Archaic lyric poetry, or meant to instruct in the manner of later historical works. Rather, it builds upon the familiar: the poet reminds, rekindles the appetite for stories his listeners know all too well. The product, is a broad canvas of supra-local social consciousness which should not be narrowly constrained to the epics’ 8th century date. For instance, when the poet refers to Phoenicians and Thracians, we are presented with a culturally charged outsider’s overgeneralization that lumps together a heterogeneous, politically distinct body of peoples. Such constructs could not have arisen and established themselves as part of a general social consciousness overnight. The same argument can be made for nautical technology as depicted on Greek Geometric pottery. In the 8th century, there are many examples of ship imagery depicting a standard archetype. A much earlier representation from Euboea, dated 850-825 B.C, shows that the typical shape was already in place, pushing the chronology by nearly a century and a half, while the burial inside the tomb at Lefkandi casts Homeric burial practices to an even earlier date.²⁴ Thus, the 8th century emerges not as the initial phase of major transformations, but as their full maturation. It is to the earlier centuries that one must look for the initiative and developments responsible for the new level of interconnectedness which defines the Mediterranean from the Early Archaic period onwards.

Despite current revisions, there are at first glance reasons why the “Dark Age” was coined as such. Although recent discoveries have significantly added to our knowledge, settlement evidence for the EIA Aegean remains rare, and the

²³ Raaflaub 2004: 201

²⁴ Popham 1987

majority of sites do not stand out either for their architectural achievements or the richness of their cemeteries.²⁵ All things considered, this general trend cannot be simply discarded as entirely a problem of archaeological visibility. A handful of sites however stand out as remarkable outliers, their wealth exceeding by far the average standard of the period. One can best make sense of the entire body of evidence – the unremarkable postholes of the Greek mainland alongside the rich burials of Lefkandi and Cyprus – by approaching the EIA Eastern Mediterranean as a mosaic of pronounced regional differences.²⁶

The present work argues that these regional differences can be largely explained by examining the scope of a community's supra-regional contacts: actors enjoying a greater number of connections benefit from superior access to resources and information as well as diminished risk. My thesis thus focuses on trans-regional networks of connectivity in the Eastern Mediterranean during the Early Iron Age (c.1200 - 700) as well as the general mode of operation of networks. Given the possible scope of this topic, I have narrowed my examination to three specific regions which seem to have enjoyed particularly widespread connections – the Levantine coast, and the islands of Cyprus and Euboea. My starting point is that any argument for cultural contact must account for both the potential and means of interaction on the one hand, and the motivations behind it on the other.

The first chapter considers the matter of potential, by outlining the context of connectivity for the EIA. I argue that three main parameters affected and shaped the framework and intensity of cultural interaction during this period: a general opening up of the maritime niche to new autonomous actors due to the political power vacuum characterizing the Eastern Mediterranean throughout the period; a swift socio-economic recovery from the disturbances at the end of the LBA by all three regions of focus; and the structural compatibility of these regions. These factors have the important implication that the Levant, Euboea and Cyprus were naturally predisposed towards interacting with each other, while no longer being constrained in their maritime ventures by the superpowers of the LBA.

²⁵ Dickinson 2006

²⁶ Whitley 1991: 364; Rutter 1992: 66-70; Morris 1997; Deger-Jalkotzy 1998; Crielaard 2006: 272; Dickinson 2006

The second chapter is largely concerned with methodology and introduces my main interpretative model – Social Network Theory (henceforth SNT). Because the application of SNT is still new in the field of Classics, I dwell upon its basic principles at some length, and proceed to explore its applicability to my period and topic of focus. I argue that the ‘network’ paradigm has potential because it offers a different way of understanding human physical and mental space that challenges old hierarchies and boundaries such as those formulated by core-periphery models. The second part of the chapter looks at the actors that would partake in trans-regional exchange, and the ways in which they function in terms of SNT. I argue that, although the scale of operations was smaller and less regulated, the political vacuum of the EIA allowed for a greater number of versatile agents to profit from the maritime niche. While their ventures were often informal and random, they equated, in the aggregate, to a sizable network defined by a variety of intimate cultural encounters.

The third and last chapter examines the scope and intensity of trans-regional networks in the Eastern Mediterranean through maritime infrastructure. Most analyses aiming to measure trade and exchange during the EIA continue to focus on imported goods, in particular pottery. This has proven to be a great point of contention within a much larger methodological debate on the interpretation of material culture and the extent of its usefulness in the study of topics such as cultural assimilation, identity, and information flow. This reactionary trend against the equation of ‘pots with people’ provides significant challenges especially for proto-historic periods and those with scant literary evidence. Maritime infrastructure has an advantage over imported objects as the main indicator for measuring connectivity in that it can provide a more encompassing picture both geographically and temporally. By infrastructure, I refer to the entire artificial complex in place to facilitate maritime communication, including harbor facilities, nautical technology, and established codes of diplomatic conduct. Since the maintenance of such infrastructure required significant and prolonged communal investment, I argue that it can be used as a measure of the overall intensity of interaction in the Eastern Mediterranean given that it reflects specific socio-economic choices and needs geared towards promoting a maritime orientation.

Less darkness and more business: socio-political landscape of the Eastern Mediterranean in the Early Iron Age

The aim of this chapter is to establish the context of trans-regional connectivity in the Eastern Mediterranean during the Early Iron Age. I argue that three parameters in particular affected and shaped the framework of cultural interaction during this period. The first and most important factor was the political power vacuum which was created at the end of the Late Bronze Age, opening up seaborne endeavors to a plethora of new and versatile agents. Second, while the collapse of centralized political entities was a widespread phenomenon of the Eastern Mediterranean at the end of the LBA, the process of social and economic recovery was highly uneven. The regions which were by far the quickest to revitalize were the Levant and Cyprus in the Near East and Euboea in the Aegean, resuming long-distance seaborne activities as early as the 11th century. Lastly, these regions were structurally compatible in terms of social organization, economic needs and geography, which naturally predisposed them to forge strong links with each other.

The Bronze Age saw the first truly significant transformation of the Mediterranean as a highway of international communication.²⁷ Archaeological, literary and linguistic evidence points to regular interaction, with heavily laden ships transporting rich and heterogeneous cargoes. The LBA represents a peak in this development, when “a very complex and differentiated network of trade routes evolved, inter-joining the civilizations of the Eastern Mediterranean – the Levant, Cyprus, Egypt and the Minoan-Mycenaean world.”²⁸ The Syro-Canaanite predecessors of the Phoenicians emerged as one of the main actors in this intense web of exchange.²⁹ Ugaritic documents refer to traders from Arwad, Byblos,

²⁷ Wachsmann 1998: 3

²⁸ Matthäus 2001: 153

²⁹ Wachsmann 1998: 39

Beirut, Tyre, Acco, Ashdod and Ashkelon stationed at Ugarit, indicating a high degree of interstate trade along the Levantine coast in addition to external trading partners, attested by Mycenaean, Cypriot and Cretan tradesmen's guilds.³⁰

Yet this teeming seagoing trading activity was not backed up by political power since during the New Kingdom, most of the Syro-Canaanite coast was under Egyptian sovereignty.³¹ The letters of "prince" Rib-Addi of Byblos to the Pharaoh Amenophis IV (ca.1350) from El-Amarna not only testify to military dependence but also show a certain level of humility in their address.³² In areas where the southern powerful neighbor did not extend its reach or lost control, the Hittite kings were quick to assert themselves, notably at Ugarit to the north for much of the LBA.³³

Leading up to the well-known 'collapse' ca. 1200, the Syro-Canaanites of the Levantine coast enjoyed wide-ranging, albeit monitored contacts, including strong links with Cyprus and the Aegean. This vibrant commercial environment continued undiminished quite literally until the very end, as evidenced by hundreds of tablets, many pertaining to international affairs and trade, which were being baked in a kiln as Ugarit burned.³⁴ In one of these tablets a certain *Ydn* writing to "the king, his master" requests the dispatch of 150 ships to "protect" the country, which points to an impressive fleet, albeit one that was summoned too late.³⁵

1.1 EIA political landscape and the role of the Neo-Assyrian Empire

There is no question that the significant site destructions in the Aegean and Asia, from Hattusas in the north to south Canaan, during what Dews has termed "the catastrophe" at the end of the Bronze Age, had serious

³⁰ Niemeyer 2000: 90

³¹ Bunimovitz 1998: 104-5; Wachsmann 1998: 77; Morris 2005; Morenz and Popko 2010:101

³² Niemeyer 2000: 90

³³ Ibid.

³⁴ Dews 1993: 13; Wachsmann 1998: 40

³⁵ *KTU* 2.47 (trans. Wachsmann 1998)

reverberations.³⁶ The most immediate effect was a widespread collapse of centralized power, as Mycenaean palace society and the Hittite empire foundered alongside minor kingdoms like Arzawa, Hatti, Oedi and Karkemish.³⁷ Egypt managed to fend off the so-called sea peoples, but its hold in Asia was broken entirely under Rameses VI (1143-1136 B.C), and by 1060 it was confined to its original valley boundaries.³⁸ With the beginning of the 20th dynasty, Egypt entered the Third Intermediate Period marked by internal and external political unrest and thinning resources – its reach and aspirations abroad never reverted to their former glory.³⁹

The political map which emerged after ca. 1200 B.C in the Eastern Mediterranean was thus one of a power vacuum, with very important implications for the terms under which international connections and trade of the EIA would develop. One political entity however can be brought forth to argue against such a small scale, fragmented landscape of the EIA Levant: the neo-Assyrian empire. Military pressure from Assyria first became felt on the Levantine coast under Ashurnasirpal II (883-859) who conducted several expeditions, forcing some of the city-states into formal submission including Tyre, Sidon and Byblos. His successor Shalmaneser III (858-824) also paid a visit to the coast but his action was limited to collecting tribute without actually threatening the Phoenician cities.⁴⁰ This was certainly the general attitude of Assyrian kings of the period, who confined themselves to resource exaction without threatening the political independence of the coastal city-states.⁴¹ The nature of this early Assyrian policy emerges most clearly when contrasted with that of the mid-8th century, beginning with Tiglath-Pileser III (745-727), who launched a true campaign of annexation: “I brought them within the boundaries of Assyria” states the king in his annals regarding the cities of northern Phoenicia.⁴² Meanwhile the southernmost cities of Byblos and especially Tyre remained at the fringe of events occurring in north

³⁶ Dews 1993: 4

³⁸ Wachsmann 1998: 75; Moscati 2001: 32; Morenz and Popko 2010:118

³⁹ Freeman 2004 : 103 ; Morenz and Popko 2010: 119

⁴⁰ Aubet 2008: 251

⁴¹ Moore and Lewis 1999: 108; Moscati 2001: 43

⁴² Parpola 2003Aubet 2008: 253

Syria and politically independent. In the Assyrian annals, Tyre is a far away place from where tribute laden ships were sent to the mouth of the Orontes.⁴³

Several points must be stressed regarding the effect of Assyrian presence on Levantine cities. First of all, there was a lack of Assyrian heavy-handed involvement for a significant part of the EIA; before Tiglath-Pileser III, the Assyrians did nothing to seriously damage Phoenician interests. Up to that point the coastal cities were not a main Assyrian objective – the west was primarily seen as a territory for tribute and hunting without any systematic plan of conquest. Truly serious disruptions are recorded for the 7th century under Esarhaddon, but these mark the end of the period under concern, and may in fact be at least one of the causes of not only Phoenician but also Euboean decline around this time. Even actual military presence did not have the expected disruptive effects since cuneiform documents offer vivid descriptions of Phoenicians who went about their commercial activities while their very city was besieged by Assyrian troops.⁴⁴

Secondly, although the Assyrians were the first and largest land-based power of the Near East in the early first millennium, they were certainly no seafarers. The stele of Sargon II, erected at Kition in 709/707, was meant to mark the empire's furthest reach all the way to Cyprus at the moment of its height, but behind the formulaic text lies little substance. In contrast to mainland areas turned into Assyrian provinces, there is nothing in the archaeological record of Cyprus except for the stele itself pointing to either military or political presence. What is more, the Assyrian royal archives whose chief focus was the detailed recording of military events mention neither a campaign to subjugate the island nor the station of a garrison.⁴⁵ In actuality, the forces of Sargon II never crossed the sea in order to subjugate Cyprus.⁴⁶

⁴³ Aubet 2008: 252

⁴⁴ Full text and translation in Saggs 1955, no.2715

⁴⁵ Iacovou 2006: 318; Iacovou 2006a: 259; Tulpin 1996: 20. For a clear change in material culture following Assyrian annexation see notably Philistine centers such as Ekron which were occupied and made into provinces (Gitin 1995)

⁴⁶ Tulpin 1996: 19

The fact that the Assyrian reach did not extend into the Mediterranean was a marked change from the Egyptian hold on the Levantine coast during the LBA. The lack of a major centralized power with a strong maritime presence in the Mediterranean is a defining and rather unique feature of the EIA. As such it is one of the key factors which must be taken into account regarding the nature and development of trans-regional interaction and trade in the Eastern Mediterranean.

The economic stress caused from Assyrian tribute extraction has been traditionally brought forth as the main cause of Phoenician expansion westward. According to this model, Phoenician traders were instigated to intensify their Mediterranean operations in order to meet these requirements.⁴⁷ Without downplaying the effect of the considerable tributes owed to the Assyrian kings, this economic pressure can no longer be accepted as the primary driving cause of Phoenician expansion. Significant work on Levantine chronology over the past few years has provided new radio-carbon dates for the earliest Phoenician presence in the far west of the Mediterranean. These reveal a much earlier web of contacts than previously assumed, developing long before Assyrian involvement on the Levantine coast.⁴⁸

Furthermore, when the Assyrian empire does come into the picture, its relationship with the Phoenician city-states is best understood as one of political and economic symbiosis: the former enjoyed a certain protection from outside interference such as the military power of Mesopotamia, while the latter could count on a regular supply of luxury goods and raw materials. Because of this the Assyrians did not have to build their own network of international economic reach, to the greatest advantage of Phoenician enterprises.⁴⁹ Thus, the general effect of the main 'land' power of the Near East over the Levantine maritime operations was, for the major part of the period under concern, indirect and largely unobtrusive to trade networks.

⁴⁷ Fox 2008: 24

⁴⁸ Aubet 2008: 247

⁴⁹ Niemeyer 2004: 245; Radner 2004.; Frankenstein 1979; 1997 for the earliest formulation of this model

The geo-political situation of the EIA in the Eastern Mediterranean can thus be characterized on the macro scale by a lack of any centralized powers comparable to the ones of the LBA, whether Egyptian, Hittite or Mycenaean. The newfound geopolitical-freedom in turn opened a new road for local development for Phoenician and Cypriote as much as for Greek polities. The most important and far reaching effect of the so-called collapse was therefore a profound alteration of the international power balance, but what about the intense level of connectivity of the Eastern Mediterranean that was well underway by the end of the LBA? The traditional view is that economic networks were disrupted so comprehensively that they did not recover for several centuries.⁵⁰ The most recent trend in scholarship however has been to argue for a much more nuanced picture where “the so-called dark ages [...] were neither that dark nor as long as some still think.”⁵¹ In Near Eastern archaeology in particular, “the break in continuity is considered to be less clear-cut and the length of discontinuity less long-lasting.”⁵² An increasing number of scholars are willing to push the revival chronology back to the 10th century where a first wave of informal “pre-colonial” Phoenician mariners acted as explorers probing the ground for the more intense overseas interaction in the 8th century.⁵³

Nonetheless, this refinement of the “Dark Age” period still operates on the basis that a serious break and cessation of international connections in the Eastern Mediterranean did occur. The model of Phoenician expansion in two phases implies that the first wave was somewhat lesser both in its intensity and impact compared to the ‘true’ period of revival of the 8th century. Ridgway has rightly pointed out that “the dangerously abstract and misleading teleological concept of ‘precolonization’ no longer affords an appropriate framework within which to assess the ever-increasing volume of archaeological evidence for direct or indirect Aegean and Levantine contact” abroad.⁵⁴ The entire construct implicitly relegates the EIA as a transition between two great periods, much in the same way as the

⁵⁰ Dickinson 2006; Freeman 2004: 38-39

⁵¹ Lemos 2001:218; Smith 2009: 3; Nijboer 2008: 365; Sherratt 2003; Boardman 2001

⁵² Niemeyer 2000 : 92 ; Mazzoni 1996

⁵³ Matthäus 2001: 154; Negbi 1992: 601; Nijboer 2008: 366

⁵⁴ Ridgway 2003: 17

Hellenistic period used to be treated. Only by looking at this phase in its own right without the shadow of anticipation of the 8th century can the emerging patterns of foreign contacts be properly situated and defined.

The standard narrative of widespread disruption and decline of the Eastern Mediterranean as a whole after ca.1200 B.C offers a deceptively homogenous picture, whereas the beginning of the Iron Age is defined by pronounced regional differences.⁵⁵ The degree of disruption and pace of recovery greatly varied from one place to another. With the increase of archaeological evidence in the past few decades, there are now numerous sites and artifact types all over the Mediterranean, which show evidence of continuity across the purported divide.⁵⁶ From an archaeological point of view, the EIA is more accurately defined as a busy period of migration, transformation and development rather than introversion and regression: “gloom and doom does not exist for archaeologists concerned with the proto-history of the Mediterranean, just some caution and hesitation regarding the interpretation of the excavated evidence.”⁵⁷ Seaborne networks and contacts between east and west were never entirely interrupted at the beginning of the Iron Age.⁵⁸

With the current state of the evidence, it is now safe to argue that the Phoenician core region between Arwad and Akko was largely spared from any severe destruction at the end of the Bronze Age.⁵⁹ Only Ugarit in the north was completely destroyed and abandoned by 1190/80, not to be resettled before the Late Archaic period.⁶⁰ Undisturbed continuity of building structures and ceramic types has been documented at the great northern Phoenician site of Sumur/Simyra as well as at Ras el-Basît,⁶¹ while in the southern Levant some of the LBA city-states such as Megiddo, Beth Shan, and Afula, persisted into the 11th century.⁶²

⁵⁵ Crielaard 2006: 272; Dickinson 2006: 67; Morris 1997; Rutter 1992: 66-70; Whiteley 1991: 364

⁵⁶ Nijboer 2008: 365

⁵⁷ Ibid.

⁵⁸ Aubet 2008: 248

⁵⁹ Niemeyer 2000: 92

⁶⁰ Ibid.

⁶¹ Badre et al. 1994: 345

⁶² Joffe 2002: 439

On Cyprus the situation is more complicated, since the EIA is archaeologically the most understudied period on the island.⁶³ The apparent ‘gap’ preceding the 8th century pointed out by Petit is thus foremost the result of the state of the evidence rather than the socio-political reality of the island, since the earlier layers of the majority of monumental structures, which have been used for dating the emergence of Cypriote city-states, have not been uncovered.⁶⁴ Most importantly, the evidence from Kition and Palaipaphos, which have been more extensively excavated, show firmly attested continuity.⁶⁵

The cities on the Levantine coast and Cyprus were the quickest to resume the seaborne activities upon the Mediterranean trade routes which they had come to know so intimately in the LBA. The report of Wenamun (ca.1075 B.C) shows a fully operational network in the 11th century B.C, including in its itinerary the Levantine cities of Dor, Tyre, Sidon, Byblos as well as a visit to Cyprus. Around the same time, an Assyrian document recording an overseas commercial expedition under Tiglath-Pileser I (1114-1076) mentions visits to Byblos, Sidon, and Arvad and points to the same lively network.⁶⁶ The evidence provided by these texts implies that the process of recovery had begun at some earlier point. The revised date of a 10th century reopening of international networks is thus too late, as a well-developed system was already in place a century earlier. Negbi’s argument for resumed Eastern Mediterranean activities as early as the 12th century should therefore be considered seriously.⁶⁷

A reassessment of the chronology makes the purported initial phase of Phoenician “pre-colonial” expansion highly problematic. To refer to the EIA as one of slowly evolving ‘probing’ and ‘rediscovery’ is factually incorrect, since there was no serious break with the LBA on either the Levantine coast or Cyprus. Rather, an investigation of the patterns of foreign contacts and exchange mechanisms of the period must begin with “the undisputed continuity of the

⁶³ Smith 2009: 2; Iacovou 1999: 144-145

⁶⁴ Petit 2001: 55 for some the earliest layers uncovered to date are even later, dating to the 6th century

⁶⁵ Karageorghis 1990: 15,19; Petit 2001: 54

⁶⁶ Negbi 1992 : 603

⁶⁷ Negbi 1992

Bronze and Iron Age Canaanite-Phoenician cities, connecting the two periods on either side of the sea-people-catastrophe and the so-called Dark Ages.”⁶⁸ This aspect of continuity goes hand in hand with the main element of discontinuity – the fragmentation of political power and the freeing of the Levantine coastal cities from outside interference. Together, they provide the basic operational framework of Eastern Mediterranean contacts during the EIA: a familiar and well developed web of networks under the control of new actors and political entities.

1.2 structures and organization of EIA polities: Levant, Cyprus and Euboea

Levant

So far this discussion has used the term Phoenicians without delving into its significance – a question of critical importance since nearly every piece of literature treating on the subject of these people has felt the need to address this problem.⁶⁹ Furthermore, an analysis of the political organization of Phoenician city-states cannot be divorced from matters of identity.

The term *Phoinikes* is without question an outsider’s (Greek) appellation for a group of peoples who never identified themselves as such.⁷⁰ The etymology of this term is widely accepted as originating from the word *phoenix*, which means “purple-red” and alludes to the purple textile industry for which the Phoenicians were famous. In Mycenaean Linear B texts of the LBA, when contacts with the Levant were at their peak, we find the word *po-ni-ki-jo* or *po-ni-ki* referring to an aromatic herb or condiment of eastern origin as well as decorative elements presumably of the color red.⁷¹ Moscati has suggested that the common usage of the word may thus have originated at the end of the second millennium, but Homer and the Ancient Testament remain the earliest uncontested context when the term specifically refers to a group of people.⁷²

⁶⁸ Niemeyer 2000: 93

⁶⁹ It should be kept in mind that my own use of the term is simply a matter of convenience as it is the standard designation for the peoples of the Levantine coast. Consequently it does not operate on the assumption that the term is correct or indeed accurate.

