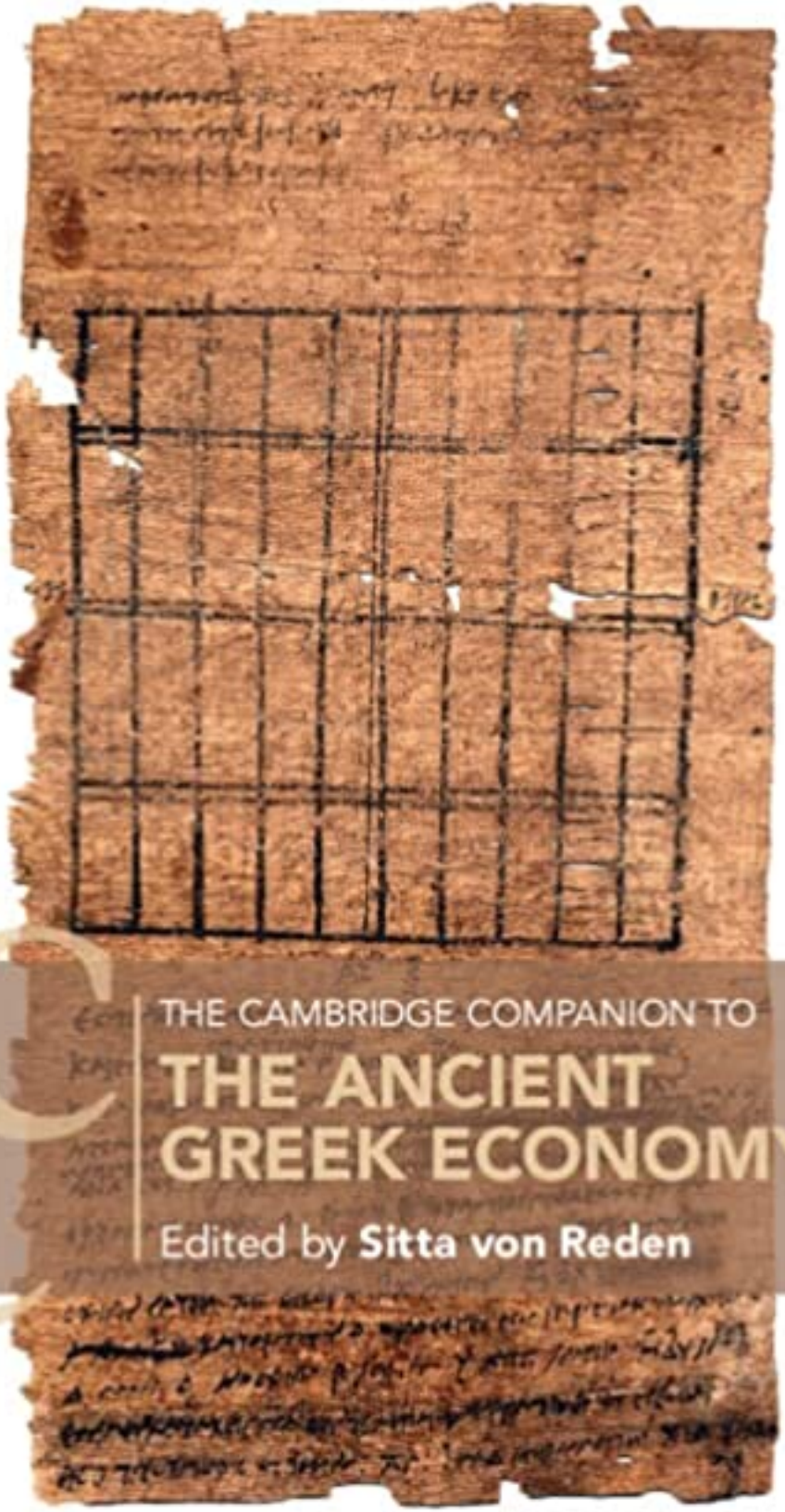

THE CAMBRIDGE COMPANION TO

THE ANCIENT GREEK ECONOMY

Edited by **Sitta von Reden**

2: Early Iron Age Economies

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Introduction

This chapter explores the economic activities of Greek communities from the twelfth to the eighth centuries.[1] It was a formative phase after the end of the Late Bronze Age (LBA) palatial administration, and there were several kinds of social and economic transformations that had an impact on the economic performance of the period. Past studies have mostly focussed on the eighth century, with brief discussions of the eleventh, tenth, and ninth centuries, but totally ignoring the twelfth.[2]

In order to comprehend Mycenaean economies, we rely on the Linear B documents and the archaeological finds. Both suggest that the quantity of resources and the number of people that were managed by the palace administration should not be underestimated, even if the palaces did not control the entire economy.[3] It has also been argued that mobilisation of goods and people characterised comparable early states whose main purpose was to support the elites in charge.[4] Indeed, Mycenaean palaces monopolised the production and consumption of a range of goods and materials – in particular, luxury goods such as high-quality textiles and perfumes. These were then exchanged for commodities (such as copper and tin) and other goods that formed part of the conspicuous consumption of palatial and regional elites. This is mostly traced in the funerary display.[5]

The fact, however, that there was no attempt to restore palatial administration after 1200 is significant, and yet the impact of its demise must have severely affected surviving communities. Indeed,

[1] I would like to thank Antonis Kotsonas and Birgitta Eder for useful comments on an earlier draft of the chapter. Antonis Kotsonas provided me with further bibliographical references of recent publications of analyses of animal bones and human skeletons.

[2] Morris 2007; 2009a with bibliography of his numerous contributions; for exceptions: Dickinson 2006; Morgan 2009; Murray 2017; Eder and Lemos 2020; Nakassis 2020.

[3] Killen 2007; Bennet 2007.

[4] Killen 2008; Halstead 2011. Both are following Earle's 1977 redistribution model in Hawaiian chiefdoms.

[5] Voutsaki 2001; Bennet 2007, 190–1; Nakassis 2020.

the post-palatial period marked profound socio-economic adaptations and changes, even if palaces did not monopolise all economic activities and the degree of centralisation differed from region to region.[6] It has been shown, for example, that the production of some goods such as pottery was not under strict palatial control.[7] Most importantly for the surviving post-palatial communities, it has been argued that agricultural products, and especially those which were not mentioned in the Linear B documents but which have been retrieved from several archaeological sites, were managed without palatial regulations.[8]

In any case, the post-palatial period is characterised by the demise of the mobilisation centres and the administrative documents that were associated with them. And as period covered by the Linear B documents comes to an end, it is archaeology that can trace the economic activities of the period until another challenging source enters the picture: the Homeric poems and Hesiod.[9]

Scholarship has long contemplated the contribution of the Homeric epics and Hesiod to the study of the Early Iron Age (EIA),[10] but priority is given here to the archaeological evidence, as the study of the period depends entirely on data provided by archaeology.[11] It is therefore appropriate to survey the archaeological evidence combined with data from bioarchaeological, palaeoclimatological, and other scientific analyses to outline some aspects of the economic activities of the period.[12]

Communities and Population in the EIA

Recent palaeoenvironmental research has suggested that the climate changed from the twelfth to the eighth centuries, becoming much drier.[13] Such conditions may have challenged agricultural regimes and put pressure on economic and social structures. There has been, however, a critical response to such studies, suggesting that they lack high-resolution data and reliable chronological association between the presented proxy records, showing climate change and certain 'historical' events.[14]

[6] Nakassis, Parkinson, and Galaty 2011. [7] Whitelaw 2001; Nakassis 2010.
[8] Halstead 2007; 2011. [9] Morris 2007, 213, 231–5; Nakassis 2020.
[10] Finley 1978; Donlan 1997; Tandy 1997; Morris 2001; von Reden 2003, 13–76; van Wees 2009; Osborne 2009a, 131–52; Hall 2014, 260–6.
[11] Morris 2007, 213.
[12] For the importance of acknowledging climate variability, environmental conditions, and geographical location among other factors, see J. G. Manning 2018.
[13] Drake 2012; S. W. Manning 2013, 112–14.
[14] For a summary of the research and evaluation of the results: Knapp and Manning 2016; Weiberg et al. 2016.