⁷⁰ Sherratt 2004: 35

⁷¹ Aubet 2001 : 9

⁷² Moscati 1995 ; Moscati 1997 : 19 contra Aubet 2001

Regardless of the plausibility of Moscati's proposition, there is no question that the term already had a Near Eastern association in Linear B documents. Thus, since the word first appeared during the LBA and since the 8th century B.C represents the *terminus ante quem* for its standard usage, the EIA is the obvious bracket during which this crystallization occurred, drawing from a Bronze Age heritage, and having a further development under unique EIA contingencies.

An early date is also further supported by the other synonymous Homeric appellation for the peoples of the Levantine coast: 'Sidonians.' This designation for Phoenicians as a whole at first appears odd, since by the 8th century B.C Tyre had unquestionably emerged as the dominant city-state of the Levantine coast.⁷³ This balance of power however was gained over time, the process of which can be traced in Tyre's earlier competition with Sidon.⁷⁴ The generic term 'Sidonians' thus makes sense as a reflection of an earlier political configuration when Sidon (from which the name obviously derives) was in a dominant position. The linguistic analysis suggests that it was during the EIA, possibly before the 10th century B.C when Tyre began to rise to prominence, that Greeks came to develop a broad appellation for the peoples of the Levantine coastal cities. The word thus not only illuminates the chronology of their interaction but also its nature, singling out a commercial characteristic above other identity indicators.

What the Phoenicians did call themselves was *can'ani* ('Canaanites') – a word of Eastern Semitic and most probably indigenous origins. It is used to denote them especially in the Old Testament, and continued to be used outside the Levantine homeland for a very long time.⁷⁵ The name of Canaan goes far back to the Bronze Age, considered to have arisen as early as the third millennium. The Nuzi texts from the mid second millennium make things particularly interesting as they demonstrate that the name 'Canaan' had already at this time a dual meaning: ethnic and toponymic, but also denoting purple-red.⁷⁶ The parallel with the

⁷³ Aubet 2001

⁷⁴ Sommer 2009: 120

⁷⁵ Referring to the population of Africa Augustine says the peasants called themselves *chanani* (*Ep. Ad. Rom.* 13) while the evangelist Matthew calls a Phoenician woman 'Canaanite.' (Matthew 15 : 21-22)

⁷⁶ Aubet 2001: 11

etymology of the Greek *phoinix* is unmistakable – in both cases the purple cloth industry taking the name of the land of origin. This connection was already pointed out in ancient times, notably by Hecataeus of Miletus and Philo of Byblos.⁷⁷ At some point during the EIA, Greeks translated the second meaning of Canaan into their own language. I would argue therefore that although the appellation ‘Phoenicians’ was coined by Greek outsiders, the choice was not a misinformed one. The Homeric designations concord with both direct terminology used by Near Easterners (Sidonians) and their translation (Phoenicians), which hints at a bilingual environment and more than very casual interaction.

That is not to say that it accurately reflected Phoenician self-perception. The one common characteristic of all these appellations for the people of the Levantine coast is their lack of specificity. The oldest and original term Canaanites had a broader meaning than Phoenicians: it denotes them at times and certainly includes them, but it can also refer to other groups.⁷⁸ Meanwhile ‘Phoenicians’ is too vague and loosely defined *faute de mieux*, while Sidonians is actually too precise – its use to denote the peoples as a whole is misguided. The difficulty for outsiders to pinpoint an accurate designation stems from the actual lack of Phoenician cohesiveness.⁷⁹ The basic building block for their identity was the city-state, as is made clear by their own designations of themselves which always stress their regional affiliations. Before anything else, they were Tyrians, Biblions and Sidonians.

Yet civic identity was already the main sense of belonging during the Bronze Age. The scholarly use of ‘Canaanites’ for the peoples inhabiting Syria-Palestine during the second millennium and ‘Phoenicians’ after 1200 B.C is both artificial and unhelpful. How ‘Phoenicians’ of the EIA came to perceive themselves and were perceived by others, as well as the nature of their political

⁷⁷ Hecataeus provides a rational explanation on linguistic ground: the Phoinike had previously been called *Chna* and that it had been the transcription into Greek of the Semitic ‘Chanaan.’ Philo is more colorful but his argument is the same. He relates of a historical character named *Chnas* or *Chanaan* who was later re-baptized as ‘Phoinix’ and was called father of the Phoenicians.

⁷⁸ Moscati 2001: 18

⁷⁹ Lehmann 2008: 205

structure, developed out of an uninterrupted tradition of a highly sophisticated city-state structure. This does not imply that their sense of cohesiveness was an immutable legacy of the Bronze Age. On the contrary, it was highly dynamic and adaptive. EIA Phoenician identity must therefore be approached as a process, developing out of both self-ascribed and externally projected perceptions and expanding upon an important LBA background. In this context, trans-regional networks of interaction simultaneously shaped and were shaped by various layers of identity.

Another decisive factor in the development of the Levantine coast was the peculiarity of its regional geography, which hindered unity and promoted interconnection at the same time. With its numerous promontories, offshore islands and peninsulas, the coast provided ideal seafaring conditions. To the east however, the land was cut off by the Lebanese mountains, varying from up to 50 km inland to as little as 10 km – sometimes the mountainous promontories actually touch the coast. These promontories break up the region into smaller areas that are separated from each other. The territory is further divided by a series of rivers, while the fertile, but small coastal plain allowed no more than small-scale subsistence farming. This geographical landscape had two major effects: political fragmentation and an ever present tendency towards maritime trade. Given this situation, it is hardly surprising that the coastal settlements of the Levant sought to restore their overseas enterprises as quickly as possible at the beginning of the EIA.

By recognizing a certain level of social and institutional legacy from the LBA, our knowledge about the socio-political organization of the Levant during the EIA becomes more substantial.⁸⁰ The settlements of the Levantine coast certainly fit within the broad model of a city-state: “a highly institutionalized and highly centralized micro-state consisting of one town (often walled) with its immediate hinterland and settled with a stratified population.”⁸¹ More specifically, the institution of city kings, along with all the obligations for which they were

⁸⁰ Joffe 2002 : 432

⁸¹ Hansen 2000: 19

responsible, was a Bronze Age inheritance. Tyre's chief god Melqart literally means "king of the city," thus alluding both to the city-state as the main political unit and the divine connotations of kingship.

The macro-scale political landscape outlined earlier was nonetheless a significant element of change. The newly acquired political independence is vividly illustrated in the account of Wenamun as he visits the city of Dor. There he is received by the 'prince,' to whom he addresses his commercial affairs and calls upon his jurisdiction to find the thieves of his stolen property.⁸² When the king of Dor is dissatisfied with the quantity and quality of the Egyptian side of the commercial bargain, it is made clear that he is the one in command of the trading relationship and shapes the conditions to suit his liking.⁸³ The city-states of the EIA Levant were very different in the fact that their economic backbone, maritime trade, was no longer under the control of outside superpowers.

There is very little direct evidence for the political organization of the Phoenician mainland during the EIA, mainly from the Old Testament which records Hiram of Tyre's dealings with Solomon, in the early part of the 10th century.⁸⁴ Due to the particular focus of the narrative, we are not provided with any more than a very basic outline, namely references to an arrangement of independent city-states ruled by kings. The earlier date however remains significant, as it concords with two other independent sources.⁸⁵ The more specific information we have about the Phoenician civic structure is both scarce and of questionable reliability, as most of it is derived from Greek and Roman sources about Carthage. Not only is it from a later period and provided by outsiders but we cannot assume that the Phoenician diaspora did not undertake its own course over time. Nonetheless, some basic features may be inferred. Carthage had a people's assembly (*lm*) which theoretically could decide on political issues, but only if the chief magistrates (*sufets*) and the council (*h'drm*)

⁸² Breasted [1906] 2006 (trans.)

⁸³ Ibid.

⁸⁴ Kings 1: 5-10; Chronicles 2: 2-9

⁸⁵ Hiram is mentioned in the writings of Menander of Ephesus, preserved in Josephus's *Against Apion*, who asserts that Menander had drawn his information from the chronicles of Tyre itself. The chronology is also checked against the Assyrian record of tribute of Baal-Eser II/Balazeros II to Shalmaneser III in 841 B.C.

disagreed or decided to summon it.⁸⁶ These offices point to an oligarchic structure even though for Polybius the Carthaginians had a 'mixed' constitution.⁸⁷ Furthermore, citizenship was fairly exclusive.⁸⁸ One of the classes which enjoyed this privileged status were the merchants, as illustrated by the second Roman-Carthaginian contract (4th century), which stipulates that merchants should be treated like citizens by the opposing party.⁸⁹ Offices and access to the council were reserved for the wealthiest citizens,⁹⁰ which, given the economic orientation of Phoenician city-states, were primarily individuals involved in long-distance trade. Thus, although most of the sources for Phoenician political organization are scarce and problematic, a basic sketch reveals a structure not incompatible with the Greek model, especially when considering the EIA.

Although the city-state was the main Phoenician political unit and source of collective identity, it was nevertheless one plane of cohesiveness among others. The term 'Canaanites' itself makes this clear, as the 'Phoenicians' are presented to belong to a larger whole. Before the advent of the Iron Age, Syro-Palestinian history hardly differentiates coastal settlements from those inland. This has led Moscati to argue that there was no difference between coast and hinterland, and that Syro-Palestinian civilization, rather than Phoenician, is more appropriate in discussing the Bronze Age.⁹¹ From the second millennium onwards the coastal cities worked closely together in reciprocal affairs, thus strengthening links among themselves. This process, in addition to a newly acquired autonomy at the beginning of the EIA, allowed for the gradual development of the Levantine coast as a distinct region with certain shared cultural features extending beyond individual city-states. It is therefore possible to talk of a newly emerging form of cultural cohesiveness at the regional level during the EIA.

The rise in preeminence of Tyre is a case in point of a larger unity of the Levantine coast. Beginning in the 10th century, Tyre gradually extended its

⁸⁶ Huss 1994: 33-4

⁸⁷ Polyb. 6.43.1

⁸⁸ Sommer 2010 : 125

⁸⁹ Polyb. 3.23

⁹⁰ Arist. *Pol.* 2.11

⁹¹ Moscati 2001; Bondi 2001: 23

dominance over the southern part of the Phoenician coast, including not only cities (Sidon), but also smaller urban settlements such as Sarepta as well as stretches of mountains and farmland like the fertile Jezreel valley in lower Galilee.⁹² A clause of a treaty between king Hiram and Solomon (mid-10th century B.C) mentions the cession to Tyre of ‘twenty cities’ in the lands of Galilee.⁹³ Archaeology independently attests to Tyrian enclaves at Akhziv, Akko, Tel Keisan, and Tell Abu Hawam.⁹⁴ One can thus talk about various levels of political and cultural integration of the Levant, although the boundaries defining ‘Phoenician’ culture remain elusive and particularly difficult to define. We should envisage such planes of identity as developing synchronously with the evolving networks of connectivity of the EIA, both shaping and being shaped by them.

Cyprus

The situation on Cyprus follows much the same lines in terms of political fragmentation and a structure based around independent city-states. Although a later development than in the Levant, a trend towards urbanization was already underway during the LBA, but by the end of 13th century it had not yet reached a degree of centralization which would allow us to speak of statehood. At the other end of the chronological spectrum, the first literary attestation of Cypriote city kingdoms is the stele of Sargon II (722-705 B.C) at Kition, supplemented by a second inscription by his successor Essarhadon (680-669 B.C) which actually lists the “ten kings of Iatnana of the middle of the sea,” among them Chytroi, Soloi, Papos, Salamis, Kourion, Tamassos and Ledra. As discussed above, behind the formulaic language of the Assyrian documents there was no substance of an actual subjugation. However, as the Assyrian presence on the Levantine coast became more substantial, it was advantageous for the Cypriote city-states to enter a formal political relationship with Assyria in order to enjoy continuous privileged

⁹² Aubet 2001: 77-118; Sommer 2000:97-9; Sommer 2004: 237-40

⁹³ I Kings 9: 11-14

⁹⁴ Aubet 2001

access to the empire's economic sphere. The inscriptions from Khorsabad suggest that the Cypriote rulers traveled to Babylon to offer tribute on their own accord.⁹⁵ The episode must be therefore understood as a ceremony of voluntary submission – a compromise serving the economic and political interests of both parties alike.

The treaty of the mid-8th century that turned the Cypriote states into client-kingsdoms is highly informative of the political landscape of the island during this period. It shows that these city-kingsdoms were already fully-established and that they had the capacity to closely monitor their international affairs. The archaeological picture of Cyprus in the 8th century equally points beyond doubt to highly centralized and well-organized city-states with monumental architecture (palatial and temple structures) and royal necropolises.⁹⁶ An argument for Cypriote state formation as a by-product of Assyrian influence is therefore untenable, as the Assyrians came into contact with highly centralized, autonomous city-states – if one may speak of direct contact at all.⁹⁷ Furthermore, the Assyrian texts refer to Cyprus not as a unit, but as a politically fragmented territory of multiple independent city-kingsdoms. As for the Phoenician cities, this EIA arrangement developed out of the island's LBA legacy.⁹⁸

The figure of a city king was central to Cypriote political organization as was the case on the Levantine coast. In the Cypriote epigraphic record, the term *pa-si-le-wo-se* – an adaptation of *basileus* in the Arcado-Cypriot dialect and written in the local Greek syllabary – appears inscribed on two highly prestigious objects of the 7th century. These are a silver bowl marked as property of Akestor, *basileus* of Paphos⁹⁹ and a lost pair of solid gold bracelets belonging to Etewardros, another *basileus* of this city.¹⁰⁰ These two royal names are equally attested on Esarhaddon's Cypriote kings list. The longevity of the institution is

⁹⁵ Yon & Malbran-Labat 1994: 161-79

⁹⁶ Petit 2001

⁹⁷ contra Childs 1997: 40; Knapp 1994: 290; Rupp 1987: 147

⁹⁸ Armstrong 2003. Arguments for a single centralized state on Cyprus during the LBA rest on textual evidence and the interpretation of the name *Alashiya* found in Egyptian, Hittite, Akkadian, Linear B and Ugaritic records (Knapp 1997; Eriksson 2007). This link however remains debated, and does not accord with the archaeological evidence.

⁹⁹ Marcoe 1985: 177-9; V.Karageorghis 2000a: 182 no.299 (dating); Mitford 1971: 373-6; Masson 1983: 412 no. 180a (textual analysis)

¹⁰⁰ Mitford 1971: 7-11 (dating); Masson 1983: 192 no. 176; 1984: 75-6 n.23 (textual analysis)

remarkable: until the very end when the island's political independence was abolished under Ptolemy I Soter during the Hellenistic period, the epigraphic record refers to city-kings, invariably under the term *basileus*.¹⁰¹ This status was also recognized by outsiders, as the Assyrian contemporary documents always refer to the Cypriote city-states as ruled by *sharru*, the Akkadian equivalent of king.¹⁰² Outside Greek sources equally allude to Cypriote kings, but they are late and their terminology is inconsistent, making indiscriminate use of *turannos* and *dunastes* in conjunction with *basileus*.¹⁰³

The internal and remarkably consistent epigraphic and archaeological record of Cyprus is sufficient on its own to draw a political landscape of the island, which by the 8th century B.C enjoyed a full-fledged structure of a series of independent city-states along a similar structural framework of those of the Levantine coast. The emergence of Cypriote city-states must therefore be sought in the EIA, centuries before Assyria came onto the scene.

The importance of an uninterrupted Bronze Age legacy, a swift social and economic recovery after 1200, and an early emergence of a political structure of independent city-states governed by kings, shows that the development of the Levantine coast and Cyprus during the EIA ran synchronously with each other. This was not the result, as some have argued, of an importation of the Levantine model to Cyprus. In neither of the two regions could this development have been possible without the opportunities and network of contacts that they provided for each other. It was precisely the mutual benefits from an intensive cultural and economic exchange that allowed Cyprus and the Levantine coast to flourish during a period of relative loss of material and immaterial culture in other regions of the Mediterranean.

¹⁰¹ See Iacovou 2006: 316 for detailed discussion

¹⁰² Iacovou 2006: 317

¹⁰³ Hdt.5.113 (Stesenor of kourion as *turannos*); Diod.19.62.6 (Androcles of Amathous as *dunastes*)

Euboea

So far the emphasis has been on the core region of the Eastern Mediterranean, but there was a third important actor in the network of interaction which included Cyprus and the Levant, namely Euboea. The general scholarly consensus is that the Greek homeland was among the regions more seriously affected by the Bronze Age ‘collapse.’ Like the Mediterranean region as a whole, the impact was nevertheless uneven, with some regions recovering quicker than others. The discoveries at Euboea in the past few decades have positively contributed to a major change of outlook about the history of Greece during the EIA.

The island of Euboea, which stretches along the Eastern coast of Attica and Boeotia shares similar geographical features as those outlined for the Levantine coast, namely small and bounded space, restricted agricultural resources and ideal seafaring conditions. It is a large island by Mediterranean standards, but it was its length which impressed the ancients most, sometimes referring to it as Makris (‘long island’). Its elongated form, with variation between 60 km at its widest to 3.2 km at its narrowest point, shares obvious parallels with the geography of the Levant. It is furthermore similar by its highly mountainous environment and limited arable land, with only four significant plains. This landscape was a key factor which influenced Euboea’s history. Thus, although the territory delimited by the central coastline between Eretria and Chalcis accounts for only a small fraction of the island’s total surface area, “the places in it are associated with nearly everything of note that we know about the island in antiquity.”¹⁰⁴

The two settlements strategically demarcate the largest and most fertile plain on the island, the subject of the only conflict from the EIA remembered in the historical tradition, the so-called Lelantine war. As for its advantageous position within the maritime landscape, Euboea represents the westerly end of a number of natural island-hopping routes between Central Greece, Western Asia Minor and further East to Cyprus and North Syria. Furthermore, its position

¹⁰⁴ Ridgway 1992: 14

guaranteed safe inner passage for sea traffic passing between Athens and the Northern Aegean.

In Homer's epics, the Euboeans appear only once as "Abantes breathing fury", in the famous catalogue of ships, where seven place-names on Euboea are given.¹⁰⁵ Among them Chalcis and Eretria are the only ones which stand out archaeologically, along with the unmentioned Lefkandi. However, the picture of Euboean settlements remains unbalanced, as ancient Chalcis remains largely unknown due to modern occupation. Nevertheless, the site suggests substantial human occupation going back at least to the middle Bronze Age. Much better excavated, Lefkandi also enjoyed occupation in the second millennium at a settlement beneath the Xeropolis mound, becoming particularly prosperous in the LBA. The final BA settlement shows that building standards and the overall quality of the pottery assemblage deteriorated, suggesting that Lefkandi was not unaffected by the series of disruptions affecting the Greek mainland.¹⁰⁶ Much more importantly however, around 1200 the subsequent LH IIIC occupants undertook an ambitious scheme of rebuilding, during which much of the earlier settlement was leveled away.¹⁰⁷ Xeropolis thus defies the general trend of wholesale destruction typical of the Greek mainland: the clearing and reconstruction suggest a need to improve and expand the settlement due to increasing population rather than to clear away debris.¹⁰⁸ Unlike many parts of the Aegean, the settlement of Lefkandi therefore provides evidence for not only continuity from the LBA but swift recovery and significant prosperity during the transition period and the subsequent EIA. Around 825, the site began to diminish in importance although it was not completely abandoned as previously assumed, while Eretria emerged around this time.¹⁰⁹ Due to this synchronicity it is commonly argued that Lefkandi was in fact the old Eretria, with the new

¹⁰⁵ Hom. *Il.* 626-636. Trans. By R. Fagles

¹⁰⁶ Every 2006

¹⁰⁷ Popham et al 1980: 7. This also explains why the evidence for the final stage of the LBA is so meager, since these layers ended up being destroyed (Every 2006: 1)

¹⁰⁸ Sackett and Popham 1972: 13. Lefkandi's Sub-Mycenaean period was punctured by three phases of destruction, but the settlement steadily developed and expanded into the Protogeometric period.

¹⁰⁹ Fox 2008: 168

settlement founded by Lefkandian refugees.¹¹⁰ The settlement history of Euboea during the transition into the EIA is therefore similar to that of the Levant and especially Cyprus, in that it is marked by the continuity of important settlements as well as fresh foundations, most probably through a process of relocation.

The political configuration of Euboea was ostensibly one of independent settlements often in competition with each other: they are presented as such already in Homer and in all subsequent literary sources. Toponyms offer another line of evidence. Over its history, the island was given some seven different names, although Walker has argued that only Euboea, Makris, Abantis and perhaps Ellopia are likely to have applied to the whole island.¹¹¹ In the *Iliad* we are given a dual appellation, since the island is referred to as Euboea but its inhabitants are called Abantes.¹¹² It has been suggested that this variety of names reflects the political separateness of the island's regions and the difficulties of intercommunication which contributed to this process of fragmentation.¹¹³ The primary unit of Euboean organization during the Archaic Age, namely the city-state, was thus already in its early form during the EIA.

The nature of the socio-political organization of Euboea is further suggested by the apsidal Protogeometric building at Toumba (c.1000-950), or *Heroön*, and the elite couple buried within it. It is generally agreed that the amount of material and human resources necessary for its construction, and the burial treatment of its occupants, point to the 'heroic' or princely status of the community's ruler. Such a 'royal' burial at Toumba fits in a larger Eastern Mediterranean elite grammar and funerary ideology, which hints at a similar

¹¹⁰ Walker 2004: 9

¹¹¹ Ibid, 3. **Abantis/Abantias**: Str. 10, 1, 3 C445; D.P. *Orbis descr.* 520; Eust, *ad Hom. Il. pert.* 536–41; Hes. fr. 3; St. Byz. s.v. Call. *Hymn.* 4, 20; schol. ad loc.; Menaikmos ap. Plin. *HN* 4, 64; Prisc. *Perieg.* 544 (*Geog. gr. min.* II 195); Nikephoros 512–54 (*Geog. gr. min.* II 462, ll. 12–13); Suid. s.v. **Makris**: Str. 10, 1, 2 C444; Agathemeros 5, 25 (*Geog. gr. min.* II 486). Str. 10, 1, 3 C445; Plin. *HN* 4, 64; D.P. *Orbis descr.* 520; Call. *Hymn* 3, 188; 4, 20 and schol. ad loc.; Scymn. 568; Eust, *ad Dion. Perieg.* 517; 520; Prisc. 514; schol. ad Ar. *Nu.* 212; Horn. *Il.* 2, 535 and schol. ad loc.; A.R. 2, 392 and schol. ad loc.; 4, 1175; Agathemeros, 5, 25; *E.M.* 389, 2 s.v.; **Ellopia**: Str. 10, 1, 3 C445; Euphorion, *P. Oxy.* 2528; **Okhe**: Str. 10, 1, 3 C445; **Khalkis**: Kallidemos ap. Plin. *HN* 4, 64; **Khalkodontis**: Plin. *HN* 4, 64; **Asopis**: Plin. *HN* 4, 64; Scymn. 569; and, of course, **Euboea**. For the mythology of the nymph Euboia: Eust. *ad Hom. Il. pert.* 2 535; cf. Str. 10, 1, 3 C445; Plin. *HN* 4, 64; Scymn. 567–7

¹¹² *Il.* 2.626

¹¹³ Walker 2004. For the original argument, see Wallace 1936

nature of ruling power. Although we certainly cannot identify Lefkandi as a city-state ruled by kings – as was the case of the Levant during this period – it is admissible to envision its elites as broadly similar to those buried on Cyprus, which by the 8th century had developed into the *basileis* of the Cypriote city-kingdoms.