Another common assumption is that after the end of palatial administration the population dropped dramatically, resulting in negative outcomes for social structures and economic growth.[15] The actual estimates of the population, however, are usually calculated by projecting backwards from the classical and later periods.[16] Though to some extent such estimates can be useful, we should take into consideration that this is a period without historical evidence and not that much explored. Alain Bresson and others have argued for a more cautious approach to estimating ancient populations.[17]

Nevertheless, since the actual area that a settlement occupied and the entire extent of a cemetery are rarely fully explored, a common concern for every period is to assess the size of a community's territory. For example, it has been estimated that during the twelfth century, some 2,000 people lived at Karphi in Crete, though only a small part of the settlement has been excavated, while on Xeropolis-Lefkandi, we assume that the whole tell (a mound formed by the debris of generations of people living at this site) was occupied, based on excavations and trial trenches. But without excavating the whole settlement, we cannot estimate accurately how densely it was occupied and how many people lived there.[18] Another way of estimating population is analysing the data from surveys. The visibility, however, of this particular period in surveys is notoriously low, while a number of sites are still to be exposed under the remains of later periods located on top of them.[19]

Despite several challenges that the first generation had to confront after the 'collapse', communities did survive. Indeed, the fact that a number of settlements experienced destruction early in the twelfth century (Lefkandi, Kynos in the Euboean Gulf, Aigeira in the Corinthian Gulf, Koukounaries on Paros, and elsewhere), while key Mycenaean regions such as Messenia were dramatically depopulated, is indicative of the volatility that characterised Greece at the time. The recovery, however, was especially swift in regions that were not closely associated with central administration and thus where palatial control was weaker, allowing more freedom in managing local economies.[20] Yet Tiryns was an exception, in having been a palatial centre that now attracted an influx of inhabitants, increasing its size and population.[21] In central Greece, a number of sites were thriving, both along the Euboean Gulf (Lefkandi, Eleon, Mitrou, Kynos) and in inland locations (Elateia,

[15] Morris 2007, 217–18. [16] Scheidel 2003.
[17] Bresson 2016b, 41–5, 54–63; Morgan 2009, 46–8. [18] Wallace 2010, 62; Evely 2006.
[19] Bintliff 2012, 211–20; Haggis 2015 for Crete. [20] Bennet 2007, 209–10.
[21] Maran and Papadimitriou 2006; 2016.

Agnadi, Zeli, Modi). Most of them continued to be occupied into the eleventh and the tenth centuries.[22] In Thessaly, while a number of Mycenaean sites were abandoned, others remained occupied into the post-palatial period and the EIA (Kastro in Volos, Velestino, Aerino).[23] In north-western Greece (Achaea, Elis, Kephallonia, Aetolia/Acarnania), the large number of burials in chamber and cist tombs suggests that the population increased during the twelfth and early eleventh centuries.[24] In the Aegean, the Cyclades (Chrora on Naxos, Koukounaries on Paros, Agios Andreas on Siphnos) and the Dodecanese (Rhodes, Kos) became important post-palatial centres in the twelfth century and increased their population.[25] Crete experienced relocation of population to well-chosen and defensible sites away from the coasts, such as Karphi, Monastiraki Chalasmenos, Vronda and Kastro in Kavousi, and others in the Mirabello bay.[26] At the same time, earlier palatial centres declined but were not abandoned (e.g. Knossos, Phaistos, Kydonia). Knossos, after a short decline, developed into a centre of substantial size and importance.[27]

The period from the late eleventh to the ninth century sees further developments in Athens, Argos, Corinth, Larisa, Knossos, Prinias, Gortyn, and other sites that grew into what Morgan called 'big sites'.[28] In the Euboean Gulf, the tell sites of Kynos and Mitrou and others were eventually abandoned, while Atalante and Tragana emerged in the ninth and eighth centuries as key and prosperous centres.[29] At the end of the eighth century, Xeropolis at Lefkandi and Zagora on Andros were abandoned, with the population of the former site moving to Eretria and abroad and of the latter to the nearby Palaiochora and/or to Hypsile, which were occupied into the archaic and later periods.[30] Koukounaries and Paroikia on Paros were key settlements in the eighth century, as was Minoa on Amorgos.[31] In Crete, there is another shift in settlement patterns, as some smaller post-palatial sites were abandoned and new ones were established that grew into proto-urban size during the next period.[32]

This account of selected sites occupied during the period does not do full justice to the degree of variability that characterised the transition from the LBA to the EIA and the archaic period.[33] So, although it would be wrong to argue that the population did not decline after the palatial demise, it would be similarly unwise to be too confident in any

[22] Lemos 2012; 2014; Livieratou 2020. [23] Morgan 2003, 85–102; Karouzou 2020.
[24] Eder 2006. [25] Deger-Jalkotzy 1998.
[26] Nowicki 2000, 223–47; Wallace 2010, 60–75; Gaignerot-Driessen 2016, 56–71.
[27] Hatzaki and Kotsonas 2020, 1036–42. [28] Morgan 2003, 54–69. [29] Livieratou 2020.
[30] Televantou 2015. [31] Gounaris 2005.
[32] Wallace 2010, 234–53; Haggis 2013; Gaignerot-Driessen 2016, 71–9.
[33] For a regional survey, see Lemos and Kotsonas 2020, vol. 2.

guesstimates depending only on quantitative models based on later data without taking into consideration the length of the period during which significant fluctuations took place and the regional diversities of the archaeological record.[34]

Household Economies

Despite uncertainties regarding the size of the population, there is consensus about the importance of household economies after the end of palatial administration.[35] While it has been argued that households were essential in maintaining palatial economies, it is after the demise of the Mycenaean administration that the archaeological landscape is characterised mostly by households of different sizes.[36] The case of Nichoria in Messenia is interesting since the houses of the palatial period were abandoned after the destruction of the palace of Pylos, suggesting that this event had an impact on the economic activities of the settlement. The picture changed in EIA Nichoria when a large household dominated the site.[37] Moreover, the size, storage capacities, and bioarchaeological remains associated with these households reveal key aspects of their economic performance, while craft production in close proximity allows us to appreciate the intricacy of their industrial activities.

Twelfth-century houses have been excavated in Tiryns, Aigeira, Lefkandi, Mitrou, Kynos, Eleon, Naxos Town, Karphi, Halasmenos, Kastro, and Vronda in Kavousi, while in the ninth and eighth centuries, edifices at Zagora, Emporio, Oropos, Lefkandi, and Eretria represent the EIA well. We mostly lack evidence from the centuries in between, but recent archaeological investigations have started to cover the gap. Actually, most of the evidence from the eleventh to the eighth centuries relies on funerary data, allowing only selective exploration of the economies of the living.

Houses were free-standing or formed agglomerated units, and they varied in size. Some had large-size rooms, as in twelfth-century Tiryns, Xeropolis-Lefkandi, and Mitrou. At Tiryns, House W and Room 8/00 outside the citadel were equipped with large central rooms divided by rows of columns.[38] On Xeropolis, the houses were large units with rooms of 5 m^2 each, while a large edifice with additional

[34] Morris 2007; see Murray 2017, ch. 3 for a rather negative approach based on mostly quantitative data.
[35] Stockhammer 2011, 214–36; Foxhall 2014; Day 2017. [36] Nakassis 2020.
[37] Foxhall 2014, 418–25. [38] Maran and Papadimitriou 2006, 108–11; 2016.

quarters had a main room of at least 61 m² in size.[39] Building B at Mitrou was roughly 111 m² and as large as its Mycenaean predecessors.[40] In Crete, the main rooms of the buildings at Vronda in Kavousi and Karphi varied in size between 30 and 56 m², while a large complex, A-B, at Vronda was 197.64 m².[41]