The physical elements of a city-state are already well in place in the Homeric epics and Hesiod. In the *Odyssey*, Phaeacian Scheria is described as a city surrounded by high walls and having a paved *agora*, harbors and a sanctuary of Poseidon,¹¹⁴ in stark contrast to the Cyclopes who lack any such physical organization of their community.¹¹⁵ Similarly on the shield of Achilles, a well walled city is under siege¹¹⁶ and in *Works and Days* Zeus brings down punishment on people as he “either destroys their wide army, or their walls, or else makes an end of their ships on the sea.”¹¹⁷ The description of the shield of Achilles, which seems to highlight what the poet judged as the key features of a community, suggests that defensive walls were the main element which defined it physically. On Euboea, the settlement of Eretria of the 8th century echoes the description of Homeric Scheria, with fortifications, main streets, a harbor and drainage works on an impressive scale for such an early period.¹¹⁸

The situation of Euboea from the end of the LBA and throughout the EIA thus resembles the Levant and Cyprus in at least three important ways. It had similar geographical and economic contingencies (restricted land, limited agrarian productivity and prominence of the sea), which meant that the quick resumption of maritime endeavors was vital for the prosperity of its EIA communities. Furthermore, and unlike the general trend of the Aegean, Euboea was quick to recover from the major disturbances at the end of the LBA, with the settlement of Lefkandi showing not only continuity but expanding prosperity from the Sub-

¹¹⁴ “Then we will reach the polis, which is surrounded by a high bastion. There is a good harbor on each side of the city and a narrow causeway [...] Here, next to the fair sanctuary of Poseidon, is their agora, constructed from transported blocks of stone set firmly into the ground.”
(Hom.*Od.*6.262-72)

¹¹⁵ Hom.*Od.*9.105-29

¹¹⁶ Hom.*Il.*18.509-40

¹¹⁷ Hes.*WD.*241-47

¹¹⁸ Walker 2004: 90-98

Mycenaean period onwards. Finally, the island shows structural compatibility with the Levant and Cyprus in terms of its socio-political organization, characterized by a politically fragmented landscape of independent communities on the road towards city-state formation.

1.3 Conclusion

This chapter has aimed to provide the context of trans-regional connectivity in the Eastern Mediterranean during the EIA, by assessing the degree of disruption and processes of recovery following the end of the Bronze Age ‘collapse’ on the one hand, while examining the new political configurations on both the macro and micro scale on the other. I have argued for three important parameters shaping cultural interaction during the EIA. First, the end of the Bronze Age impacted the Mediterranean unevenly, with the regions of the Levantine coast, Cyprus and Euboea being among the quickest to recover while enjoying considerable continuity from the Bronze Age. In addition to their synchronous pace of recovery, the three regions were structurally compatible in terms of their socio-political organization and economic contingencies. These factors certainly impacted the chronology, extent and nature of contacts that developed between these regions. Finally, the EIA Eastern Mediterranean is marked by a unique political setting, where the major centralized powers that controlled international connections during the LBA either disappeared or receded, leaving a power vacuum, which in turn allowed for the emergence of a plethora of new actors who profited from the lucrative niche of maritime networks. The parameters affecting trans-regional interaction and exchange of the Eastern Mediterranean during the EIA thus emerge as substantially different from previous periods, but the notion of connectivity itself can be interpreted fairly vaguely. The next chapter therefore sets to define the concept and provide a working methodology for its analysis.

Social Networks Theory, the ‘small-world’ effect and weak ties

2.1 SNT basic principles

The idea of Mediterranean connectivity and interaction is currently a forefront topic in ancient history.¹¹⁹ In parallel, the past few decades have witnessed a significant rise of general interest in the concept of networks in both the exact and social sciences. Yet surprisingly, although Social Network Analysis has become well established in sociology and the sciences (particularly in physics), its impact in history and more specifically antiquity has been negligible. Fernand Braudel’s pioneering work was arguably the first to present the Mediterranean as a unit, with lines crisscrossing throughout in terms of *réseaux* or ‘networks.’¹²⁰ Shlomo Dov Goitein’s *A Mediterranean Society* similarly demonstrates a network of connectivity at a period when, to follow Pirenne’s Thesis, the Mediterranean was sharply divided between the two hostile civilizations of Christendom and Islam.¹²¹ Growing interest in the ‘Mediterranean’ as a heuristic concept culminated with Peregrine Horden and Nicholas Purcell’s important recent work *The Corrupting Sea*.¹²² Although neither Braudel nor Goitein employed the concept of networks for much more than its descriptive value, it is these global approaches which have provided a basis for current scholarship to build upon towards a networks approach.

The first serious application of networks theory to the ancient world emerged merely a few years ago, being the subject of Irad Malkin’s recent

¹¹⁹ See for example Karageorghis and Stampolidis 1998; 2003; Horden and Purcell 2000; Harris 2005; Malkin 2005

¹²⁰ Braudel, Fernand. *La Méditerranée et le Monde Méditerranéen à l’époque de Philippe II*. 2nd revised ed. 1966, 2 vols (vol.2 published 1973). London : Harper and Row. See Horden and Purcell 2000: 36-39 for a discussion and review of the implications of Braudel’s work.

¹²¹ Goitein, S.D. *A Mediterranean Society : The Jewish Communities of the Arab World as Portrayed in the Documents of the Cairo Geniza*. 5 vols. Berkley: Berkley University Press, 1999.

¹²² Horden, P., and N. Purcell. *The Corrupting Sea. A Study of Mediterranean History*. Oxford: Blackwell, 2000.

work.¹²³ A conference held at Crete in May 2006 and the resulting volume represents the first application by distinguished scholars of networks theory in ancient history (some recent applications in archaeology should be also considered).¹²⁴ Thus, the parallel flourishing of research on connectivity in Antiquity on the one hand and social networks on the other resulted in their imminent convergence. The growing popularity of the ‘network’ paradigm stems from its potential to break up assumed hierarchies and shift the focus of investigation, while simultaneously appealing to postcolonial and postmodern thinking.¹²⁵ It offers a novel way of understanding human physical and mental space.

The notion that things and people were interconnected during the EIA is by no means novel. The present work adopts the view that “focusing on networks does not entail simply adding on a new term to existing debates [...] but to explore issues that the limits of current paradigms fail to address effectively.”¹²⁶ In other words, the adoption of this heuristic tool is a deliberate choice stemming from the possibilities which it opens up for understanding the mechanics of connectivity. For a meaningful application of SNT to historical and archaeological topics, the very notion of ‘network’ requires some examination in detail, by looking at it both descriptively (identifying its presence) and as an instrument of analysis.

Finally, it is important to be aware of the potential dangers and limitations of applying such borrowed tools and to identify the ‘grey zones’ where network theory is not applicable. The most immediate implication for research questions related to Antiquity is that the qualitative, rather than quantitative aspects of network theory are most pertinent. This stems from the obvious problem of fragmented, non-representative numerical information from archaeological assemblages and literary records alike. Experimental archaeology as well as more

¹²³ Malkin 2005; Malkin 2011

¹²⁴ Malkin, I., C. Constantakopoulou and K. Panagopoulou. *Greek and Roman Networks in the Mediterranean*. London and New York: Routledge, 2009. For archaeological application see Graham, S. “Networks, Agent-Based Models and the Antonine Itineraries: Implications for Roman Archaeology.” *Journal of Mediterranean Archaeology* 19 (2006): 45-64.

¹²⁵ Malkin et al 2009: 3

¹²⁶ *Ibid*, 6

extensive information on aspects such as nautical technology, cargo sizes and composition may increase the potential for mathematical calculations, but these could hardly provide more than loose approximations.

The most basic definition of a network is a structure constituted of vertices or nodes which are linked to each other by connections called edges.¹²⁷ This simplified form becomes very rapidly complex, as there can be several different types of nodes and edges (henceforth referred to as actors and ties) within a single network, with a variety of properties associated to each (Figure 1). In the case of the EIA Mediterranean, actors can range from individual merchants and aristocrats to the entire population of a city-state or a larger geographical region. These can be connected by friendly ties such as guest-friendship or trading agreements but also by hostile ones such as piracy and state sponsored warfare. Social networks analysis thus zooms on the importance of relations between social entities, their patterns and implications.¹²⁸ This general framework derives from structural analysis, which argues that the best way to understand social categories is to examine the underlying relationships between actors.¹²⁹

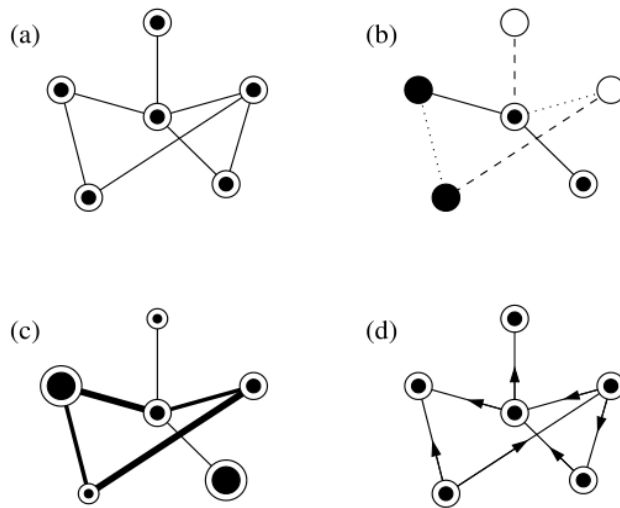


Figure 1 Examples of various types of networks (a) an undirected network with only a single type of vertex and a single type of edge; (b) a network with a number of discrete vertex and edge types; (c) a network with varying vertex and edge weights; (d) a directed network in which each edge has a direction (Newman 2004: 4)

¹²⁷ Newman 2003: 2; Malkin et al 2009 : 2

¹²⁸ Wasserman and Faust 1994: 3-10

¹²⁹ Berkowitz and Wellman 1988: 480; Wasserman and Faust 1994: 18-20

In order to exist, networks require repeated rather than occasional interaction over prolonged periods of time.¹³⁰ These lasting patterns of relations among actors form *structures*. By definition, networks are multi-polar and decentralized which gives them a flexible quality, allowing for a high degree of resilience in the case that nodes in a network are removed. This resilient property is most critical during periods of disturbance and instability when other more rigid and centralized organizational structures founder.¹³¹ Nonetheless networks exhibit a hierarchical structure. This implies that some actors enjoy better access to material and immaterial resources through the superiority of their ties (quantitatively and/or qualitatively), pointing to their high status within the system.¹³² Depending on how well connected an actor is in relation to other nodes within the network, he can be *locally*, *relatively* or *globally* central, with points of the lowest centrality considered as *peripheral points* (Figure 2).¹³³

Furthermore, most social networks have ‘community structure,’ meaning that actors are not distributed homogeneously within the system but instead form in clusters that are in turn linked to each other.¹³⁴ Archaeologically this is very intuitive, and can be loosely equated with the way in which distinct local material cultures are manifested. Social networks are further generally characterized by ‘assortative mixing’ as ties are established selectively or preferentially based on certain criteria or affinities.¹³⁵ Thus, whereas social networks may at first appear only loosely defined for lack of a strong formal arrangement, their structure is very far from random; real networks are governed by robust organizing principles, each having a highly distinctive signature.¹³⁶

¹³⁰ Sommer 2007: 99

¹³¹ Newman 2003: 15. Studies on the resilience of different types of networks all tend towards the same conclusion, namely that networks are robust against random vertex removal but considerably more vulnerable in cases of a targeted removal of the highest-degree vertices. Even in cases of strategic removal, only all or the majority of the highest-degree vertices need to be removed to completely dissolve a network, thus as long as *some* of these are preserved, the network remains functional even if reduced in strength.

¹³² Scott 1991: 166-75

¹³³ Scott 2000:81-88

¹³⁴ Newman 2003: 17-19

¹³⁵ Ibid, 16

¹³⁶ Ibid, 47

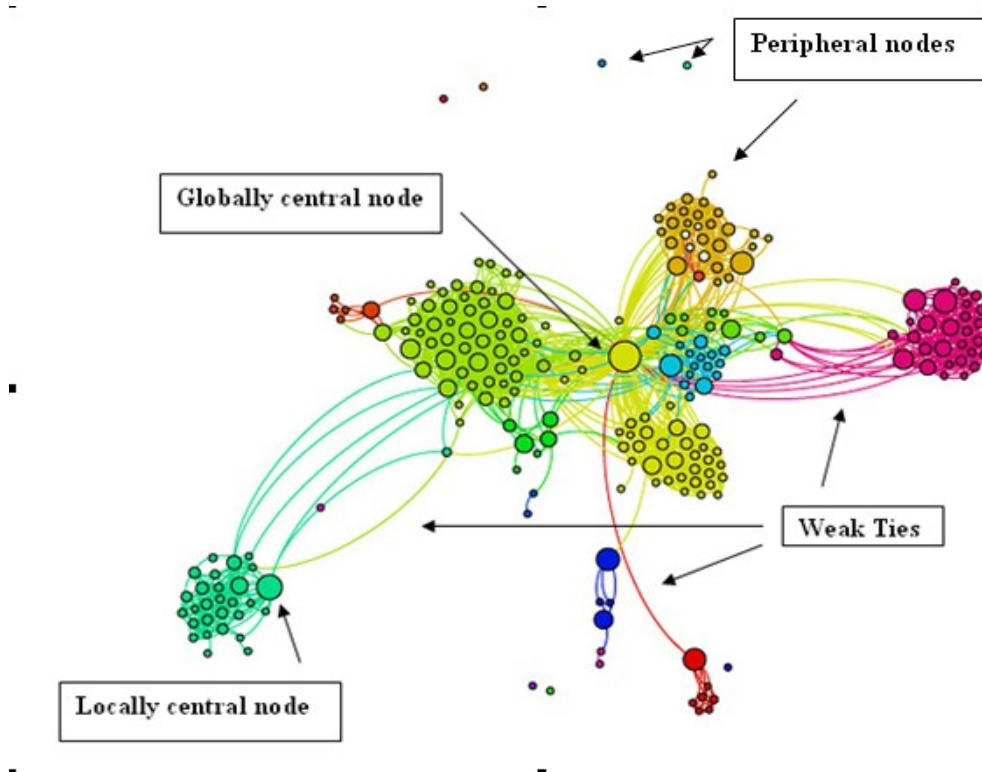


Figure 2 a hypothetical network involving ten distinct clusters of close ties. Weak ties serve as bridges between clusters without which these would be otherwise disconnected.

Networks furthermore have a unique property which affects connectivity, commonly termed the “Small World” effect. It stipulates that when a few random long-range links are established, these function as shortcuts which reduce the number of steps necessary for other nodes to connect to each other (figure 3).¹³⁷ A set of relatively small changes can therefore have a dramatic impact on a network’s global structural properties, and even very large networks can effectively function as a small world, where most pairs of actors are connected by a short path through the network. Such networks benefit from enhanced propagation speed, computational power and synchronizability” (i.e. efficiency).¹³⁸

¹³⁷ Watts 1999; 2003: 69-100; Watts and Strogatz 1998

¹³⁸ Watts and Strogatz 1998: 440; Newman 2003: 9

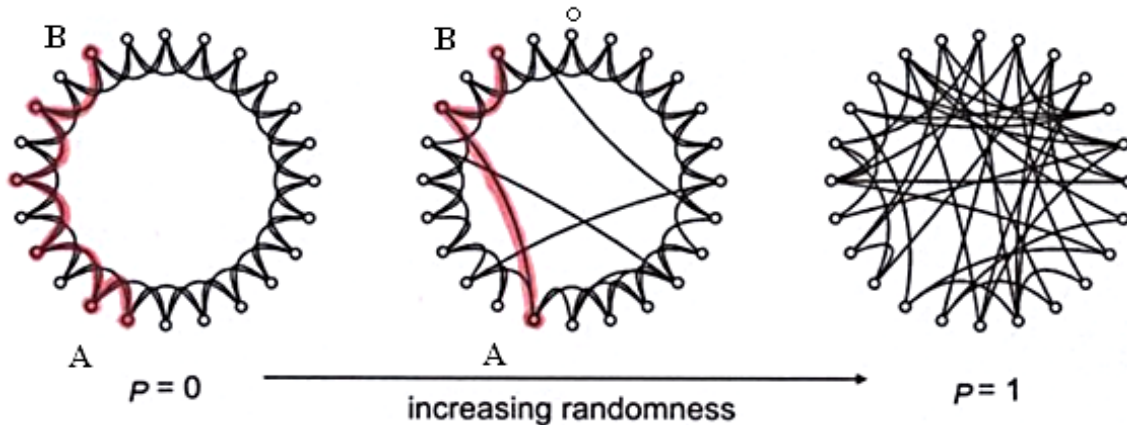


Figure 3 Random rewiring procedure for interpolating between a regular ring lattice and a random network, without altering the number of vertices or edges. The addition of a long-range random link reduces the number of steps required to reach point B from A from five to two.

Finally, networks theory distinguishes between ‘closed’ networks which are typically small and enjoy strong but often redundant ties, and larger ‘open’ ones characterized by ‘weak ties.’¹³⁹ The latter have a number of properties which makes them most conducive for a high flow of ideas and material goods due to their weak ties which function as the random long-range links necessary for the ‘Small World’ effect.

2.2 Open networks and the power of weak ties

In a highly influential paper called “The Strength of Weak Ties,” Granovetter first outlined an elegantly simple model of the crucial role played by weak ties in network cohesion and connectivity. At the basis of this hypothesis is the argument that a person’s acquaintances (weak ties) are less likely to be socially involved with one another in comparison to close friends (strong ties).¹⁴⁰ A cluster of strong ties means that most nodes will be *linked*, creating a *dense* matrix, where density has a strong correlation with inclusiveness.¹⁴¹ A web of an individual and his acquaintances on the other hand comprises a low-density network as fewer actors are interrelated. Acquaintances however have access to

¹³⁹ Sommer 2007: 99

¹⁴⁰ Granovetter 1973; 1983

¹⁴¹ Scott 2000: 70-74

their own distinct highly connected social structures. This simple observation has important implications, since each weak tie is not merely a trivial contact with an acquaintance, “but rather a crucial bridge between the two densely knit clumps of close friends.”¹⁴² Some weak ties are nonetheless actually embedded in an individual’s local social web. Therefore, those that do serve as connecting links with other groups are specifically distinguished as ‘bridging’ ties.

Building on these propositions and relating it back to the property of community structure (above), it follows that separate clusters would not be connected at all without the existence of bridging weak ties.¹⁴³ Individuals or communities enjoying a great number of weak ties therefore have access to information even from distant actors within the network, whereas those with few ones are typically insulated from the latest developments and ideas. Since individuals embedded in a cluster of proximal strong ties must navigate within the boundaries of established norm and precedent, innovation typically emanates from the margins and the edges where separate clusters come into contact and overlap.¹⁴⁴

The fact that bridging weak ties link different groups heightens the probability that the individuals coming into contact are significantly different from one another.¹⁴⁵ In an intimate social circle, codes of communication tend to be restricted – they are simpler as more meanings are implicit and taken for granted due to the familiarity of the actors with each other.¹⁴⁶ Conversely, bridging weak ties stimulate elaborate codes of communication: “they are exactly the sort of ties that lead to complex role sets and the need for cognitive flexibility.”¹⁴⁷ The access to such heterogeneous environments also promotes an individual’s opportunity for mobility as he navigates through new social circles.¹⁴⁸ The information exchanged between actors through weak ties is thus initially

¹⁴² Granovetter 1983: 202

¹⁴³ Granovetter 1973: 1363; 1983: 202

¹⁴⁴ Scott 2008: 102; Granovetter 1983: 216; Chubin 1976: 460

¹⁴⁵ Granovetter 1983: 204; Coser 1975

¹⁴⁶ Coser 1975: 256

¹⁴⁷ Granovetter 1983: 204

¹⁴⁸ Granovetter 1973: 1369-1373; 1974: 51-62

novel. However, this heightened degree of connectivity promotes cohesiveness over time, leading to the eventual emergence of homogeneous subcultures. It is important to stress that from a networks perspective, such larger entities of shared culture as implied by labels such as the Orientalizing Period represent a well advanced stage in a diffusion process rather than its initial establishment.

Tying networks theory to the main parameters so far established about the transition period at the end of the Bronze Age and the subsequent EIA leads to some interesting observations. As pointed out at the beginning of this chapter, connections linking actors all over the Mediterranean were developing throughout the Bronze Age, reaching a peak at the end of the period. The resilient property of networks provides an important predictive model for envisioning continuity across the disturbances which followed this high point. It is now well established that the series of disruptions which affected the Eastern Mediterranean at the end of the Bronze Age were neither uniform nor systematic. Although some sites were permanently abandoned, others continued uninterrupted, while even more settlements quickly rebuilt and resumed previous activities. Such heterogeneity means that the stability of the LBA Mediterranean network was not threatened through the targeted removal of a large number of key ties. Such an argument contradicts the archaeological evidence, and would further imply by default that the series of invasions and destructions in the Eastern Mediterranean c. 1200 were an organized, large scale undertaking which strategically targeted the majority of key settlements. All recent scholarship on the topic of the sea peoples in fact argues quite the opposite.¹⁴⁹ Ugarit can be taken as an ideal case in point, since the permanent abandonment of this very important LBA settlement did not disrupt the overall network of the Levantine coast during the EIA, which was in fact the region to recover the quickest alongside Cyprus. The resilient property of networks thus allowed for Mediterranean seaborne connectivity to continue while various other, formal political and economic systems fell apart. Thus, although

¹⁴⁹ See for example Iacovou 2006a; 2006b. for the case of Cyprus. Also several contributions in Gitin *et al* 1998. Increasingly it is argued that migrating peoples during the period actually contributed to the rapid recovery and revitalization of various settlements by bringing knowledge and various technological improvements with them.

c.1200 may represent a divide depending on the angle from which the period is approached, from a networks perspective, EIA connectivity expands and builds upon a system developing continuously from the Bronze Age. The desirability of an approach which covers a large chronological span as a unit that crosses various period divides is increasingly reflected in scholarship on Mediterranean connectivity.¹⁵⁰

The political vacuum and decentralization which characterize the EIA was in fact beneficial for the flourishing of an open network system and the proliferation of weak ties. Although functioning at a trans-regional scale, Bronze Age networks were much more closed as they were monitored and filtered through central administrative bodies such as palatial centers. As these levels of organization collapsed or were severely weakened, the lucrative niche of international trade markets became available to a number of new actors, effectively causing an ‘opening up’ of such avenues to a larger and more versatile clientele. In networks terms, this created an increased number of random ties reinforcing a ‘Small World’ effect. Finally, the structural compatibility of the three regions of the Levantine coast, Cyprus and Euboea and their early recovery naturally predisposed them to forging ties with each other through the principle of assortative mixing. Social Networks Theory thus has great potential as a heuristic tool for the exploration of trans-regional interaction of the EIA period, through its explicative power for the study of continuity and its particular approach to social ties. The power vacuum characterizing the period promoted a new kind of actor – fulfilling the function of weak ties – which defined the nature and intensity of connectivity.

2.3 Raiders and traders on the wine-dark sea

Mobility requires motivation, be it positive or negative. In the case of largely agrarian societies where one’s wealth is tied to the land, it is often met with great

¹⁵⁰ For example Karageorghis and Stampolidis, *Eastern Mediterranean: Cyprus-Dodecanese-Crete 16th-6th cent, B.C.*; Karageorghis and Stampolidis, *ΙΙΑΟΕΣ... Sea Routes... Interconnections in the Mediterranean 16th–6th Centuries B.C.*; Bonfante and Karageorghis, *Italy and Cyprus in Antiquity: 1500-450 B.C.*

reluctance. Hesiod's aversion of the sea and Tiresias' prophesy to Odysseus immediately come to mind: "carry your well-planned oar until you come to a race of people who know nothing of the sea, whose food is never seasoned with salt, strangers all to ships with their crimson prows and long slim oars."¹⁵¹ It is particularly significant then, that the Postpalatial Period is largely characterized by mobility.¹⁵² Whether this was caused by new opportunities or threat and insecurity is not as important as the mere fact that it was prevalent.¹⁵³ In all likelihood profiteers and victims were part of the same loop in a mutually reinforcing cycle of willingness to be on the move. The Homeric epics shed much light on the attitudes towards long-distance travel and the types of actors which were involved.

Odysseus' string of Cretan lies (a series of fictitious stories he recounts to several individuals while hiding his true identity) are particularly informative. Although these are obviously false, they are ironically presented as more believable than Odysseus' real story – and are meant to be plausible and convincing both to the audience of the hero and that of the poet.¹⁵⁴ The first is a made-up tale by a disguised Odysseus to his swineherd Eumaeus. In this narrative, Odysseus hails from Crete, born to a prominent local chief and a foreign concubine purchased as a slave.¹⁵⁵ A division of the wealth between the many sons forced the young aristocrat to seek his fortune elsewhere:

"I had no love for working the land, the chores of household either [...] No, it was always oarswept ships that thrilled my heart, and wars [...] long before we Achaeans ever camped Troy, nine commands I led in our deep-sea-going ships, raiding foreign men, and a fine haul reached my hands. I helped myself to the lion's share and still more spoils came by lot. And my house grew by leaps and bounds, I walked among the Cretans, honored, feared as well."¹⁵⁶

¹⁵¹ *Od.* 139-42

¹⁵² Dickinson 2006: 66. For a useful summary on the arguments regarding the 'sea peoples' see Niemeier 1998:47-8

¹⁵³ For a positive take on these trends see Muhly 1992; 2003; Morris 1997:540

¹⁵⁴ I assume that these are also largely reflective of the trends during at least the previous century if not also earlier. For a similar argument see Raaflaub 2004.

¹⁵⁵ *Od.* 14. 228-32

¹⁵⁶ *Od.* 14.254-266

The first part of Odysseus' story presents a scenario where a young local aspiring aristocrat finds an outlet in seaborne raiding in the face of scarce resources and competition at home. Eventually, one of his raiding expeditions in Egypt turns badly but he manages to win over a local protector and remains in Egypt for seven years where he amasses resources and experience.¹⁵⁷ His fortune changes yet again when a Phoenician convinces him to sail away in his ship: "he smoothly talked me round and off we sailed, Phoenicia-bound, where his house and holdings lay. There in his care I stayed till the year was out."¹⁵⁸ They then set out on a trading expedition to Lbya where his Phoenician host plans to sell him into slavery, but this outcome is prevented by a shipwreck, followed by another act of local hospitality and rescue and more treacherous traders.¹⁵⁹

The picture presented in the passage is one of a lively exchange and interaction of peoples. The story of Cretan Odysseus provides one possible scenario in which mobility is perceived as desirable. His father is a wealthy man with many sons, who unlike Odysseus were born from wedlock. Although Odysseus says that his father treated him "on par with all his trueborn-sons," the contrast between him and his half-brothers is made explicit and is thus not coincidental.¹⁶⁰ His fragile social status is clearly affirmed upon the death of his father, when his brothers carve out the wealth and leave nearly nothing for Odysseus. Similar tension is hinted at in the *Iliad*, where Medon, bastard son of Oileus, was banished for killing his stepmother, which suggests a conflict of interest.¹⁶¹ The case of Cretan Odysseus is a delicate situation: raised within the household of a prominent individual yet not fully integrated among his kinsmen, he is an aspiring young individual whose communal status is compromised by a division of inheritance. The story presents a lifestyle of seaborne raiding as a viable alternative, one that can ensure both wealth and status. Cretan Odysseus' birth meant he was more loosely tied by family and communal bonds, while at the

¹⁵⁷ *Od.* 14. 276-321

¹⁵⁸ *Od.* 14.227-229

¹⁵⁹ *Od.* 14.330-404.

¹⁶⁰ *Od.* 14. 233. The same treatment is presented in the *Iliad* for Teucer, whose father Telamon tended him in his own house although he was a bastard (*Il.* 8.324)

¹⁶¹ *Il.* 15.393-6

same time his upbringing would have provided him with a warrior's training and access to resources (such as retainers) beneficial for his new occupation. He thus represents one form of mobile actor – a young aristocrat driven by necessity and equipped with the means for such an undertaking.

Cretan Odysseus presents piracy as a profession with greater appeal than landowning, granted he could be purposefully casting his occupation in a favorable light after the fact. It is the attitude of the Cretan community however that is most significant, as it treats him with fear and respect. His marriage to a woman from a wealthy landowning family is the most explicit act of reintegration within the higher social sphere.¹⁶² Such an attitude remains consistent throughout both the *Iliad* and *Odyssey*, as raiding is presented as a worthy heroic occupation. The Homeric *basileis* often engage in such activity and do not shrink from boasting about it, while a common formula in addressing travelling strangers for the first time includes a casually formulated inquiry about their business, including whether or not they are pirates.¹⁶³

Cretan Odysseus' raiding lifestyle leads him to many encounters, some hostile but others hospitable. In the process he experiences reversals of fortune, lives in foreign countries for extended periods of time, and joins seaborne expeditions with various foreigners. His mobility is not defined only geographically, but up and down the social ladder. Particularly striking is the fluidity with which the young Cretan is able to surf along sea-lanes and interact with foreign communities: neither ethnic nor regional identity is shown to hamper the nature of these exchanges. His occupation is perceived as highly lucrative yet risky and unpredictable – an environment where malleability and readiness of action would have been particularly valuable.

In response to Odysseus' tale, the swineherd Eumaeus shares his own story, largely similar in its overall structure. He is a local prince betrayed by his nurse, a Phoenician slave woman part of his father's household, and ends up

¹⁶² *Od.* 14.241

¹⁶³ "Where did you sail from, over the running sea-lanes? Out on a trading spree or roving the waves like pirates. Sea-wolves raiding at will, who risk their lives to plunder other men?" (*Od.* 3.79-83) Also *Od.* 9.285-8

abducted by Phoenician traders which sell him as a slave to Odysseus' father Laertes.¹⁶⁴ A passage in his tale illuminates the nature of the interaction:

“One day a band of Phoenicians landed there. The famous sea-dogs, sharp bargainers too, the holds of the black ship brimful with a hoard of flashy baubles [...] the rovers stayed on with us one whole year, bartering, piling up big hoards in their hollow ship, and once their holds were loaded full for sailing they sent a messenger, fast, to alert the woman. This crafty bandit came to my father's house, dangling a golden choker linked with amber beads.”¹⁶⁵

The story points to an important but archaeologically invisible resource and item of trade – namely slaves – which contributed to a net exchange of people, skills and ideas. These foreigners are often portrayed in close and trusting positions within their master's household, such as the Sicilian woman caring for Laertes and Eumaeus' Phoenician nurse, entrusted with the upraising of a local aristocrat's children.¹⁶⁶ This would have placed them in an ideal position to transmit some of their cultural background and knowledge, in addition to practical skills: the Phoenician woman is singled out as “skilled at weaving lovely things.”¹⁶⁷

Raiding and the net exchange of peoples which it produced through slavery is therefore portrayed as normal and common in the Homeric epics. Such evidence of prevalent piracy has often wrongly been interpreted as either the cause or expression of a serious disruption in maritime connectivity – an index of widespread insecurity inimical to commerce. The problem of such an equation is the assumption that commerce and predation must necessarily be opposed. On the contrary, piracy suggests the maintenance of trading links and institutions on a scale worth plundering – it is in a profound symbiosis with commerce and serves as an outward expression of persistent exchange. In Horden and Purcell's words, “raiders need traders upon whom to prey, then. But those raiders are also, in a stronger sense, part of the world of trade; they are not just parasites.”¹⁶⁸ From a networks perspective, it hardly matters whether exchange was conducted through

¹⁶⁴ *Od.* 15.353-541

¹⁶⁵ *Od.* 15.465-69; 510-515

¹⁶⁶ *Od.* 24.232-4 ; *Od.* 15.469

¹⁶⁷ *Od.* 15.469

¹⁶⁸ Horden and Purcell 2000 : 157

illegal or institutionalized channels, as long as there is mobility of material and immaterial goods. As a means of capital accumulation, piracy also could have provided a basis for other, more legitimate endeavours. The story of Eumaeus illustrates this well, as the band of Phoenicians which abducted him is shown to engage in both trade and raiding. There is a conspicuous lack of sharp distinction between the occupations of these mobile actors – the dividing line between adventurous aristocrats, pirates, mercenaries, merchants and skilled craftsmen was often blurred.

What does appear certain is that some individuals transformed seaborne activity into a hazardous but potentially lucrative lifestyle that required both cognitive and occupational flexibility. That is not to say the EIA period was crowded with mobile opportunists. Cretan Odysseus' lack of interest in working the land would not have been sustainable without the backbone of stable communities of landowners like Hesiod. Differences in outlook and orientation could arise within a group or even a family, as illustrated by Hesiod's father who left Aeolis and crossed the sea in search of new opportunities. Mobility could arise from a plethora of reasons: exile arising from communal conflict, raiding, trade, travelling craftsmen, slavery, intermarriage, or simply the search for better conditions. In addition to the exchange of goods and peoples, these ventures provided various opportunities for sharing information and exploring the economic potential of distant locations, as illustrated in Eumaeus' story of Phoenician tradesmen who remained at their port of call for over a year.

Relating this back to the political vacuum of the EIA, these ventures do not appear to require centralized organization such as the royal palaces of the Bronze Age.¹⁶⁹ Rather, the majority of them were propelled and performed on a much more modest scale, be it several tradesmen pooling resources together for equipping a merchant vessel or a local aristocrat and his small band in the manner of Odysseus. The political situation of the EIA thus promoted the exploitation of seaborne economic avenues to a larger spectrum of actors free to operate autonomously or semi-autonomously. Although the scale of seaborne enterprises

¹⁶⁹ Cf. Sommer 2005: 97-105 contra Aubet 1993: 77-118.

decreased as they were no longer financed by central powers, their number as individual occurrences would have increased. The Homeric stories suggest that for some individuals this was a livelihood and a lifestyle, a phenomenon which Osborne describes as a “mobile population” sailing widely across the Mediterranean in search of profit.¹⁷⁰

From a SNT perspective, these new kinds of Mediterranean travelers can be relatively confidently understood as ‘weak ties’ on several grounds. Although the degree of interaction during the LBA was high, the fact it was controlled through centralized institutions made it much more of a ‘closed’ network, in the sense that trade was channeled through specific avenues. During the EIA, this no longer holds, as anyone able to equip a relatively small operation could try his luck within the seaborne niche. In other words, a small community, or a social stratum within a community, which previously had no access to maritime endeavors, was provided with new outlets. This effectively heightened the possibility for a larger number and variety of individuals to be active, and as a consequence also heightened the number of occasions for previously unconnected nodes to interact with each other (i.e. a greater number of weak ties). Although this new dominant form of small scale interaction was on the individual level both less organized and systematic, taken in its totality it provided both more frequent and varied trans-regional interaction. As such, it becomes possible to argue for an apparent informality of relations coupled with certain regularity in the exchange of goods and information. Thus, the political vacuum of the EIA and the resultant nature of seaborne interaction make the concept of an ‘open’ social network dominated by ‘weak ties’ a particularly suitable framework for studying the structure and mode of operation of Mediterranean exchange during this period.¹⁷¹ The growing number of weak ties also provides an explanation for the further intensification and rapid acceleration of the process of exchange and connectivity, until one reaches the 8th and 7th centuries which scholars see as a the “first really busy period of traffic, to the farthest West and throughout the Aegean.”¹⁷² SNT

¹⁷⁰ Osborne 1998: 258

¹⁷¹ Cf. Sommer 2009: 97

¹⁷² Boardman 1990: 179

thus provides a framework for studying Mediterranean connectivity both at the macro-scale (a *longue durée* perspective on how it developed and persisted throughout the period divide of ca.1200) and the micro-scale (the specific modes of operation).

An Eastern Mediterranean Seascape: conceptualization, infrastructure and technology of a maritime milieu

The question of potential has already been addressed in the opening chapter, where it was argued that the three regions of the Levant, Cyprus, and Euboea were naturally predisposed towards interaction with each other due to their swift recovery from the disturbances at the end of the LBA, their structural compatibility, and the general opening up of the maritime niche to new autonomous actors due to the political power vacuum of the EIA. This chapter expands on this last point by considering the channels of transmission through which trans-regional relations in the Eastern Mediterranean during the EIA took shape. By examining the entire complex of maritime infrastructure, including harbour facilities, nautical technology, and codes of diplomatic conduct, the means and motivation behind connectivity can be assessed with greater clarity.

3.1 The Mediterranean seascape: imperatives, potential and conceptualization

A big portion of the lively redistributive processes of any period in antiquity have become invisible to modern observers, but this problem is particularly acute for the EIA Eastern Mediterranean due to the loss of literacy in the Aegean and its scarcity on Cyprus. What have remained nearly identical however are the geographical landscape, sea currents, and winds that, before the invention of steam, were an ever-present factor affecting maritime connectivity. Even shorelines, which are most subject to change, can have their ancient outline reconstructed fairly accurately through geo-morphological studies.¹⁷³ Using these constants, the seascape of the EIA can be reconstructed by taking into

¹⁷³ For an excellent example of such reconstruction, see Marriner *et al* 2008 for the island of Tyre and its harbour facilities.

consideration the ancient perceptions and approaches towards geography as well as some key aspects of human cognition affecting the conceptualization of space.

During antiquity, tradition put centrality on the sea as a shaper of the land, not the other way around. One may recall Plato's famous passage about the Greeks who live like frogs around a pond,¹⁷⁴ but also Strabo who elaborates this theme in a less metaphorical manner: "Most of all it is the sea that delineates precisely the layout of the land, creating gulfs, sea-basins, traversable narrows and, in the same way, isthmuses, peninsulas and capes; in this the rivers and mountains also play their part."¹⁷⁵ The unity of the sea is also stressed much earlier in the Semitic languages of the Levant of the EIA, where the term "Great Sea" is widely diffused – a concept first attested in Greek by Hecataeus of Miletus.¹⁷⁶

Horden and Purcell, whose work *The Corrupting Sea* provides an invaluable basis for approaching Mediterranean unity, argue that this logical priority of the sea was not purely the product of abstract thought, but largely developed from the practical reality of the sea as the principal agent of communication.¹⁷⁷ Their main thesis is that the distinctiveness of Mediterranean history "results from the paradoxical coexistence of a milieu of relatively easy seaborne communications with quite unusually fragmented topography of microregions in the sea's coastlands and islands" which effectively magnifies the unity of the sea and its coastlands in a way exceeding anything predictable for a continent.¹⁷⁸ The Mediterranean must therefore be envisaged in terms of an inside-out geography where the sea is the interior and the land is the fringe as distance is inverted – with places linked by water being always 'close' while land neighbors can be quite distant in terms of interaction.¹⁷⁹ Thus, although fragmentation is common to landscapes in general, it is the unusual degree to which the Mediterranean world is subdivided that makes maritime

¹⁷⁴ Pl. *Phd.* 109B.

¹⁷⁵ Strabo. 2.5.17.

¹⁷⁶ for instance in the Bible: Num.34:6,7; Josh. 1:4, 9:1, 15:47; Ezek. 47:10,15,20

¹⁷⁷ Horden and Purcell 2000: 11

¹⁷⁸ Ibid, 5

¹⁷⁹ Ibid, 133

communications the most essential and efficient ‘structure’ that overcomes segregation.

Islands in particular play a focal role as nodes and meeting points, being at the center of this inverted geography with the sea perceived as an open and uniform expanse between landfalls.¹⁸⁰ The concept of ‘islandscapes’ further expands the maritime milieu as an analytical unit, by including in the physical definition of islands both land and sea, along with their human made modifications.¹⁸¹ In the ancient tradition, the conceptual primacy of the maritime milieu and the centrality of islands are exemplified by the Greek term *περαία*, which defines pockets of mainland territory in relationship to offshore islands rather than vice versa. Such attitudes are already hinted at as early as the *Odyssey*, where Odysseus has a portion of his flocks raised on the mainland.¹⁸² As we shall see in further detail, this notion was natural in the Levant since the BA, the most notable case being the island of Tyre which, during the EIA, progressively expanded its hinterland on the coast.

Another important principle in the conceptualization of space further outlined by Horden and Purcell is the visual ordering of geography. This is a basic but powerful cognitive process through which individuals understand the relationship between their immediate sphere of movements and larger horizons using chains of perceptibility that are created by looking from one vantage point to the next. Nowhere else do these lines of mutual visibility appear as obvious and natural to use than in the maritime sphere: “the shores, with their usually clear unilinearity and their easily intuited sequence of prominent features, readily assist the conceptualization of space.”¹⁸³ The Mediterranean basin in particular enhances this phenomenon further thanks to the mountainous nature of many of its coastlands and its multiple islands. This notion is especially true for the eastern Mediterranean, where, except for a direct route towards Egypt through deep sea,

¹⁸⁰ D’Arcy 1997: 75

¹⁸¹ Broodbank 2000: 21-3

¹⁸² *Od.* 14.115-6. Also *Od.* 20.203-5 where Philoetius brings flocks for the suitors from the mainland (trans. R. Fagles)

¹⁸³ Horden and Purcell 2000: 126

most areas have a landmass in sight.¹⁸⁴ A visual ordering of geography and the importance of lines of visibility is repeatedly made evident in the Homeric epics. Such instances include: cases when gods or men climb on peaks or higher ground to gain a panoramic view of a larger area;¹⁸⁵ locations (especially islands) defined by their visual relation to one another;¹⁸⁶ the recurring concern with the sight of land while at sea;¹⁸⁷ and literal references to land markers such as mountains and famous warriors' grave-mounds.¹⁸⁸ Odysseus' description of his native land makes this stress on visual relationships particularly clear: "sunny Ithaca is my home. Atop her stands our seamark, mount Neriton's leafy ridges shimmering in the wind. Around her a ring of island circle side-by-side, Dulichion, Same, wooded Zacynthus too, but mine lies low and away, the farthest out to sea, rearing into the western dusk while the others face the east and breaking day."¹⁸⁹

In addition to lines of visibility, maritime navigation was further shaped by the imperatives of weather and currents. While nearly all the prevailing winds across the Mediterranean blow from between northwest and northeast, the general direction of the movements created by the flow of the Atlantic water through the straits of Gibraltar is anticlockwise, which means that winds and currents were often two powerful yet opposing forces to be dealt with by the ancient mariners of the Mediterranean. The most efficient way to undertake long-distance voyages, and especially those from east to west and south to north, was therefore to use the chain of islands and coastlands in the northern waters of the Mediterranean, thus taking advantage of both currents and the daily cycle of coastal breezes in order to

¹⁸⁴ see map after Horden and Purcell 2000: 125

¹⁸⁵ "But the mighty god of earthquakes was not blind. He kept his watch, enthralled by the rush of battle, aloft the summit of timbered Samos facing Thrace. From there the entire Ida ridge swung clear in view, the city of Priam clear and the warships of Achaea." (*Il.* 13. 12-16). Also *Il.* 2.901-3; 4.585-6; 8.60-2; 8.193-5; *Od.* 10.160-5. Notice that unlike Zeus, Poseidon and Apollo who sit on mountain peaks in order to scrutinize battle developments, when Athena convinces Ares to stay away from fighting she takes him aside on low ground, on the banks of Scamander (*Il.* 5.39-41).