The monumental funerary building at Toumba, Lefkandi (nearly 500 m²) demonstrates the potential for ambitious architectural constructions in the tenth century.[42] Also of large size was Megaron B at Thermos, now dated to the eleventh century, which occupied some 156 m².[43] Other free-standing edifices – mostly apsidal in plan – were smaller. In Nichoria, Unit IV-1 was 73.5 m² in phase 1 and 127 m² in phase 2; another building, Unit IV-5, is estimated to have been around 111 m².[44] The largest building at Asine was around 71 m²,[45] while the building at Kephalosi in Thessaly was 52.4 m².[46] So the size of buildings varies depending on location, context, and function. Interestingly, houses in Late Geometric (LG) Oropos and Eretria have an average size of around 60 m², so they are comparable to or even smaller in size than earlier dwellings.[47] This could be because at Eretria, Lefkandi, and Oropos, walls marked compounds of buildings with both domestic and industrial activities during the ninth and eighth centuries.[48] So the buildings within these compounds should be considered as forming households comprising social and economic kin groups. An alternative spatial organisation can be seen in Zagora on Andros, where houses with courtyards fulfilled similar social and economic roles in the eighth century.[49]

Storage was clearly important in the households of the period, indicating that there was an intention to fulfil subsistence requirements. In Vronda in Kavousi, the largest building of the settlement (A-B) was provided with ample storage facilities, most probably under the control of local leaders.[50] Whether such provisions were designed for feasting or were to signify the status of elite households, they suggest that there was some sort of surplus available for display, to accommodate redistribution and to provide communal consumption on convivial occasions.[51]

[39] Evely 2006; Lemos 2020, 39–49. [40] Van de Moortel and Zachou 2011, 332–4.
[41] Wallace 2005, 252–3; Day 2017, 33–4; Klein and Glowacki 2016, 27–30. [42] Coulton 1993.
[43] Mazarakis Ainian 1997, 127; for the date: Papapostolou 2008.
[44] McDonald, Coulson, and Rosser 1983, 19, 33, 47–54. [45] Mazarakis Ainian 1997, 233.
[46] Karouzou 2020, 890.
[47] Oropos: Mazarakis Ainian 1998, 194–6. Eretria: Verdan 2013, 45–6; Mazarakis Ainian 1997, 58, 103–4.
[48] Mazarakis Ainian 2015. [49] Lang 2007. [50] Day 2016, 221–4.
[51] Halstead 2014, 304–19.

The importance of storage is evinced by the symbolic provision of pits to hold large pithoi (storage containers), discovered in the apse room of the Toumba funerary building at Lefkandi and in other locales in central Greece.[52] In Unit IV-1 at Nichoria, storage was clearly a priority of the household, as was the case in the even larger Unit IV-5 that accommodated considerable storage facilities in its courtyard.[53] In LG Zagora, where every house had storage facilities, the analysis of the capacity of the different types of pithoi shows that they were designed to serve special needs, including the storage of bulk goods such as olive oil and wine.[54] Provisions for storage are indicated by the discovery of circular granaries in LG Xeropolis-Lefkandi and also in the symbolic presentation of wealth in the offering of model granaries to a female elite burial in Athens and their dedication to sanctuaries.[55]

The study of faunal and archaeobotanical remains reveals an economic organisation that supported a mixed agropastoral economy engaged in the production of a diversity of resources that involved the cultivation of different species of cereal, legume crops, and fruit and the management of cattle, sheep, goats, and pigs. The prevalence of one species over others depends on regional and environmental aspects and depositional contexts, whether domestic, cultic, or funerary. In Aigeira, Xeropolis-Lefkandi, Kynos, Nichoria, Zagora, and elsewhere, barley, beans, vetches, figs, olive oil, and wine were part of the diet.[56] In Crete, and on the Aegean islands, caprine faunal remains are more numerous than those of cattle, either for micro-environmental reasons or because of the economic exploitation of certain products such as wool from the sheep and milk from the goats.[57] Cattle are more common in Nichoria and in Tiryns, suggesting that – if slaughtered young – they were kept for their meat.[58] On Xeropolis-Lefkandi, cattle were kept to an adult age, implying that they were used both for their milk and for traction in the nearby Lelantine plain.[59] Hunting deer for cult and ritual display has been attested at the sanctuary at Kalapodi, in Lefkandi, in Tiryns, and in Aigeira.[60]