¹⁸⁶ *Od.* 3.89; 4.395-7; 4.755; 4.949-50; 9.129-30; 21.386-7

¹⁸⁷ *Od.* 12.435-8

¹⁸⁸ "I'll strip his gear and haul it back to sacred Troy and hang it high on the deadly archer's temple walls. But not his body: I'll hand it back to the decked ships, so the long-haired Achaeans can give him full rites and heap his barrow high by the broad Hellespont. And someday one will say, one of the men to come, steering his oar-swept ship across the wine-dark sea, 'There's the mound of a man who died in the old days, one of the brave whom glorious Hector killed.' So they will say, someday, and my fame will never die." (*Il.* 7.96-105) *Il.* 2.811; 24.349; *Od.* 11.59

¹⁸⁹ *Od.* 9.23-9

counter the prevailing winds which would otherwise render northern and western voyages impossible.¹⁹⁰

The need for visible seamarks and the peculiarities of winds and currents made island hopping and coastwise navigation defining features of maritime connectivity in the Mediterranean. The περίπλους – literally ‘sailing-around’ – which compiled useful information about harbours, points of anchorage, coastal landmarks, distances and climatic factors, is the most direct formulation of a response to these contingencies. This specialized literary genre was already well established in the Archaic Age, but its roots reach much further back since both the *Odyssey* and the much earlier report of Wenamun focus on maritime travel and exploration.¹⁹¹ Certainly, the interest for such literary works is an Eastern Mediterranean phenomenon rather than specifically Greek, and was preceded and complemented by a much larger pool of information preserved orally since ancient navigation “depended on a vast and intimate knowledge of position-finding factors that were entirely committed to memory.”¹⁹² These appear prominently in the *Odyssey*, and included an understanding of winds and their tendencies, knowledge of sea currents and observation and position of the sun and stars.¹⁹³ Seafaring knowledge thus much resembled that of an artisan’s skill, and included mental maps that incorporated time, direction and an ordered sequence of landmarks that engaged experience, memory, inherited knowledge, place-naming, and stories of the sea.¹⁹⁴ The latter two served as important memory aides, the evidence for which is preserved in toponyms and myths centering around sea ventures and distant localities.¹⁹⁵

¹⁹⁰ Pryor 1988: 14; Horden and Purcell 2000: 138

¹⁹¹ See Burian 2011 for known periploi of the Archaic Age

¹⁹² Wachsmann 1998: 299

¹⁹³ Stars: “So saying, he stirred on Athene that was already eager, and down from the peaks of Olympus she went darting. Even in such wise as the son of crooked-counselling Cronos sendeth a star to be a portent for seamen or for a wide host of warriors, a gleaming star, and there from the sparks fly thick” (*Il.* 4.73) Also *Il.* 5.1; 8.553; 10.247; 21.227; 22.25; 23. 226; *Od.* 5.262; 12.302; 13.93; 14.459. Also the epithets “starry heaven” (*Il.* 4.30; 5.767; 6.102; 7.41; 15.352; 19.114; *Od.* 9.526; 11.13; 12.374) and “starry sky” (*Od.* 20.102). Winds: *Il.* 1.475; 2.142; 2.394; 4.419; 6.342; 7.1; 7.54; 9.1; 11.299; 13.788; 14.388; 15.1; 15.379; 15.592; 19.369; 19.404; 21.324; 23.192; *Od.* 12.432

¹⁹⁴ Broodbank 2000: 22–3

¹⁹⁵ See Lane Fox 2008 for extensive examples

An examination of Mediterranean geography and the cognitive processes which shaped ancient perceptions of this maritime landscape thus provide some important insights for reconstructing trans-regional networks of the EIA. First, the unusual degree of microregional fragmentation of the Mediterranean basin highlighted even more the primacy of the sea as a connectivity agent, creating an inside-out geography uniting coasts and islands. From this standpoint, the three regions of the Levant, Cyprus and Euboea should be therefore examined as part of a single maritime geographical unit rather than belonging to their immediate inland regions. We may safely assert that for societies ringing the eastern Mediterranean, maritime travel was the most intuitive and naturally advantageous means of establishing contact. Furthermore, the visual ordering of geography and the demands of winds and currents gave primacy to coastal travel and island hopping. This particular type of navigation increases the number of stopping points along travel routes, thus naturally providing enhanced exposure to trans-regional encounters.

The factors highlighted thus far can be treated as constants given the limitations of ancient nautical technology, but although they outline the *potential* for Mediterranean seaborne interaction, they cannot account on their own for the degree of connectivity of a given period. The latter can be fully understood only by including the specific motivations and means, which are always culturally informed. Like any other technology, maritime infrastructure is expanded or relegated to relative unimportance in the face of profound cultural manifestations or needs.¹⁹⁶ Likewise, the sea can be perceived as an agent of connectivity, but may just as well be seen as “an immense threshold, bridge or barrier between what is near and familiar and what is far and exotic.”¹⁹⁷ Such a duality is best exemplified by the conceptualization of islands, which paradoxically represent both essentializing metaphors for insularity and isolation, and focal nodes in much broader networks where various communities meet.¹⁹⁸ Despite the potential which the Mediterranean provides, isolation and connectivity have therefore to be treated

¹⁹⁶ Westerdahl: 1992; Adams: 2001

¹⁹⁷ Helms 1988: 24-5; Knapp 2008: 19

¹⁹⁸ McKechnie 2002: 129; Pearson 2004: 129

as relative phenomena. Thus, it is only during the BA that maritime travel first develops on a truly intensive scale in the Mediterranean. The ‘human seascape’ – which includes the complex of both physical geography and the artificial infrastructure which alters it – has therefore much to offer for evaluating cultural priorities and attitudes towards maritime travel. These in turn can be used as an indicator of the importance and intensity of trans-regional interaction during the EIA.

3.2 Maritime infrastructure: settlements patterns and harbours

The distribution of major sites in the three regions of focus is the most straightforward and clear pointer of an orientation towards the sea. Both on Euboea and Cyprus, the most important settlements of the LBA and EIA form a chain along the coastal strip with the most favorable conditions for navigation and anchorage. On Cyprus, the first urban centers which appear during the LBA are all on the southern coast, their locations selected for maritime trade even at the expense of proximity to key resources. For example, the eastern coast of Cyprus, with its outlook on the Levant, was developed even though it was at a distance from the Troodos massif – a source of both ores and timber.¹⁹⁹ Finally, and perhaps the most indicative, are the fresh EIA Cypriote foundations. While during the LBA urban centers were clearly chosen close to the sea, they were still set back from the coast. The new EIA foundations in comparison are directly at, or near a harbour.²⁰⁰ This clear shift suggests further intensification of a maritime orientation rather than a period of introversion and insularity.²⁰¹ Whatever disturbances plagued coastal settlements of the eastern Mediterranean at the end of the LBA, the benefits to counterbalance them were clearly greater. Finally, in the Levant itself, priority of access to the sea was pushed even a step further, with

¹⁹⁹ Raban 1998: 429

²⁰⁰ Smith 2009: 4. The most clear example of this phenomenon is the abandonment of the LBA settlement of Enkomi, to be replaced by Salamis.

²⁰¹ A departure from inland placements was also witnessed elsewhere in the Mediterranean. The palace of Ugarit for instance was separated from the harbour by less than two kilometers (Yon 1997).

a number of settlements established directly on small offshore islands, notable cases being Tyre, Arados and Perea.²⁰² The distribution of major settlements on Euboea, Cyprus and the Levant during the EIA thus suggest further pursuit of a strong maritime orientation undertaken during the LBA. Rather than exhibiting greater introversion and insecurity, the period shows not only a continuation in development but also an intensification in terms of efficiency and improvements, a trend apparent not only in settlement patterns, but the entire maritime infrastructure in place to support these coastal sites.

The dramatic increase in knowledge of ancient harbour installations and shipping during the last thirty years has allowed for the discussion of trans-regional exchange to expand beyond the analysis of imported objects such as pottery.²⁰³ Harbours of the EIA shed light on the scope of connectivity by reflecting the resource investment of communities and individuals into the creation and maintenance of a maritime infrastructure and the development of new technologies, as well as providing a general idea of the scale of maritime operations they were meant to support. As with settlements, the general trend in harbour installations of the Eastern Mediterranean is one of continuity rather than breakdown, with a series of renovations and investments beginning around 1300 which continued with an accelerated pace during the EIA.²⁰⁴

Towards the end of the BA, a new type of harbour facility built of ashlar courses with huge headers and quays was introduced in the Levant and Cyprus.²⁰⁵ Among the best examples are Kition and the south harbour at Dor which are identical in shape, dimensions and components. This has led scholars to suggest similarities and possible diffusion of technology, stressing in particular the role of the ‘sea peoples’ and other migrants from the west as contributors to innovation in

²⁰² This typical Phoenician practice was also replicated in the west, for instance at Cadix and Castillo of Doña Blanca in Spain and Rachgoun and Siga in Algeria. Also relevant in this context is the earliest Euboean colony in the west, Pihtekoussai, which was likewise founded on an island with ready access to the mainland – a choice driven by similar needs and most probably direct Levantine input.

²⁰³ For an extensive bibliography on recent works see Marriner *et al* 2008

²⁰⁴ Relevant settlements include Enkomi, Kition, Maa and Toumba Tou Skourou on Cyprus and Ras ibn Hani, Tyre, Acco, Tel Nami, Dor, Aphek and Deir el-Balah in the Levant.

²⁰⁵ Raban 1998: 428

the region of the Levant.²⁰⁶ However, the data available at present does not lend itself to any pinpointing of origin and transfer, nor should it be forced to, since it provides a number of other very important indicators. There is no doubt that the end of the BA was a period of mobility, and that such a state would have promoted the exchange and diffusion of technology, regardless of the identity of the actors. What is more significant is that the regions of the Levant and Cyprus not only had access to such know-how, but had the interest and means to put it into use. At Cyprus, the centers of Palaipaphos and Kition stand out as remarkable for their architectural achievements in the 12th century, having at their disposition the human and material resources to erect *ashlar*-built *temene* and ritual architecture of unprecedented monumentality.²⁰⁷ Such evidence is also documented on the Levantine coast, where monumental architecture and expanding settlement size is evident even in the south where there was supposedly most instability.²⁰⁸ The adoption of a new type of monumental harbour facility in the Eastern Mediterranean at the outset of the EIA therefore points not only to contact and diffusion, but to similar means and investment.

The need for a more extensive artificial maritime infrastructure was intensified during the last two centuries of the 2nd millennium because of the sea level which rose by at least one meter, which reduced the gradient of the outflowing coastal rivers and must have blocked their outlets with silt and sand-bars.²⁰⁹ This process would have closed off most of the riverine anchorages which were predominant during the LBA and generally reduced the number of naturally suitable anchor locations. The second main harbour innovation of the EIA – the so-called “cothon” – which became popular during the 11th and 10th centuries may be related to this phenomenon, since it seems to be a development from the BA river outlet anchorages but is almost entirely artificial. This type of dug-out basin on land with a well-controlled navigation channel to the open sea with stone built quays and retaining walls shows a willingness to expend considerable efforts in

²⁰⁶ Shaw 1990; Raban 1991; Raban 1988

²⁰⁷ Webb 1999: 288

²⁰⁸ Bauer 1998

²⁰⁹ Raban 1998: 432

the creation of extensive harbour facilities in the absence of naturally suitable havens.

Overall, changing climatic conditions and shifting settlement hierarchies during the EIA meant that many new harbour facilities had to be established, while existing ones required constant upkeep, modification and even relocation in order to accommodate the altered interface of shores and excessive siltation. The cultural response in the Levantine region and Cyprus during the period was one of maritime intensification despite of, and in reaction to these difficulties, through technological innovation and significant expenditure in the maintenance of sophisticated sheltered harbours basins. Such an artificial maritime infrastructure of monumental quality that was widespread at the trans-regional level has important implications. First, it points to a shared system of facilities able to accommodate a network of supra-regional scope. Second, the degree of investment in such permanent structures would have made no sense if the debit of maritime traffic was negligible. It is thus a good indicator of year-round maritime activity on a scale significant enough to make these efforts worthwhile. A closer look at two such harbour complexes belonging to settlements of different size and importance (Atlit and Tyre) serves to further illustrate these points.

Atlit was a small Phoenician settlement on the Carmel coast with an artificial harbour built during the EIA, whose use was discontinued at the end of the Persian era. This settlement is invaluable for the study of early Levantine harbours, because it is a single-period construction with no later superstructures and clearing, contrary to the cases of Sidon and Tyre. In addition, radiocarbon analysis of wood samples from one of the harbour's moles (a protruding jetty) has so far provided the only absolute date for such a facility for the EIA, dated to the late 9th century.²¹⁰ Expanding upon the LBA invention of header sea-walls, Atlit's harbour was constructed in a new EIA style of free-standing moles and double-sided quays, of the same kind of conception, planning and building techniques common to other Phoenician harbours. Some of these harbours were renovations and modifications of existing ones such as Arwad, Tyre and Sidon while others

²¹⁰ See Haggi 2010: 279 table 1

were built at new types of sites. Technological innovation thus continued throughout the period and was adopted with a certain degree of uniformity trans-regionally, Atlit representing a standard Phoenician model adopted in the northern Israelite region.

The harbour was built on an ideal location, carefully selected on the northeastern side of a rocky promontory adjacent to two natural bays, the northern being the best-sheltered and the southern being the second largest on the coast of Israel.²¹¹ This provided an enclosed area of water protected from the dominant winds and swell from the south-west by the promontory cliff, and from the west by two rocky islets. While the harbour was planned to be relatively open both to the surge of the sea and in-sailing ships, it was situated on a nearly inaccessible stretch of marshy coastal strip, detached from the hinterland by the Carmel range. It is thus a prime example of prioritization towards maximum exposure to the sea at the expense of inland accessibility.

The naturally suited bay was further improved by the construction of two artificial sectors laid out symmetrically, each consisting of a mole perpendicular to a quay, together forming an enclosed rectangular area creating low-energy water which served as the harbour basin (figure 1).²¹² The moles were comprised of two parallel walls of carefully laid ashlar headers filled with field-stones, a common Phoenician pier-and-rubble technique²¹³ noticeable at Sarepta as early as the 11th century.²¹⁴ These moles were no mere breakwaters, but functioned as vertical-sided piers that enabled ships to be berthed along both sides, with towers at their tips that functioned most probably as watchtowers.²¹⁵

A foundation layer of flat round river pebbles covered the entire width of the quay to prevent waves from undermining the moles, consisting of basalts, ophiolites and gabbro which were unavailable locally, and had to be imported either from northern Syria or Cyprus.²¹⁶ The northwestern sector of the port was

²¹¹ Haggi and Artzy 2008: 75

²¹² For a more detailed description of the harbour see Haggi 2010: 278-82

²¹³ Haggi and Artzy 2008: 82

²¹⁴ Markoe 2000: 30

²¹⁵ Raban 1998: 434; Haggi 2010: 279

²¹⁶ Raban 1995: 156

attached to two small sandstone islets which formed an integral part of the harbour. The smaller southern islet was quarried and leveled to accommodate a structure (most probably a warehouse)²¹⁷ and was connected to the main sandstone peninsula by a bridge, which simultaneously provided access to the warehouse and prevented the flow of water into that part of the harbour.²¹⁸ The larger northern islet had its eastern edge leveled for the construction of a quay, which it naturally protected from westerly winds by forming a sea-wall (figure 2).

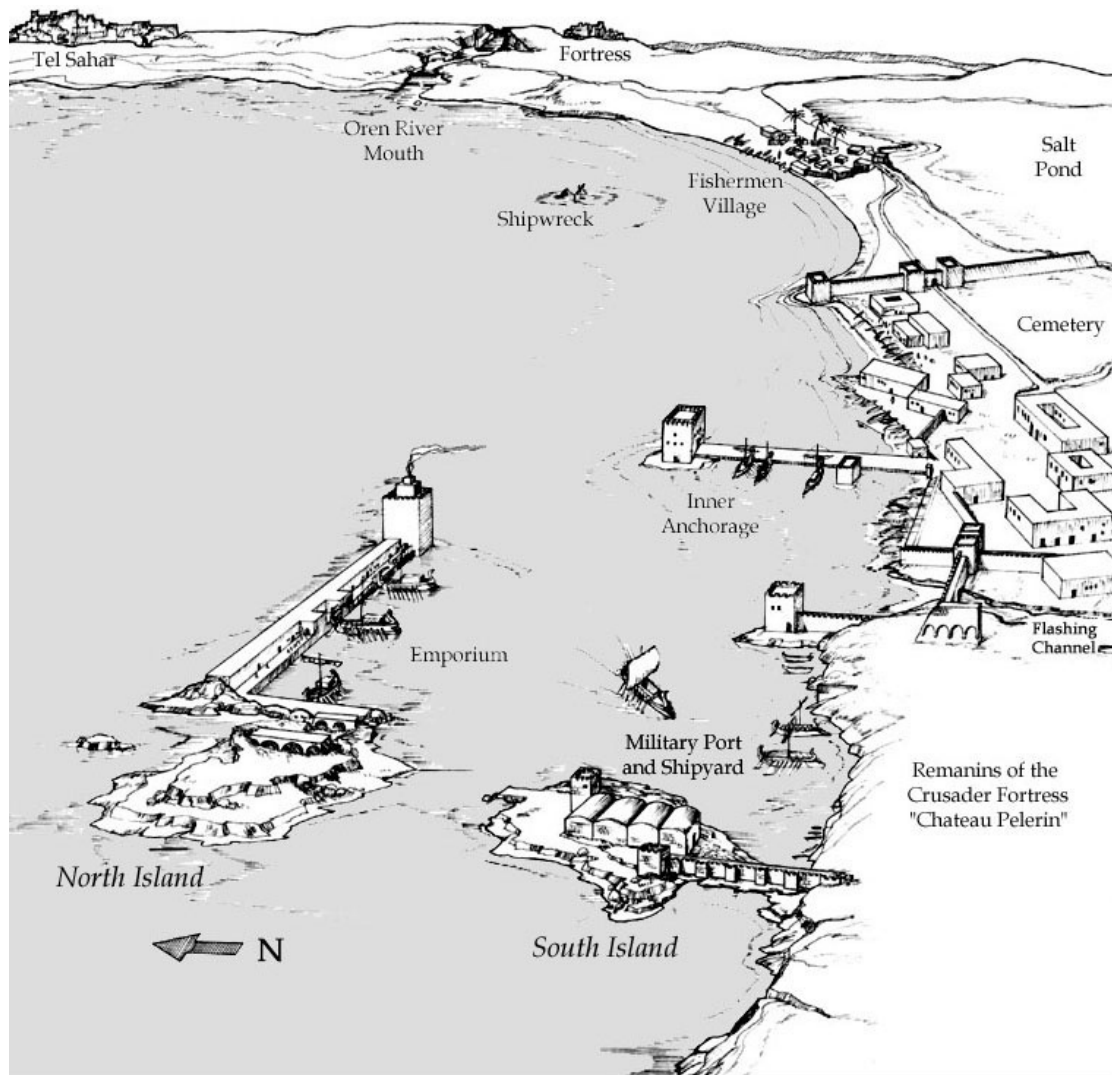


Figure 4 Artistic rendering of the Phoenician harbour of Atlit, looking E. After Raban 1998.

²¹⁷ Raban 1997

²¹⁸ Haggi 2006: 49

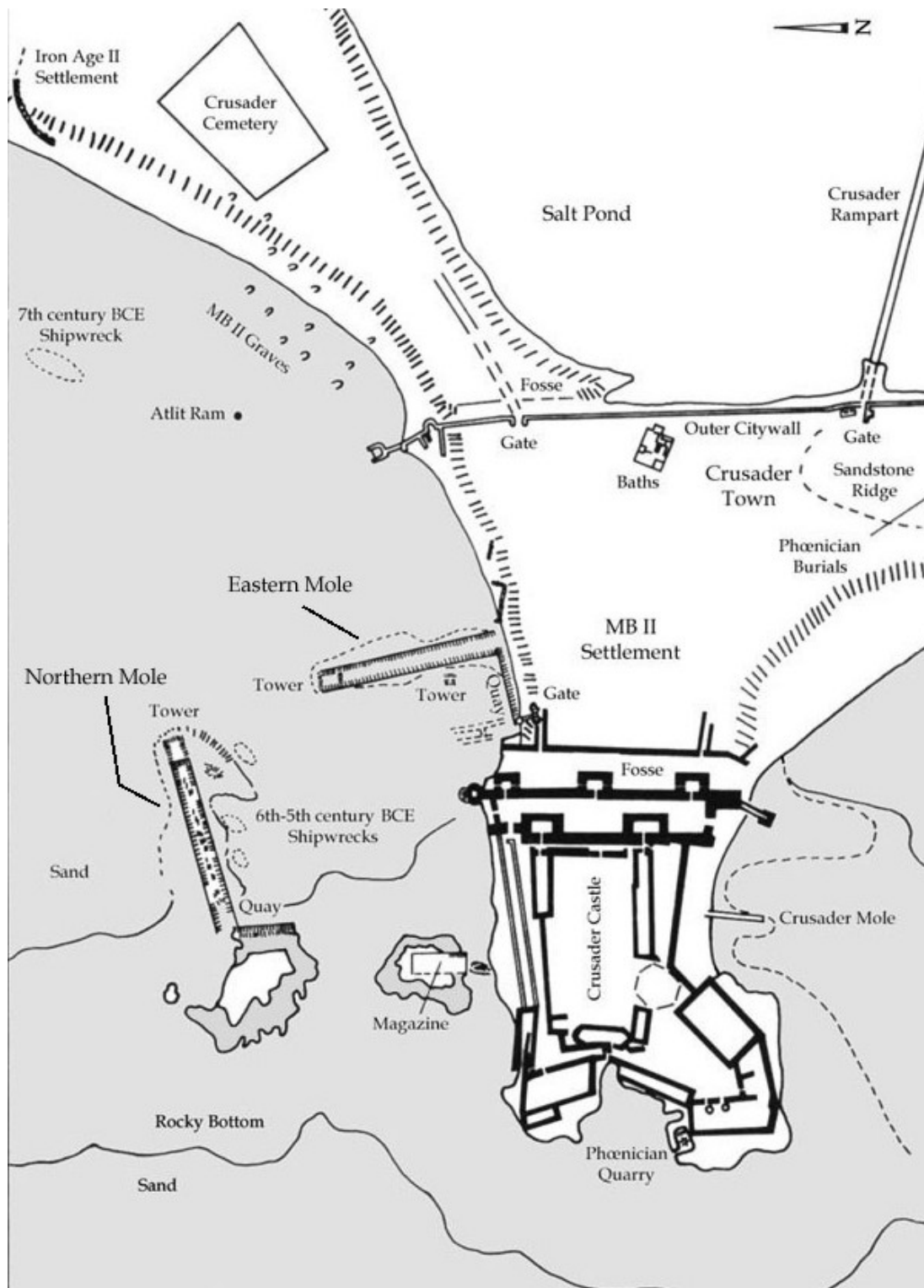


Figure 5 Plan of the Phoenician harbor at Atlit. After Raban 1998: 435

The EIA harbour at Atlit testifies that even a relatively small settlement could enjoy extensive maritime infrastructure. It demonstrates a high level of technology and know-how, through its choice of an optimal natural location whose advantages were further enhanced with monumental free-standing moles and double-sided quays. The significant scale of the endeavor is suggested by the imported building materials for the foundation floor and the efforts to build a durable structure that would remain functional year round. The overall planning decisions employed both natural and artificial features to maximize protection from winds and currents on the one hand, while minimizing siltation on the other. The latter was achieved by creating the main entrance from the east, while the 15 m. natural gap between the two western islets was left unobstructed so that the westerly currents would keep the harbour basin properly flushed.²¹⁹ The effectiveness of these measures was confirmed during surveys and underwater excavation which showed no sediment accumulation on the harbour's bottom.²²⁰ The Phoenicians' intimate understanding of harbour engineering is also evident in the drainage systems of other sites such as Tyre and Akko where several gaps were left along the moles to enable water to enter the harbour basin, while at Sidon a system of three flushing channels and a pool specifically designed to collect sediments was artificially created.