[52] Coulton 1993, 50; on the importance of storage in central Greece: Lis and Rückl 2011. For the evidence of storage facilities in the northern Aegean: Gimatzidis 2020, 252–5.
[53] McDonald, Coulson, and Rosser 1983, 17, 28, 52–4. [54] McLoughlin 2011.
[55] Popham, Sackett, and Themelis 1981, 15–17; Mazarakis Ainian 1997, 120–2; on storage methods that we cannot retrieve in the archaeological record: Halstead 2014, 180.
[56] Livarda and Kotzamani 2019; Margaritis 2013; Alram-Stern and Deger-Jalkotzy 2006.
[57] For Vronda: Snyder and Reese 2016 with further bibliography.
[58] Tiryns: Morgenstern 2016 with further bibliography. For Nichoria: Dibble 2017.
[59] Mulhall 2015 with comparative discussion from other sites.
[60] Mulhall 2015; for Kalapodi: Felsch 1981.

Additional information is offered by the study of human skeletal assemblages, which could serve as indicators of the health status and subsistence of ancient populations. Such data, however, is meaningful only when appropriate consideration is given to the environmental, cultural, and social contexts.[61] In addition, we should be aware that the nature of the assemblages, together with the methodology and techniques employed, can produce biased results.[62] Age, for example, is not always estimated with accuracy, while the frequent exclusion of juveniles and elderly individuals from the funerary display results in the under-representation of specific age groups.[63] Liston, for example, has noted that skeletons in Athens, assigned to adults in the 1970s by the pioneering work of Angel, were of children.[64] Hence, analyses of skeletal remains should not be taken as reflecting the structure of the living population of any past society or representing its exact size.

Bioarchaeological analyses, however, have shown that in the twelfth century in Achaia Clauss, the buried population was in general in good health.[65] In LG Argos, men and women of high status were found in equally good states of health, while evidence from their teeth revealed the consumption of food rich in carbohydrates.[66] Stature is considered a good indication of the general health of a population. It has been noticed, however, that cremated skeletons cannot provide actual calculations of stature, and thus in recent EIA studies only inhumed skeletons were employed. This restricts our data since cremation is a common rite in this period. In any case, in the EIA cemeteries in the Athenian agora, the estimated mean height of eight inhumed adults was typical for the period generally but shorter than the average individual at Torone.[67]

Stable isotope analyses (the identification of stable isotopes and chemical elements in organic and inorganic matter) conducted on the human remains from the eighth-century Agios Dimitrios cemetery in Phthiotis provided information regarding the main sources of protein in the diet of the population. The analyses show that their diet predominantly consisted of terrestrial resources with minor animal protein components. Interestingly, though the site is located near the coast, marine-derived protein did not make a substantial contribution to their diet.[68]

[61] Larsen 2015, 422–31; Liston 2017, 520; Schepartz, Fox, and Bourbou 2009.
[62] Triantaphyllou 2001, 30–2; Larsen 2015, 402–24. [63] Larsen 2015, 418–19.
[64] Liston 2017, 515–19. [65] McGeorge 2018.
[66] Pappi and Triantaphyllou 2011; for similar results in the three cemeteries examined in Macedonia: Triantaphyllou 2001, 139–41.
[67] Liston 2017, 521–2. [68] Papathanasiou et al. 2013.

Subsistence and self-sufficiency were not the only economic strategy of EIA households. Exchange of commodities and production of specialised goods are attested for even the 'darkest' parts of the period.[69] For example, textiles were an important product, as we can deduce from the discovery of loom weights in every house of the period. Two exceptional garments were given to high-status male burials at Stamna in Aetolia and Lefkandi on Euboea and display sophisticated handiwork.[70] Interesting observations of the teeth of women from the graves in Athens have revealed that spinning fibres for cloth left impressions on their teeth.[71]

Areas allocated to the manufacture of pottery and metal objects have been found near or within household compounds. Twelfth-century pottery kilns have been discovered in Kynos and Velestino on the mainland and at Kavousi in Vronda in Crete.[72] Protogeometric and Geometric potters' wasters from wells and pits in the Athenian Agora have been used to support the idea that the area was assigned as a potters' quarter, but pottery kilns have also been found in various locations around the Acropolis and in Palaia Kokkinia near Piraeus.[73] Metalworking activities at Geometric Thoricus, Oropos, and Eretria were under household control. Workshops were also found in sanctuaries later in the period.[74]

On Naxos, remains of a workshop for the production of faience objects suggest that their manufacture continued into the twelfth century, while at Argos, an installation for the refining of silver was found among the EIA levels of the site.[75] In LG Eretria, the discovery of gold globules on two sherds found in the area of the sanctuary of Apollo further evinced the operation of jewellery workshops along with those that produced copper and iron artefacts.[76]

Networks of Mobility and Exchange

Recent research has suggested that, during the Mycenaean period, market-based systems of exchange were in operation, alongside those of the redistribution of goods that relied on palatial organisation.[77] With the end of the palatial administration, however, the role of merchants

[69] Nakassis 2020; see also below, 'Networks of Mobility and Exchange'.
[70] Kolonas et al. 2017. [71] Liston 2017, 525–6.
[72] Kynos: Dakoronia 2015; Velestino: Karouzou 2020, 891; Vronda: Day 2016, 225–6.
[73] Papadopoulos 2003; Alexandridou 2017.
[74] Morgan 2003, 149–55; Mazarakis Ainian 2015.
[75] Lambrinoudakis and Zaphiropoulou 1985, 166; Lemos 2002, 138. [76] Verdan 2013, 148–9.
[77] Parkinson, Nakassis, and Galaty 2013.

and agents who were in charge of such tasks became even more essential in maintaining the short- and long-distance transactions that continued to operate, even if on a smaller scale.[78] It has been noted that coastal locations that were not predominantly dependent on agricultural goods became nodes of such exchanges;[79] consequently, it is not a coincidence that a number of locales during this period were on coasts and islands that controlled sea routes.[80] It is also noticeable that from the twelfth century onwards, the galley becomes popular in imagery of ships, strongly indicating that such boats continued to be maintained and facilitated faster and safer mobility across the Mediterranean.[81]

Both familiar and alternative sources for the acquisition of goods and commodities were sought, as is evinced by the rise of imported bronze objects from Italy in twelfth-century Achaea and the uninterrupted influx of Cypriot goods in Tiryns.[82]

Copper and tin were still available and not necessarily only from recycling.[83] Copper did not come only from Cyprus, as in the palatial period, but new sources were also explored. One such source might have been from Israel and/or Jordan.[84] For the earlier part of the period, the number of bronze objects found, for example, at Karphi in Crete is impressive,[85] while fresh tin has been traced in bronze objects dedicated to the sanctuary of Enodia in Thessaly, where a metal workshop engaged both imported and local copper sources.[86]

The period is also marked by the introduction of iron technology, which might have been imported as a process from Cyprus by entrepreneurs. The purpose of iron changed in less than the span of a couple of generations from a precious to a common metal for tools and weapons.[87] The introduction of iron must have advanced agricultural activities since iron ploughs and sickles could accelerate and intensify production.[88] Even with the arrival of iron, however, bronze personal items and vessels continued to be manufactured and offered to the dead and later were also dedicated to sanctuaries together with figurines.[89]

Interaction among Greek communities can be traced in the circulation of ceramics such as the octopus stirrup jars found among coastal and island communities of the twelfth century; this demonstrates sumptuous patterns of consumption, since such jars

[78] Broodbank 2013, 602. [79] Sherratt 2016. [80] Tartaron 2013, 126–30.
[81] Eder 2006; Kramer-Hajos 2016, 152–61.
[82] Eder and Jung 2005; Jung and Mehofer 2013; Tiryns: Vetters 2011, 27–30.
[83] Murray 2017, 172–3. [84] Kiderlen et al. 2016. [85] Wallace 2005, 259.
[86] Orfanou 2015. [87] Sherratt 1994; 2016. [88] Halstead 2014, 35, 113–14.
[89] Papadopoulos 2014, 181–3; Eder 2015.