Using the dimensions of the moles and quays at Atlit and the average size of the EIA Phoenician shipwrecks of *Tanit* and *Elissa* discovered near Ashkelon, I have estimated that approximately twenty five ships could have been comfortably berthed within the most protected low-energy area of the harbour basin. If one considers however that the moles were meant to accommodate ships on both sides, about sixteen additional vessels could be stationed on the outer sides, which makes for a sizeable capacity.²²¹ The lower and higher end of this estimate is also

²¹⁹ Raban 1998: 434

²²⁰ Haggi 2010: 283

²²¹ The moles being 100 m. and 130 m. respectively and the quays 43 m. and 38m. *Tanit's* size is estimated at 6.5m width and 14m length, while *Elissa* is ca. 7m. in width and 14.5 m. in length (Ballard *et al* 2002: 157). By including about a full ship's width of spacing between each berthed vessel, the moles could accommodate seven and nine ships respectively while the quays about three vessels each. Additional space would have been available east of the southern islet where low-energy water was created by the bridge linking the warehouse to the mainland ridge.

found in the story of Wenamun where the cities of Byblos and Sidon are said to have had twenty and fifty ships at their service respectively, moored and ready to sail.²²²

Finally, the configuration of Atlit and other similar Levantine ports provides an indication of the general attitude towards trans-regional relations. During the EIA, these are largely unfortified harbours with free access from the sea, located at sites well detached from the hinterland. One can say that their ‘outlook’ was therefore inviting rather than restrictive, without an explicit aim to filter visiting ships. There was however a division between what Raban calls the city quay (inner harbour) and the royal one (international emporium). This planned diversion between a land-adjacent sector and a detached one “seems to conform both with the notion of proper security against a sudden raid of the storage area at the land-site of the harbour by crews of foreign vessels, and the administrative demand to allocate separate berthing piers for royal quays and those of the city.”²²³ As a typical example of a widespread form of Levantine average sized ports, Atlit’s main characteristics thus include extensive artificial structures of monumental size, advanced harbour engineering as well as the docking capacity and administrative infrastructure to support trans-regional trade relations. The emphasis on the modest size of Atlit and other similar settlements is important, as it suggests that long-distance contacts were not a concern limited to a handful of exceptionally powerful city-states. The latter did however play an essential role within the network hierarchy as *globally central* nodes due to the larger resource base which they could deploy for maritime infrastructure.²²⁴ A closer look at the harbour facilities of the island-city of Tyre allows for an assessment of just what kind of magnitude we are dealing with during the EIA for the most prominent sites.

Having a long history of human occupation spanning from the third millennium B.C. to present, much of Tyre’s early phases of harbour works are either inaccessible or irrevocably lost, in particular the LBA and EIA strata due to

²²² P. Moscow 120. Lines 1.58-2.2

²²³ Raban 1998: 434

²²⁴ See chapter 2 for definition of *locally*, *relatively* and *globally* central nodes

extensive dredging practices during Greco-Roman and Byzantine times.²²⁵ The key chronological bracket during which Tyre grew to become one of the most prosperous and important city-state of the Eastern Mediterranean is thus ironically the least well-known archaeologically. Tyre's EIA harbour facilities can therefore only be inferred from the better preserved contemporaneous sites such as Atlit, on the plausible premise that the technology and general engineering was largely similar but on a grander scale, given the overall trend of a shared maritime infrastructure in the Eastern Mediterranean during this period. Such a hypothesis finds support in the recently studied submerged jetty of the northern harbour, the construction of the headers being of typical Phoenician harbour work.²²⁶ As such, the amply studied moles at Atlit are smaller replicas of the one at Tyre, which is wider and one of the larger jetties of its kind.²²⁷

Even without circumventing the obvious difficulties of preservation, there remains more general information which gives an idea about the scale of Tyre's harbour infrastructure in comparison to smaller settlements such as Atlit. Numerical models indicate that the island of Tyre generated a large 3 km x 1.5 km wave shadow during antiquity, which would have favoured a number of secondary anchorages.²²⁸ The ancient sources indicate that Tyre was equipped with two harbours during antiquity – a northern seaport facing towards Sidon and Byblos and a southern anchorage facing Egypt. Combined, these secured permanent safe anchorage against the two main winds and offshore wave directions present at Tyre.²²⁹

Tyre's northern harbour was built on a location that remains to this day the most conducive environment for an anchorage on the island, being naturally protected from the dominant south-westerly winds and swell.²³⁰ This favorable

²²⁵ Carayon 2005; Nouredine 2010: 176

²²⁶ There have been some disagreements about its dating on the basis of engravings on the stone blocks, with some arguments for an EIA construction (Nouredine 2010: 179) contra Descamps *et al* which argue for a Hellenistic or Roman date (Marriner *et al* 2008: 1283). However, the clearest indicators are surely the technique, configuration and proportions of the jetty which are all compatible with Levantine harbour work of the EIA.

²²⁷ Nouredine 2010: 180

²²⁸ Marriner *et al* 2008

²²⁹ Nouredine 2010: 176

²³⁰ Marriner and Morhange 2006: 167

location made it a prime choice for the development of a natural proto-harbour during the MBA, which appears to have been sufficient for some time with little or no need for modification. It is only towards the second half of the LBA that the first traces of anthropogenic modification are attested in the shift to fine-grained silty-sand deposits, which situates Tyre comfortably within the broader Eastern Mediterranean trend of maritime intensification and trans-regional trade, which required more sophisticated port infrastructure.²³¹ The east-west oriented jetty of the northern port was thus designed to provide additional protection against the rare but damaging western wind as well as violent northern storms.

Besides ensuring an even better sheltered environment, the artificial improvements were aimed at expanding the overall docking capacity of the island. This expansion was achieved by developing a complex of secondary anchorages possible due to the island's several natural low-energy basins. The driving factor – whether it was this potential which promoted Tyre's development into a successful trading emporium, or it was the necessities of such activity that prompted an expansion of its maritime infrastructure – is difficult to isolate. Rather these should be understood as mutually reinforcing, while keeping in mind that the artificial additions from the LBA onwards, unlike the natural advantages, were a physical expression of the Tyrian community's active choices towards promoting and expanding its trans-regional involvement. Tyre thus enjoyed an extensive satellite infrastructure, with four major complexes which have been identified: 1) the main northern harbour which was approximately double the size of the present one and partially buried under the modern city center; 2) a second major harbour on the south-eastern fringe on the island facing towards Egypt; 3) a series of outer harbours that took advantage of the extensive subaerial sandstone ridges and reefs to the north and south of the city, and 4) a continental complex coordinated with Tell Mashuk, Tell Chawakir and Tell Rachidiye to provide vital supplies from its hinterland.²³² Such a bipartite geo-morphological configuration, comprising both insular and continental harbours, is a recurring feature of EIA

²³¹ Katzenstein 1997

²³² Marriner *et al* 2008

Levantine offshore island contexts, reminiscent of the Greek *περαία*. For the larger sized settlements, Tyre is also typical with its multiple harbour complexes which testify to a truly impressive docking capacity. In this regard, the ‘island-city’ type of settlement seems to have been chosen above all for a single purpose – ease of maritime communication – since it clearly lacked the advantages of large islands such as adequate food production and natural resources.

To sum up, both the extent to which some city-states of the Eastern Mediterranean developed an elaborate maritime infrastructure, and the types of settlements which were privileged, strongly suggests that during the EIA a number of communities focused the majority of their efforts and expertise towards maritime trade on the trans-regional level. Such specialization could hardly have been sustainable unless the volume of transactions was significant and spread over a wide area. Even before turning to imported goods and the difficulties of interpretation which they entail, it is therefore possible to get an idea about the overall intensity of interaction in the Eastern Mediterranean by looking at the physical infrastructure that made it possible and the socio-economic choices that it implies. The case studies of Tyre and Atlit are particularly informative because these settlements are representative of larger trends of the Levantine region and Cyprus, while providing a comparative basis for the higher and lower ends of the spectrum of settlement hierarchy. Thus, even more important than the individual level of sophistication of these sites is the fact that this sophistication is not an isolated phenomenon but rather a shared standard: a departing vessel from Sidon could expect the same harbour conditions upon its arrival at Dor or Kition. The necessary technological knowledge not only stems from an important LBA legacy, but expanded upon it while introducing novel EIA concepts. The social priorities which transpire through these tangible developments provide a solid indication that far from experiencing a setback in terms of maritime connectivity, the EIA steadily intensified the trends that were under way during the previous period.

3.3 Maritime infrastructure: nautical technology

The infrastructure in place to ease trans-regional communication and exchange formed an integral package, including harbour facilities, but also ship building technology and a commonly recognized system of permanent institutions to regulate inter-state interaction. The study of ships is a precarious matter for the BA and EIA periods because there are so few shipwrecks that provide direct evidence for building techniques. The majority of the primary sources remain iconographic, which creates significant interpretative difficulties because of artistic shortcomings such as the adherence to a generic canon, constraints of pictorial space and neglect of details and precision. A willingness or even ability on the part of the artist to represent vessels accurately often proves difficult to demonstrate. Thus, ship representations, although extremely valuable about cultural attitudes towards seafaring and the nature of maritime activities, are of limited use when it comes to vessel technology.

Nevertheless there are some general but very important nautical advances that can be traced and which, unsurprisingly, developed synchronously with other indicators of maritime intensification discussed so far. There are three main innovations at the end of the LBA that impacted long-distance voyages at sea: mortise-and-tenon joinery, brailed rigging, and the introduction of iron. The Uluburun and Cape Gelindoya shipwrecks (dated 1305 and c.1200 respectively) are the first planked vessels with pegged mortise-and-tenon joinery attested so far, which suggests that this technique was only introduced for the construction of deep-water ships by the LBA.²³³ Later referred to by the Romans as *coagmenta punicana* (“the Phoenician joint”), several lines of evidence suggest that this technical improvement was a Syro-Canaanite invention.²³⁴ Pegged tenons gave boats more strength and significantly increased their dependability at sea. In contrast to the earlier unlocked mortise-and-tenon joints employed by the

²³³ A mortise-and-tenon joint is “an edge-to-edge planking fastening commonly used in the ancient Mediterranean. Each joint consists of a free tenon housed in mortises in opposing edges of a seam: in its fully developed form, the tenon is locked into each plank by a wooden peg driven through plank and tenon.” (Wachsmann 1998: 379).

²³⁴ Wachsmann 1998: 330; McGrail 2006: 60

Egyptians which were used primarily in aligning or ‘stiffening’ the joint between the stakes, locked joints were far more than mere plank locators but served as fastenings in the true sense of the word.²³⁵ The improvement also impacted maritime warfare since a ship built shell-first with a fastening system of locked mortise-and-tenon would have been a much better fighting machine than one made of the simpler sewn-planking and lashed framing.²³⁶ In addition, edge-joined stakes gave the advantage that the wood they were made of did not have to be seasoned, which permitted the construction of large fleets much faster.²³⁷

Another very important step forward in Eastern Mediterranean nautical technology was the brailed rig which makes its appearance – after a period of gestation – ca. 1200 once again in the Syro-Canaanite region.²³⁸ This improvement is best appreciated when the well-established alternative still widely in use ca. 1500 is considered, namely the boom-footed rig of which the Thera fresco and Hatchepsout’s fleet representation at Deir-el-Bahari are the best examples. Roberts sums up the main shortcomings of this technology:

“Booming a squaresail limits the ability to trim it. It may only be rotated to a position before the wind or at least so that the wind is filling it from a broad angle. Once the wind comes from ahead of the beam problems arise because it is impossible to trim the windward edge of the sail tightly and so get the sail to set closer to the wind.”²³⁹

In other words, boats faced considerable danger when running before strong winds, as their rhythmical roll in a following sea would have made the low boom liable to catch waves at each roll with potentially catastrophic results.²⁴⁰ The rather clumsy boom-footed rig meant that BA sailors were ill-advised to use the sail unless the wind was directly (or nearly directly) astern.²⁴¹

The significance of brailed rigs was that it allowed an alteration of the sail to a desired shape, which greatly expanded the possibilities of controlling a ship under a broader range of courses relative to the wind (figure 6). Brailing meant

²³⁵ McCarthy 2005: 25

²³⁶ McGrail 2001: 148

²³⁷ Sleeswyk 1980: 244

²³⁸ Wachsmann 1998: 331

²³⁹ Roberts 1991: 55-56

²⁴⁰ Cf. Georgiou 64

²⁴¹ Wachsmann 1998: 331-2; Roberts 1991: 56

that ropes could be pulled from the deck level, resulting in the furling of the square sail upward to its yard: “no yard had to be lowered with all its attendant clutter in order to reduce sail.”²⁴² The technique was therefore quick, safe for the crew and could rapidly relieve a boat from capsizing forces or speed. The refinement of the brailed square sail rig was a gradual process. Initially it allowed hull forms rather unsuited for propulsion by sail to extend their sailing scope thanks to the ease of control and the lightness of the gear. As better fittings and gear were adopted and the skills in handling the brailed rig were refined (such as the selective trim of the sail), the range of directions which ships could adopt other than before the wind was greatly expanded. In addition, military endeavours profited from this newly acquired ability to conserve the strength of the rowing crew, while merchant ships could travel in most directions more economically with smaller crews.

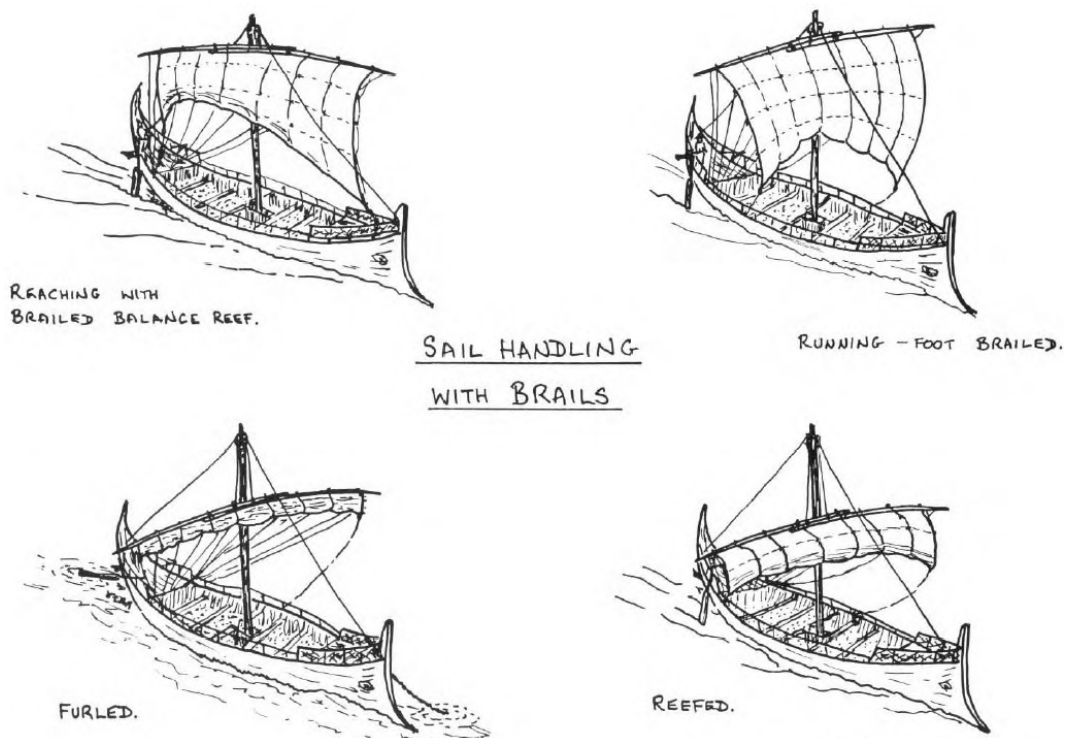


Figure 6 Sail handling with brails. After Roberts 1991.

²⁴² Roberts 1991: 55

Finally, the introduction of iron technology in shipbuilding from the 13th century onwards was another major stepping stone in the construction of larger and stronger vessels.²⁴³ These various technical improvements allowed for greater specialization in terms of a ship's function. The archives of Ugarit dating to the end of the LBA demonstrate a comprehensive terminology for different types of ships, such as the *br*-vessel referring to a big ship used for long-distance trade or warfare, and the *tk*-vessel which was of smaller proportions.²⁴⁴ Further specialization during the EIA proper is also evident. An Assyrian bas-relief from Khorsabad which adorned the palace of Sennacherib in Nineveh (early 7th century) – now lost but preserved through an unpublished drawing – shows the flight of King Luli of Tyre in the year 701 before the Assyrian armies (figure 2). The king and his attendants are shown boarding ship, with a flotilla in front of the island consisting of two kinds of vessels. Both types are guided by two steering oars thrust out from the stern, but while one is bulky and rotund in form, rounded off at stem and stern alike, the other is more elongated and armed at the bow with a long projecting beak. Despite artistic simplifications, it is clear that two different kinds of ships are being represented, a transport/ merchant vessel and a war-galley.²⁴⁵ Since the waterline ram had not been introduced as a nautical weapon during the BA, vessels during this period served primarily as firing platforms during marine battles and as rapid transports for deploying land troops.²⁴⁶ The bas-relief from Khorsabad and contemporary ship representations on Greek Geometric pottery show the fully developed form of a war-galley equipped with a straight stem and ram which was to revolutionize Iron Age maritime warfare. Another significant feature of both the Assyrian relief and some Aegean representations is that the ships are two-levelled, with the obvious implications that a doubled number of rowers had for the vessel's capacity and speed. Some scholars have been tempted to situate these inventions in the 8th century, conveniently clumping them with a large package of advancements in various

²⁴³ Marriner *et al* 2008: 1291

²⁴⁴ See for instance document *KTU* 4.81 (Herdner 1963:173-74; Wachsmann 1998: 337)

²⁴⁵ Aubet 2001: 38-9

²⁴⁶ Wachsmann 1998: 332

spheres during what has been termed the 8th century ‘revolution.’²⁴⁷ Such a conclusion is incorrect with regards to the way in which such innovations occur, and is also irreconcilable with a growing body of evidence. For example, a *pixis* with a ship representation from the Toumba at Lefkandi dated to c.850-825 already shows all the main features of the standard Geometric ship iconography such as the straight stem and incurving stern, steering oar, ram and the 'V'-shaped mast-top.²⁴⁸ Thus, although the representation brings little to the well-studied form, it effectively pushes its date back by a full century and a half.

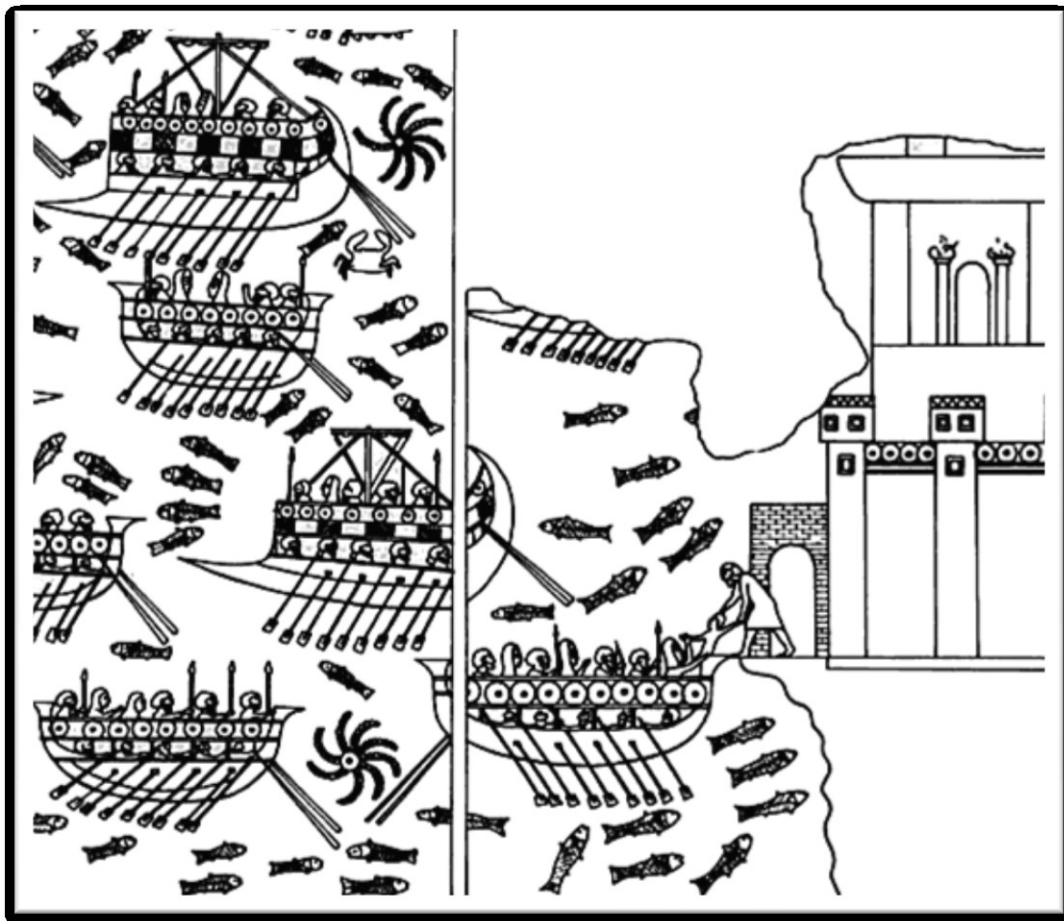


Figure 7 Flight of king Luli of Tyre. Assyrian bas-relief from Khorsabad, early 7th century B.C.

In attempting to pin down the chronology of particular nautical improvements, the ways in which ancient technology tends to evolve and gets implemented must therefore be considered. The earliest known use of the mortise-

²⁴⁷ Morris 2009

²⁴⁸ Popham 1987: 357

and-tenon technique is a table from a tomb at Jericho dated to the mid-second millennium B.C., while iron first begins to be exploited in Anatolia and Cyprus in the 13th century B.C.²⁴⁹ There was therefore a time lag between the invention, and the actual implementation of these technologies in the maritime sphere. Similarly, while mortise-and-tenon joinery and brailed rigging brought ship building to a whole new level, the exploration of the possibilities which they offered and their perfecting was gradual. Given the nature and function of the iconographic medium, the ship representations on Assyrian reliefs and Greek Geometric pottery are thus best approached as products of a prolonged process which led to these forms which were already widespread and well-established by the 8th century. Although most of the innovations that have been discussed above first appeared towards the end of the LBA, the ensuing period of transition did not experience a loss in know-how, which in itself deserves serious consideration. After all, the Aegean lost its script entirely at the end of the BA and does not seem to have felt an urgent need to recover it for several centuries. With regards to nautical technology – while new possibilities became available around 1200 – it is the EIA which must be credited with the experimentation and refinement that resulted in their successful and long-lasting implementation.

The EIA was therefore a period of significant advances in naval technology in the Eastern Mediterranean.²⁵⁰ From the 13th century onwards, much of this innovative thrust appears to have originated in the Levantine region. Major technological improvements such as the locked mortise-and-tenon joint, brailed rigging and the manipulation of iron allowed for the construction of larger, stronger ships that made better usage of the wind. Travel by sea was becoming less of a haphazard activity limited by seasons, weather conditions or time of day.²⁵¹ Increasing technical control and operative freedom opened up new vistas in seafaring, exposing a potential for seaborne traffic of an unprecedented scale. These newly available possibilities are most visible in the military sphere, with

²⁴⁹ Mortise-and-tenon: McGrail 2006: 60. Iron technology: Yalçın 1999:181–4; Dickinson 2006: 145–6

²⁵⁰ Cf. Bass 1974; Basch 1987; Casson 1994; Kemp 2001; Marriner *et al* 2008

²⁵¹ Cf. Georgiou 1990

the ram and later the two-levelled vessel marking an important change in naval warfare. Similarly to port infrastructure, these nautical improvements are symptomatic of socio-economic orientation, and should be interpreted as the backbone of an EIA maritime intensification, which built upon, yet superseded in scale, the developments in motion since the last quarter of the second millennium B.C.

3.4 Maritime infrastructure: codes of diplomatic conduct

The last element of this Eastern Mediterranean maritime infrastructure is of a different but complementary kind, namely evidence for established codes of conduct meant to regulate interaction on the trans-regional level. Such mechanisms need to be considered seriously since geographical and technological factors were never the only ones to enter into the calculation of actors wishing to establish contacts beyond their immediate communities. The importance of well-functioning social protocols becomes most evident when different transport mediums are compared. In antiquity, travel on land was always relatively expensive compared to its maritime counterpart which was both faster and of much larger carriage capacity. In addition to being more energy efficient, maritime transport was also much ‘cheaper’ in human terms, “because at sea the incidental hazards of negotiation, protection-money, willful obstruction and downright violence were so much rarer than in the carrying of goods across region after region, through settlement after settlement, by land.”²⁵² Issues such as the safe movement of merchants, the inviolability of envoys and guarantees against the harassment of embassies were a constant concern. While maritime transport far surpassed land communications in terms of ease and flexibility, the endpoint of a voyage after crossing the relatively unobstructed medium of the sea was still one of potential social tension.

If trans-regional maritime traffic existed on a significant scale during the EIA, then a set of mechanisms established for providing the necessary social

²⁵² Horden and Purcell 2000: 377

lubricant are to be expected. The centralized states of the LBA Eastern Mediterranean were conducive to the emergence of a clearly defined system of permanent institutions and structures needed to regulate international contacts between empires, kings and their vassals.²⁵³ The extensive body of evidence from the Amarna letters and other documents provides access to unedited material regarding diplomatic exchange dealing on a consistent basis with issues such as trade arrangements, spheres of influence, prestige, alliance formation, matters of protocol and the safety of travelling officials and merchants. By the end of the LBA, there was therefore a well-established code of interstate conduct, some of it dealing specifically with maritime affairs.²⁵⁴ A document found in a kiln at Ugarit, dated slightly before its destruction ca. 1185 is particularly enlightening:

1-3 To the king of Ugarit, my brother, speak: Message of the king of Tyre your brother.
 4-9 May you be well. May the gods guard and preserve you. Here with me it goes well. Is everything going well with you there? Answer me, please.
 10-25 As to a ship of yours that you sent to Egypt, that (ship) is in Tyre. Serious damage happened to it in a torrential rainstorm. They were found, and the *rb tmtt* took all their grain from them. But I took all their grain (and) the crew, all that belonged to them, from the *rb tmtt*, and gave it back to them. And another ship of yours is unloaded in Acco. Let my brother not be troubled by anything.²⁵⁵

The text is an Ugaritic translation of an original letter sent by the king of Tyre. It begins by a standard form of the type “say to person B, thus says person A” that is addressed to the messenger carrying the communication. The status of both parties and their relationship to each other as equals (‘brother’) is established from the very outset. This is followed by an expression of good wishes for the addressee that is never omitted, seconded by an optional report of well-being. Half of the letter thus deals solely with the appropriate protocol of address, which strictly follows a fixed international form.²⁵⁶

The second half is a report on two Ugaritic ships, one of which suffered serious damages and could not reach its destination. The specific function of the

²⁵³ Karavites 2008: 15

²⁵⁴ Cf. Wachsmann 1998: 328

²⁵⁵ *KTU* 2.38 (Trans. Wachsmann 1998: 334) For original text, transcription and comments see Schniedewind and Hunt 2007: 87-9.

²⁵⁶ See Karavites 2008: 22 for a discussion of the standard form and nearly identical examples from the Amarna letters.

rb tmtt remains a matter of debate, the most plausible interpretation being that he must be an appointed Tyrian official, perhaps dealing with salvage operations.²⁵⁷ What follows is a reassurance by the king of Tyre that both the cargo and crew which were initially confiscated were returned to their owner, while the whereabouts of the second ship is communicated. When both the formality and brevity of the document are considered, this seems to imply that there was a kind of international agreement whereby the ships (including personnel and contents) of other polities were respected in times of peace.²⁵⁸

Whereas this and other similar documents make it abundantly clear that at the end of the LBA there was a well-developed code of diplomatic conduct agreed upon by the various polities of the Eastern Mediterranean, there remains the question of whether it could have persisted once the centralized states that endorsed and supported it disintegrated. The basic structure of these interstate relations provides a hint why such mechanisms were not strictly dependent on large, centralized powers. From the Amarna letters and other documents it is evident that LBA international relations, even among “great kings,” were modeled and expressed in the form of interpersonal relations at the level of the family, neighborhood or a small community.²⁵⁹ Not only do kings refer to each other as relatives, but the social mechanisms, such as gift exchange, can be employed just as successfully on much smaller, less centralized societies. Thus, even when the large players of the LBA were no longer around, the framework of diplomatic conduct which they bequeathed remained applicable – that is, when it was necessary.

That they remained in place is certainly suggested by the 11th century report of Wenamun. Sent on a mission to the Levant by the high priest Herihor in order to procure timber for the ceremonial barge of the god Amun, Wenamun arrives at Tanis where he presents to the pharaoh Smendes I his official document, “the dispatches of Amun-Ra.” The letter which states the mission and the

²⁵⁷ Sasson 1996: 137; Wachsmann 1998: 334. Dietrich and Loretz (1966:132) and Cunchillos (1986: 138; 1989: 354) consider him to be the head of the ship’s crew, while Virolleaud (1965:82) suggests he was a pirate.

²⁵⁸ Cf. Sasson 1966: 137 (head of a ship’s crew)

²⁵⁹ Karavites 2008: 49

credentials to carry it out is read out, followed by an acknowledgment of its authority and Wenamun's dispatch with a Phoenician ship. Although of a narrative genre, Wenamun's report includes all the standard elements of LBA diplomatic procedure, including an officially appointed envoy carrying a legal document which is ceremoniously presented and read aloud according to protocol. The message, backed by divine authority, acts as a passport securing Wenamun's unobstructed and speedy passage.

Upon his arrival in the port of Dor, Wenamun continues to be treated with the regards due to an envoy, and is sent fifty loaves, a jug of wine and an ox haunch as a sign of hospitality. He is then cheated by the hazards of fortune and gets in a very uncomfortable situation:

“When a man of my ship fled
because he stole a vessel of gold, which amounted
to five deben,
four beakers of silver, which amounted to twenty deben,
and a bag of silver of eleven deben
([the total which he stole:]13 gold, 5 deben;
silver, 31 deben),
and after I stretched out on the morrow,
I set out for the place where the (local) ruler was,
and I said to him:
□ I have been robbed in your harbour!
Now, you are the ruler of this land
and you are its judge,
so search for my money!”²⁶⁰ □

The Egyptian envoy's actions imply that he holds Dor's ruler responsible for protecting foreign vessels from theft within his harbour and expects reparation. True to the theme of Egyptian decline which permeates the narration, Wenamun's terse and authoritative language is met with animosity by the local prince who no longer accepts to be treated on an unequal standing with Egyptian authority. The ruler rebukes by another injunction stating his obligations:

“Now look, whether you are being weighty or you are
joking, I do not understand the statement
which you speak to me.
Were the thief, indeed, one belonging to my land,
and was the one who came down to your ship and

²⁶⁰ LeS, 61, 13.62, 6

stole your money,
then I would replace it for you from my storehouse
until they (my men) had found your thief, whatever
his name may be,
but truly, concerning the thief who robbed you,
he is yours and belongs to your ship.”²⁶¹

Campbell has shown that the legal injunction invoked by the prince has very close written analogues in eighteenth century Babylonian law (law stele of Hammurabi, Laws 11, 23, 126) and later in Hurrian and Hittite law such as the Nuzi archives (ca. 1500-1350).²⁶² The stipulation refers to the Babylonian juridical concept of *šurqa(m) mullû(m)* which means “to pay compensation for stolen goods,” or “to replenish stolen property.”²⁶³ Under particular conditions, individuals were thus insured against theft through municipal compensation as long as the perpetrator fell under the jurisdiction of the locality. It is made clear however, that crimes occurring on foreign ships were considered sovereign affairs to be settled between the captain, crew and international passengers. This provided a legal loophole for the ruler of Dor, since Wenamun was robbed by a member of his own ship.

The incident at Dor suggests that both in Egypt and the Levantine coast of the 11th century, Bronze Age legal procedures of Babylonian origin were still widely in use. The legal injunction of *šurqa(m) mullû(m)* which excluded responsibility for mobile foreigners on land such as vagrants is adapted in Wenamun’s report to the maritime sphere. It suggests that the legal treatment of maritime traffic would exempt a municipality from the legal responsibility of providing compensation for theft in the case that goods were stolen among visiting foreigners. The need for such a law and its careful delimitations suggests that cities of the Eastern Mediterranean coast during the 11th century had to deal with trans-regional maritime traffic involving highly mobile participants on a significant scale. The report of Wenamun thus provides important contemporary evidence suggesting that LBA legal stipulations affecting international relations remained in use during the EIA. The Homeric epics further illustrate that this was not a matter of a select few remnants: most of the main elements defining LBA

²⁶¹ LeS, 62, 11–63, 2

²⁶² Campbell 2009

²⁶³ Ibid, 4

diplomatic relations are still widely in use in the 8th century and this, on a widespread scale. These include the safeguard and immunity of envoys, their credentials and form of address, the emphasis on divine authority behind codes of conduct and principles of hospitality towards ξενία. EIA communities of the Eastern Mediterranean thus felt the need to maintain an internationally agreed-upon set of norms meant to facilitate and smooth peer polity interaction.

3.5 Conclusion

Most analyses aiming to measure the degree of trans-regional traffic and connectivity during the EIA continue to focus on imported objects and pottery in particular. Maritime infrastructure provides an alternative approach to this question, with the advantage that it can provide a more encompassing picture both geographically and temporally. Interpreted together, harbour facilities, nautical technology and established codes of diplomatic conduct form a complex of maritime infrastructure that traces the diachronic development of maritime intensification in the Eastern Mediterranean from the end of the LBA onwards.

Furthermore, technological innovation has certain properties that make it particularly useful for tracing connectivity on a trans-regional scale from a social network perspective, which stipulates that networks require repeated (rather than sporadic) interaction over prolonged periods of time. As a result, these lasting sets of relations form identifiable structures. In the context of a new technology, “individual choices have relatively little effect; it is *patterns* of choices which, after being maintained for a considerable time, begin to make substantial change possible.”²⁶⁴ Precisely such a picture emerges in a careful study of the EIA Eastern Mediterranean, where a shared maritime infrastructure built upon an important LBA legacy is expanded and maintained throughout the period. The apparent uniformity suggests that there was a common standard and level of development which facilitated trans-regional interaction. There was, in other words, a well-developed framework in place to serve the needs of thriving

264 Horden and Purcell 2000: 291

maritime traffic. As the maintenance of such structures required significant and consistent investment, these provide evidence of specific communal choices and needs that increasingly promoted a maritime orientation. In light of this evidence, the prevailing conviction that there was a nearly complete cessation of trade after 1200 B.C. needs serious revision: “interregional maritime trade, far from grinding to a halt at the end of the 13th century, continued into the 12th century although the extent and nature of this trade and the way in which it operated had undergone a radical change.”²⁶⁵

²⁶⁵ Sherratt 2003: 40

Conclusion

In his preface to *Persian Fire*, Tom Holland recounts an anecdote involving a departmental disagreement about the issue of whether the Crusades are as important a subject as twentieth century totalitarianism. Some of his colleagues argued: “The hatreds of Islam and Christendom, of East and West – where was the possible relevance in these?”²⁶⁶ For Holland, the answer became self-evident a few weeks later, on September 11th, 2001. He addresses an important question for historians and archaeologists, namely: how does one justify the study of a subject seemingly remote and alien from contemporary concerns? Put differently, current socio-political discourses and paradigms of ethnic and cultural division actively inform approaches to the past and shape the kinds of questions that are being asked. In a globalized world, where connectivity means everything, it should come as no surprise that cultural contact and exchange have become major topics of interest within Classics in the past twenty years. An increasing number of studies emphasizing the benefit of examining the ancient Mediterranean both cross-temporally and cross-regionally.

Within this larger trend, the so-called collapse c. 1200 B.C and the subsequent Early Iron Age period have been under a major process of revision. Although the concept of a Dark Age is increasingly being discarded, the proto-historic nature of the EIA makes the investigation of topics such as social networks and agency unusually challenging. The majority of studies on long-distance trade, contact and population mobility in the EIA Eastern Mediterranean continue to rely on pottery. The usefulness of this approach remains a matter of debate. The primary aim of this work was to study the mode of operation of EIA networks and to determine how their extent and flow of exchange can be measured. My approach has emphasized the need for proper contextualization,

²⁶⁶ Holland 2005: xi

which ought to factor in the potential, means and motivation behind long-distance maritime endeavors.

The notion of a serious break between the LBA and EIA periods needs to be treated with caution. The EIA cannot be fully grasped without acknowledging the previous period's influential legacy. Like the fuming ruins of Boiotian Thebes' Mycenaean palaces that were left in the city's acropolis and converted to open air sanctuaries,²⁶⁷ the Bronze Age inheritance of EIA Eastern Mediterranean societies was reinterpreted and adapted to new conditions and developing needs. The most important socio-political difference of the EIA is the power vacuum that persisted in the Eastern Mediterranean for several centuries after the disappearance of the main centralized powers of the BA. This change had an extremely important implication for the nature of connectivity, for it opened the lucrative maritime niche to a plethora of new actors. Using the framework of Social Network Theory, I have argued that Eastern Mediterranean trans-regional connectivity shifted from a 'closed' to an 'open' network, and that the newly-introduced actors were similar in function to 'weak ties.' The new dominant form of small scale interaction was, on the individual level, less organized and systematic, yet taken in its totality it provided both more frequent and varied trans-regional encounters.

Considering the potential breadth of a study of supra-regional interaction and exchange, my thesis has focused more narrowly on the three particular regions of the Levant, Cyprus and Euboea. In addition, my analysis has concentrated on channels of transmission and the ancient attitudes which informed trans-regional exchange, rather than the imported goods themselves. The omission of a discussion on the cargoes and commodities, which reached distant shores, should not be regarded as anything but a matter of focus. I do not wish to imply that raw materials, pottery, or exotica are irrelevant to the study of mobility and exchange- far from it. I do express caution, however, that different types of objects can answers only certain kinds of questions.

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Maritime infrastructure offers an alternative approach for measuring connectivity and has an advantage in that it can provide a more encompassing picture both geographically and temporally. By infrastructure, I refer to the entire artificial complex in place to facilitate maritime communication, including harbor facilities, nautical technology, and established codes of diplomatic conduct. Since the maintenance of such infrastructure required significant and prolonged communal investment, it can be used as a measure of the overall intensity of interaction given that it reflects specific socio-economic choices and needs geared towards further maritime development. Maritime technological innovation in particular, reflects not only propitious social conditions but a sustained orientation towards sea-borne endeavours. In other words, its usefulness in studying trans-regional trends comes from the fact that individual choices and developments tend to have a relatively minimal impact in the long-term, unless they form aggregate patterns of identifiable motivation and needs.

Bibliography

- Armstrong, K. M. 2003. *Settlement Hierarchy and The Location of Alashiya on Cyprus*. MA dissertation.
- Aubet, M.E. 2008. "Political and Economic Implications of the new Phoenician Chronologies." In: C. Sagona, ed. *Beyond the Homeland : Markers in Phoenician Chronology. Ancient Near Eastern Studies Supplement 28*. Paris: Peeters, 247-260.
- _____. 2001. *The Phoenicians and the West: Politics, Colonies and Trade*. Cambridge: Cambridge University Press.
- Axe, D. 2009. "Somalia Redux: A More Hands-off Approach." *Policy Analysis* 649, 1-20.
- Badre, L. et al. 1994. "Tell Kazel (Syrie). Rapport preliminaire sur les 4^e – 8^e campagnes de fouilles (1988-1992)." *Syria* 71, 251-359.
- Ballard, R., L.E. Stager, D. Master, D. Yoerger, D. Mindell, L. L. Whitcomb, H. Singh, D., Piechota. 2002. "Iron Age Shipwrecks in Deep Water off Ashkelon, Israel." *American Journal of Archaeology* 106. 2, 151-168.
- Bauer, A. A. 1998. "Cities of the Sea: Maritime Trade and the Origin of Philistine Settlement in the Early Iron Age Southern Levant." *Oxford Journal of Archaeology* 17.2, 149-168.
- Berkowitz, S. D., and B. Wellman, eds. 1988. *Social Structures: A Network Approach*. Cambridge: Cambridge University Press.
- Boardman, J. 1999. "Greek Colonization: the Eastern Contribution." In: *La colonisation grecque en Méditerranée occidentale, Actes de la rencontre scientifique en hommage à Georges Vallet organisé par le centre Jean – Bérard, l'École française de Rome, l'Institut universitaire orientale et l'Università degli studi di Napoli 'Federico II' (Roma-Napoli, 15- 18 novembre 1995*. Rome: École Française de Rome, 39-50.
- Bondi, S. F. 2001. "The Origins in the East." In: S. Moscati, ed. *The Phoenicians*. New York: I.B. Tauris, 23-30.
- Bonfante, L. and Karageorghis, V., eds. 2001. *Italy and Cyprus in Antiquity: 1500-400 B.C. Proceedings of an International Symposium held at the Italian Academy for Advanced Studies in America at Columbia University, Nov. 16-18, 2000*. Nicosia: Costakis and Leto Severis Foundation.

- Braudel, F. 1966. *La Méditerranée et le Monde Méditerranéen à l'époque de Philippe II*. 2nd revised ed. 1966, 2 vols (vol.2 published 1973). London : Harper and Row.
- Broodbank, C. 2000. *An Island Archaeology of the Early Cyclades*. Cambridge: Cambridge University Press.
- Bunimovitz, S. 1998. "Sea Peoples in Cyprus and Israel: a Comparative Study of Immigration Processes." In: S. Gitin, A. Mazar, E. Stern, eds. *Mediterranean Peoples in Transition. Thirteenth to Early Tenth Centuries BCE*. Jerusalem: Israel Exploration Society, 103-113.
- Burian, J. 2011. "Periplous." In: H. Cancik and H. Schneider, eds. *Brill's New Pauly*. Brill.
- Carayon, N. 2005. "Embarcadères et débarcadères au Levant au Bronze Récent et à l'âge du Fer." Paper presented at Archéologie du transport dans les sociétés préhistoriques, antiques et médiévales, Strasbourg, France.
- Cartledge, P. 1983. "'Trade and Politics' Revisited: Archaic Greece." In: P. Garnsey, K. Hopkins and C.R. Whittaker, eds. *Trade in the Ancient Economy*. Berkley: University of California Press, 1-15.
- Childs, W. 1997. "The Iron Age Kingdom of Cyprus." *BASOR* 308, 37-48.
- Chubin, D. 1976. "The Conceptualization of Scientific Specialties?" *Sociological Quarterly* 17.4, 448-476.
- Clarke, J., ed. 2005. *Archaeological Perspectives on the Transmission and Transformation of Culture in the Eastern Mediterranean*. Oxford: Oxbow Books.
- Coldstream, J.N. 1988. Light from Cyprus on the Greek "Dark Age"? Nineteenth J.L. Myres Memorial Lecture. Oxford: Leopard's Head.
- Coser, R. 1975. "The Complexity of Roles as Seedbed of Individual Autonomy." In : L. Coser, ed. *The Idea of Social Structure: Essays in Honor of Robert Merton*. New York: Harcourt Brace Jovanovich.
- Crielaard, J. P. 2002. "Past or Present? Epic Poetry, Aristocratic Self-Representation and the Concept of Time in the Eighth and Seventh Centuries b.c.," In: F. Montanari, ed. *Omero tremila anni dopo. Atti del congresso di Genova, 6-8 luglio 2000*. Rome, 239-297.
- _____. 2006. "Basileis at Sea: Elites and External Contacts in the Euboean Gulf Region from the End of the Bronze Age to the Beginning of the Iron Age." In: S. Deger-Jalkotzy and I.S. Lemos, eds. 2006. *Ancient Greece:*

- From the Mycenaean Palaces to the Age of Homer*. Edinburgh: Edinburgh University Press, 271-298.
- De Souza, P. 1999. *Piracy in the Graeco-Roman World*. Cambridge: Cambridge University Press.
- Deger-Jalkotzy, S. 1998. "The Aegean Islands and the Breakdown of the Mycenaean Palaces around 1200 B.C." In: V. Karageorghis and N. Stampolidis, eds. 1998. *Eastern Mediterranean: Cyprus-Dodecanese-Crete. 16th-6th cent. B.C.* Athens : University of Crete and the A.G. Leventis Foundation, 105-120.
- DeMarrais, E., Gosden, C. and Renfrew, A.C. eds., 2004. *Rethinking Materiality: The Engagement of Mind with the Material World*. Cambridge: McDonald Institute for Archaeological Research.
- Desborough, V.R. D'A. 1972. *The Greek Dark Ages*. London: Benn.
- Dickinson, O. 2006. "The Mycenaean Heritage of the Early Iron Age Greece." In: S. Deger-Jalkotzy and I.S. Lemos, eds. 2006. *Ancient Greece: From the Mycenaean Palaces to the Age of Homer*. Edinburgh: Edinburgh University Press, 115-122.
- Drews, R. 1993. *The end of the Bronze Age: Changes in Warfare and the Catastrophe ca. 1200 B.C.* Princeton: Princeton University Press.
- Eriksson, K. O. 2007. *The Creative Independence of Late Bronze Age Cyprus: An Account of the Archaeological Importance of White Slip Ware*. Wien: Verlag der Österreichischen Akademie der Wissenschaften.
- Evely, D., ed. 2006. *Lefkandi IV: The Bronze Age. The Late Helladic IIIC Settlement at Xeropolis*. Supplementary Volume 39. London: The British School at Athens.
- Fox, R.L. 2008. *Travelling Heroes: Greeks and their Myths in the Epic Age of Homer*. London: Penguin.
- Frankel, D. 2005. "Becoming Bronze Age: Acculturation and Enculturation in third Millennium B.C. Cyprus." In: J. Clarke, ed. 2005. *Archaeological Perspectives in the Transmission and Transformation of Culture in the Eastern Mediterranean*. Oxford: Oxbow Books, 18-25.
- Freeman, C. 2004. *Egypt, Greece and Rome: Civilizations of the Ancient Mediterranean*. Oxford: Oxford University Press.

- Gettleman, J. 2007. "New Somali Government Faces the Age-Old Problem of Clans." *The New York Times*. [online] 22 January.
- _____. 2008. "Somali Pirates Tell Their Side: They Want Only Money." *The New York Times*. 1 October. p. 6a.
- Ginelli, M., G. Fass and B. Turtle. 1996. *Six Degrees of Kevin Bacon*. New York: Plume.
- Goitein, S.D. 1999. *A Mediterranean Society : The Jewish Communities of the Arab World as Portrayed in the Documents of the Cairo Geniza*. 5 vols. Berkley: Berkley University Press.
- Graham, S. 2006. "Networks, Agent-Based Models and the Antonine Itineraries: Implications for Roman Archaeology." *Journal of Mediterranean Archaeology* 19, 45-64.
- Granovetter, M. S. 1973. "The Strength of Weak Ties." *American Journal of Sociology* 78.5, 1360-80.
- _____. 1983. "The Strength of Weak Ties. A Network Theory Revisited." *Sociological Theory* 1, 201-33.
- Haggi, A. 2006. "Phoenician Atlit and its newly-Excavated Harbour: a Reassessment." *Tel Aviv* 33.1, 43-60.
- _____. 2010. "Report on Underwater Excavation at the Phoenician Harbour, Atlit, Israel." *The International Journal of Nautical Archaeology* 39.2, 278-285.
- Haggi, A. and M. Artzy. 2008. "The Harbor of Atlit in Northern Canaanite/Phoenician Context." *Near Eastern Archaeology* 70. 2, 75-84.
- Hahn, J. 2011. "EU anti-piracy mission faces tough challenges." *Deutsche Welle*. [online] 1 August.
- Helms, M. W. 1988. *Ulysses' Sail: An Ethnographic Odyssey of Power, Knowledge, and Geographical Distance*. Princeton: Princeton University Press.
- Hodder, I. 1986. *Reading the Past*. Cambridge: Cambridge University Press.
- Hodos, T. 2010. "Local and Global Perspectives in the Study of Social and

- Cultural Identities.” In: S. Hales and T.Hodos, eds. 2010. *Material Culture and Social Identities in the Ancient World*. Cambridge: Cambridge University Press, 3-31.
- Holland, T. 2005. *Persian Fire: The First World Empire and the Battle for the West*. Brown: Little.
- Homer. *The Iliad*. Translated by R. Fagles. 1990. New York: Penguin Books.
- _____. *The Odyssey*. Translated by R. Fagles. 1996. Toronto: Penguin Books.
- Horden, P. and Purcell, N. 2000. *The Corrupting Sea: a Study of Mediterranean History*. Oxford: Blackwell Publishing.
- Hunter, R. 2008. “Somali Pirates Living the High Life.” *BBC News*. [online] 18 October.
- Huss, W. *Die Karthager*. Munich
- Iacovou, M. 1999. “Excerpta Cypria Geometrica: Materials for a History of Geometric Cyprus.” In: Iacovou, M. and Michaelides, D., eds. *Cyprus: The Historicity of the Geometric Horizon*. Nicosia: University of Cyprus, 141-166.
- _____. 2006. “From the Mycenaean *qa-si-re-u* to the Cypriote *pa-si-le-wo-se*: the *basileus* in the Kingdoms of Cyprus.” In: S.Deger-Jalkotzy and I. S. Lemos, eds. *Ancient Greece: From the Mycenaean Palaces to the Age of Homer*. Edinburgh: Edinburgh University Press, 315-337.
- _____. 2006a. “Cyprus: From Migration to Hellenization.” In: G. R. Tsetschkladze, ed. *Greek Colonisation: An Account of Greek Colonies and Other Settlements Overseas*. Vol. 2 Mnemosyne, Supplementa 193. Boston: Brill, 219-289.
- Jackson, A. H. 1995. “An Oracle for Raiders?” *ZPE* 105, 95-99.
- Joffe, A. H. 2002. “The Rise of Secondary States in the Iron Age Levant.” *Journal of the Economic and Social History of the Orient* 45. 4 Excavating the Relations between Archaeology and History in the Study of Pre-Modern Asia, 425-467.
- Karageorghis, V. 1990. *The End of the late Bronze Age in Cyprus*. Nicosia: Pierides Foundation.
- Karageorghis, V. and Stampolidis, N. eds., 1998. *Eastern Mediterranean: Cyprus- Dodecanese- Crete. 16th-6th cent. B.C*. Athens : University of Crete and the A.G. Leventis Foundation.

- Katzenstein, H.J. 1997. *The History of Tyre*. Jerusalem: Ben-Gurion University of the Negev Press.
- Knapp, B.A., J. F. Cherry. 1994. *Provenience Studies and Bronze Age Cyprus: Production, Exchange and Politico-economic Change. Monographs of world archaeology 21*. Madison: Prehistory press.
- Knapp, A. B. 1997. *The Archaeology of Late Bronze Age Cypriot Society: The Study of Settlement, Survey and Landscape*. Glasgow: University of Glasgow, Department of Archaeology, Occasional Paper 4.
- _____. 2008. *Prehistoric and Protohistoric Cyprus: Identity, Insularity, and Connectivity*. Oxford: Oxford University Press.
- Knight, B. 2011. "International court could curb Somali piracy." *Deutsche Welle*. [online]. 26 August.
- Lehmann, G. 2008. "North Syria and Cilicia, c.1200-330 B.C." In: C. Sagona, ed. *Beyond the Homeland : Markers in Phoenician Chronology. Ancient Near Eastern Studies Supplement 28*. Paris: Peeters, 205-247.
- Lemos, I.S. 2001. "The Lefkandi Connection: Networking in the Aegean and the Eastern Mediterranean." In: L. Bonfante, V. Karageorghis, eds. *Italy and Cyprus in Antiquity: 1500-400 B.C. Proceedings of an International Symposium held at the Italian Academy for Advanced Studies in America at Columbia University, Nov. 16-18, 2000*. Nicosia: Costakis and Leto Severis Foundation, 215-26.
- _____. 2002. *The Protogeometric Aegean: The Archaeology of the Late Eleventh and Tenth Centuries B.C.* Oxford: Oxford University Press.
- _____. 2003 "Craftsmen, traders and some wives in Early Iron Age Greece." In N. C. Stampolidis and V. Karageorghis, eds. *ΠΙΛΟΕΣ...Sea Routes... Interconnections in the Mediterranean 16th – 6th century BC, Proceedings of the International Symposium held at Rethymnon, Crete, September 29th – October 2nd 2002*. Athens: University of Crete and A.G. Leventis Foundation, 187-195.
- Luraghi, N. 2006. "Traders, Pirates, Warriors: The Proto-History of Greek Mercenary Soldiers in the Eastern Mediterranean." *Phoenix* 60, 1/2, 21-47.

- Maliti, T. and M. Muhumed 2009. "Somali pirates a far cry from buccaneers of old." *The Washington Times*. [online] 11 April.
- Malkin, I. 2005. "Networks and the Rise of Greek Civilization in the Archaic Period." Nellie Wallace Lectures in Oxford.
- _____. 2011. *A Small Greek World: Networks in the Ancient Mediterranean*. Oxford: Oxford University Press.
- Malkin, I., Constantakopoulou, C. and Panagopoulou, K. eds., 2009. *Greek and Roman Networks in the Mediterranean*. London, Routledge.
- Markoe, E. S. 2000. *Phoenicians*. London.
- Marriner, N., Morhange, C. 2006. "Geoarchaeological evidence for dredging in Tyre's ancient harbour, Levant." *Quaternary Research* 65, 64-171.
- Marriner, N., C. Morhange and N. Carayon. 2008. "Ancient Tyre and its harbours: 5000 years of human-environment interactions." *Journal of Archaeological Science* 35, 1281-1310.
- Masson, O. 1983. *Les inscriptions chypriotes syllabiques: Recueil Critique et Commenté*. 2nd edition. Paris: École française d'Athènes.
- Matthäus, H. 2001. "Studies on the Interrelations of Cyprus and Italy during the 11th to 9th Centuries B.C: A Pan-Mediterranean Perspective." In: L. Bonfante and V. Karageoghis, ed. *Italy and Cyprus in Antiquity: 1500-450 B.C*. Nicosia: The Costakis and Leto Severis Foundation, 153-214.
- McGrail, S. 2006. *Ancient Boats and Ships*. Shire Publications.
- Meskell, L. 2005. *Archaeologies of Materiality*. Malden: Blackwell Publishing.
- Mitford, T.B. 1971. *The Inscriptions of Kourion*. Philadelphia: The American Philosphicla society.
- Moore, K. and D. Lewis. *Birth of the Multinational*. 1999. *2000 Years of Ancient Business History – from Ashur to Augustus*. Copenhagen Business School Press.
- Morenz, L., L. Popko. 2010. "The Second Intermediate Period and New Kingdom." In: A. B. Lloyd, ed. *A Companion to Ancient Egypt*. Mass : Wiley-Blackwell, 2010:101–119.
- Morris, I. 1997. "Homer and the Iron Age." In: I. Morris and B. Powell, eds. *A New Companion to Homer*. Leiden: Brill, 535-59.

- Morris, I. and Powell, B. 2006. "The Dark Age: 1200-700 B.C." In: I. Morris and B. Powell. *The Greeks. History, Culture and Society*. Upper Saddle River: Prentice Hall, 72-92.
- Moscatti, S. 1995. "Introduction." In : V. Krings, ed. *La Civilisation Phénicienne et Punique: Manuel de Recherche*. Leiden : Brill.
- _____. 2001. "Who were the Phoenicians?" In: S. Moscati, ed. *The Phoenicians*. New York: I.B. Tauris, 17-23.
- Muhly, J.D. 2003. "Greece and Anatolia in the Early Iron Age: The Archaeological Evidence and the Literary Tradition." In: W.G. Dever and S. Gitin. eds. *Symbiosis, symbolism, and the power of the past: Canaan, ancient Israel, and their Neighbors from the Late Bronze Age through Roman Palestina. Proceedings of the Centennial Symposium W.F. Albright Institute of Archaeological Research and American Schools of Oriental Research. Jerusalem, May 29- May 31, 2000*. Eisenbrauns, 23-36.
- Negbi, O. 1992. "Early Phoenician Presence in the Mediterranean Islands: A Reappraisal." *American Journal of Archaeology* 96.4, 599-615.
- Newman, M. E. J. 2003. "The Structure and Function of Complex Networks." *Society for Industrial and Applied Mathematics Review* 45, 167- 256.
- Niemeyer, H.G. 2000. "The Early Phoenician City-states on the Mediterranean: Archaeological Elements for their Description." In: M. H. Hansen, ed. *A Comparative Study of Thirty City-State Cultures*. Copenhagen: Kongelige Danske Videnskabernes Selskab, 89-116.
- Nijboer, A.J. 2008. "A Phoenician Family Tomb, Lefkandi, Huelva and the 10th Century B.C in the Mediterranean." In: C. Sagona, ed. *Beyond the Homeland : Markers in Phoenician Chronology. Ancient Near Eastern Studies Supplement* 28. Paris: Peeters, 365-378.
- Nouredine, I. 2010. "New Light on the Phoenician Harbor at Tyre." *Near Eastern Archaeology* 73, 176-81.
- Osborne, R. 1996. "Pots, Trade and the Archaic Greek Economy." *Antiquity* 70, 31-44
- Papadopoulos, J.K. 1993. "To Kill a Cemetery: The Athenian Kerameikos and the Early Iron Age in the Aegean." *Journal of Mediterranean Archaeology* 6.2, 175-206.

- _____. 1996. "Dark Age Greece," In: B.M. Fagan *et al.*, eds. *The Oxford Companion to Archaeology*. Oxford, 253-255.
- Parpola, S. 2003. "Assyria's expansion in the 8th and 7th Centuries and its long-term Repercussions in the West." In: W.G Dever and S. Gitin, eds. *Symbiosis, Symbolism and the Power of the Past*. Winona Lake: Eisenbrauns, 99-111.
- Patzek, B. 2004. "Griechischer Logos und das intellektuelle Handwerk des Vorderen Orients." In: R. Rollinger and C. Ulf, eds. 2004. *Griechische Archaik. Interne Entwicklungen – Externe Impulse*. Berlin: Akademie Verlag, 427-45.
- Petit, T. 2001. "The First Palace of Amathus and the Cypriot Poleogenesis." In: I. Nielsen, ed. *The Royal Palace Institution in the first millennium BC: Regional Development and Cultural Interchange between East and West: Monographs of the Danish Institute at Athens*. Vol. 4, 53-75.
- Popham, M.R 1987. "An Early Euboean Ship." *Oxford Journal of Archaeology* 6.3, 353-59.
- Popham, M.R., Sackett, L.H. and Themelis, P.G. 1980. *Lefkandi I: The Iron Age*. British School of Archaeology at Athens. London.
- Pryor, J. H. 1988. *Geography, Technology, and war: Studies in the Maritime History of the Mediterranean*. Cambridge.
- Raban, A. 1988. "Archaeology of Coastal Changes." In: *Proceedings of the First International Symposium "Cities on the Sea e Past and Present"* BAR International Series 404. Haifa.
- _____. 1991. "Minoan and Canaanite Harbours." In: Laffineur, R., Basch, L, eds. *Thalassa: L'Ege'e Pre' historique et la Mer, Aegaeum* 7, 129-146.
- _____. 1995. "The Heritage of Ancient Harbor Engineering in Cyprus and the Levant." In: V. Karageorghis and D. Michaelides, eds. *Cyprus and the Sea*. Nicosia, 139-89.
- _____. 1997. "The Phoenician Harbour and Fisherman Village at Atlit." *Eretz Israel* 25, 490-508 (in Hebrew).
- _____. 1998. "Near Eastern Harbors: Thirteenth-Seventh Centuries BCE." In: S. Gitin, A. Mazar and E. Stern, eds. *Mediterranean Peoples in Transition. Thirteenth to Early Tenth Centuries BCE*. Jerusalem: Israel Exploration Society, 428-438.

- Radner, H. 2004. "Assyrische Handelspolitik. Die Symbiose mit unabhängigen Handelszentren und ihre Kontrolle durch Assyrien." In: R. Rollinger and C. Ulf, eds. *Commerce and Monetary Systems in the Ancient World: Means of Transmission and Cultural Interaction*. Stuttgart: Franz Steiner Verlag: 152-169.
- Roberts, O. T. P. 1991. "The Development of the Brail into a viable Sail Control for Aegean Boats of the Bronze Age." *Aegaeum* 7, 55-60.
- Rupp, D.W. 1987. "Vive le Roi: the emergence of the state in Iron Age Cyprus." In: Rupp, D.W., ed. *Western Cyprus Connections*. Göteborg: Paul Åströms Förlag, 147-61.
- Rutter, J.B. 1992. "Cultural Novelties in the Post-Palatial Aegean World: Indices of Vitality or Decline?" In : W. A. Ward and M. S. Joukowsky. eds., *The 12th Century B.C.: the Crisis Years*. Dubuque, 61-78.
- Sackett, L.H. and Popham, M.R. 1972. "Lefkandi: a Euboean town of the Bronze Age and early Iron Age, 2100–700 BC." *Archaeology* 25, 8-19.
- Scott, J. 2000. *Social Networks Analysis: A Handbook*. 2nd ed. London: SAGE Publications.
- Shaw, J.W. 1990. "Bronze Age Aegean Harboursides." In: Hardy, D.A., Doulas, C.G., Sakellarakis, J.A., Warren, P.M, eds. *Thera and the Aegean World*. London: Thera Foundation, 420-436.
- Sherratt, S. 2003. "The Mediterranean Economy: "Globalization" and the End of the Second Millennium B.C.E." In: W.G. Dever and S. Gitin. eds., 2003. *Symbiosis, symbolism, and the power of the past: Canaan, ancient Israel, and their Neighbors from the Late Bronze Age through Roman Palestine. Proceedings of the Centennial Symposium W.F. Albright Institute of Archaeological Research and American Schools of Oriental Research. Jerusalem, May 29- May 31, 2000*. Eisenbrauns, 37-62.
- _____. 2004. "Ethnicities', 'ethnonyms' and archaeological labels. Whose Ideologies and whose identities?" In: J. Clarke, ed. *Archaeological Perspectives in the Transmission and Transformation of Culture in the Eastern Mediterranean*. Oxford, Oxford Books, 25-38.
- Shortland, A. 2011. "'Robin Hook": The Developmental Effects of Somali Piracy." *Deutsches Institut für Wirtschaftsforschung* 1155, 1-37.
- Smith, J. S. 2009. *Art and Society in Cyprus from the Bronze Age into the Iron Age*. Cambridge: Cambridge University Press.

- Snodgrass, A. 2000. *The Dark Age of Greece: an Archaeological Survey of the Eleventh to the Eighth Centuries BC*. New York: Routledge.
- Sommer, M. 2010. "Shaping Mediterranean Economy and Trade." In S.Hales and T. Hodos, eds. *Material Culture and Social Identities in the Ancient World*. Cambridge: Cambridge University Press, 114-137.
- _____. 2007. "Networks of Commerce and Knowledge in the Iron Age: The Case of the Phoenicians." *Mediterranean Historical Review* 22.1, 97-111.
- Stampolidis N. C. and V. Karageorghis, eds., 2003. *ΠΑΟΕΣ...Sea Routes... Interconnections in the Mediterranean 16th – 6th century BC, Proceedings of the International Symposium held at Rethymnon, Crete, September 29th – October 2nd 2002*. Athens: University of Crete and A.G. Leventis Foundation.
- Symeonoglou, S. 1985. *The Topography of Thebes from the Bronze Age to Modern Times*. Princeton: Princeton University Press.
- Tandy, D.W. 1997. *Warriors into Traders : The Power of the Market in Early Greece*. Berkeley : University of California Press.
- _____. 2004. "Trade and Commerce in Archilochos, Sappho, and Alkaios." In: R. Rollinger and C. Ulf, eds. *Commerce and Monetary Systems in the Ancient World: Means of Transmission and Cultural Interaction. Melammu Symposia V*. Franz Steiner Verlag, 183-94.
- Tuplin, C. 1996. *Cyprus Before and Under the Achaemenids: Problems in Chronology, Strategy, Assimilation and Ethnicity, Achaemenid Studies*. Stuttgart: Franz Steiner Verlag.
- Ulf, C. 2009. "Rethinking Cultural Contacts." *AWE* 8, 81-132.
- Van Dommelen, P. and A.B. Knapp, eds. 2010. *Material Connections in the Ancient Mediterranean: Mobility, Materiality and Mediterranean Identities*. Routledge, London.
- Wachsmann, S. 1998. *Seagoing Ships and Seamanship in the Bronze Age Levant*. London: Chatham Publishing.
- Walker, K.G. 2004. *Archaic Eretria. A Political and Social History from the Earliest Times to 490 BC*. London: Routledge.
- Wasserman, S. and K. Faust. 1994. *Social Networks Analysis: Methods and Applications*. Cambridge: Cambridge University Press.

- Watts, D. J. 1999. *Small Worlds. The Dynamics of Network between Order and Randomness*. Princeton: Princeton University Press.
- Watts, D. J. and S. Strogatz. 1998. "Collective Dynamics of "Small-World" Networks." *Nature* 393, 440-42.
- Webb, J. M. 1999. *Ritual Architecture, Iconography and Practice in the Late Cypriote Bronze Age*. Jonsered: Paul Åströms Förlag.
- Weber, M. 2010. Kein Frieden für Somalia? Die somalische Tragödie und der internationale Terrorismus M. W. Verlag.
- Westerdahl, C. 1992. "The Maritime Cultural Landscape." *The International Journal of Nautical Archaeology* 21.1, 5-14.
- Whitley, J. 1991 "Social diversity in Dark Age Greece." *BSA* 86, 341-65.
- Yon, M. and F. Malbran-Labat. 1994. La stèle de Sargon II à Chypre. In: A. Caubet, ed. *Khorsabad, le palais de Sargon II, roi d'Assyrie, Actes du Colloque du Louvre*. Paris: La Documentation Française, 161-79.
- Yon, M. 1997. *La cité d'Ougarit sur le tell de Ras Shamra*. Paris: Éditions Recherche sur les Civilisations.