were containers of desirable liquids and perfumes.[90] From the tenth century until later in the seventh, the distribution of a specific type of amphora in the northern Aegean suggests a network of consumers who benefitted from the exchange of transported commodities, probably olive oil and wine. This indicates not only that the central and southern Aegean managed redistribution of commodities but also that a busy operation ran in the north.[91]

As in the Mycenaean period, status continued to be displayed in the funerary arena with offerings either imported from within the Greek world or from abroad. The latter include bronze vessels, gold ornaments, and personal adornments made of faience, amber, glass, and ivory. It has been argued that because of the drop in population and local economic growth during this period, the number of imported goods is smaller compared to earlier and/or later periods.[92] This is indeed the case, yet the reasons might not be population decline and lesser wealth but distinctive funerary rites, social structures, and even availability of imported things ('goods') manufactured in the eastern Mediterranean. It should be noted that it was not only Greece that suffered after the events of 1200 but also most of the eastern Mediterranean, and this must have had an effect on the production of goods for export. It might also be the reason behind the circulation of antiques such as those given to the dead at Perati, Lefkandi, and elsewhere.[93]

On the other hand, the only detectable Greek artefacts found abroad are ceramics. Without a doubt, other goods were also exported, including foodstuffs, textiles, and most importantly iron and silver.[94] Luke has argued that Greek pots found in the East were the result of *xenia*, whereas Vacek interprets their presence especially in Al Mina as preliminary gifts of low material value that had a symbolic significance in initiating market exchange.[95] Interestingly, it has been suggested that production of plates by Euboean potters was targeting market demands to satisfy the requests of Levantine consumers,[96] comparable to the production of the Nikosthenic vases for the Etruscan markets in the archaic period.[97]

It has been debated for a long time whether such interactions were based on gift or market exchange. It is important, however, to note that the one does not exclude the other.[98] In any case, merchants operated in

[90] Deger-Jalkotzy 1998. [91] Gimatzidis 2010, 258–69; 2020;Kotsonas 2012.
[92] Murray 2017, 199–209. [93] Sherratt 2010, 132–3; Dickinson 2006, 72. [94] Sherratt 2010.
[95] Luke 2003, 50–6; Vacek 2012, 19–24. [96] Coldstream 1988. [97] Osborne 1996, 31–9.
[98] Appadurai 1986, 11–16; Tandy 1997, 59–75; Sherratt 2016.

the eastern Mediterranean from the LBA and continued to do so in the EIA, with Cypriots and Phoenicians playing a major role but without excluding participation of Greek agents. Their role has been underestimated in recent scholarship.[99] It has been suggested that Greek communities were poor and not able to produce enough agricultural surplus to enable them to participate in any exchange. However, the case of Aegina in the archaic and classical period indicates that surplus is not a prerequisite for successful trade.[100] Indeed, it has been argued that mobility among Mediterranean communities was necessary for the subsistence of the population; thus, we cannot exclude the possibility that certain groups were engaged in the redistribution of commodities by cabotage (short-distance tramping) or by their participation in long-distance networks.[101]

Another indication of the operation of trade is provided by the discovery of balance weights that were given to a male burial at Lefkandi in the first half of the ninth century. According to Jack Kroll, their discovery indicates how Euboeans were actively engaged in trade with the eastern Mediterranean using multiple Levantine/Cypriot weight standards.[102] Equally important is the gold deposit found in one of the neighbourhoods of late eighth-century Eretria and the Tekke tomb 'hoard' in Knossos, suggesting the operation of a pre-monetary system similar to that found in the eastern Mediterranean.[103]

From Resilience to Sustainability and Change

This brief survey shows that the term stagnation does not correctly characterise the period after the rejection of palatial administration.[104] Instead, it reveals similar economic indicators to those employed for studying later economies, even if we lack historical accounts and the archaeological evidence is not always visible. This lack of evidence might be the reason that economic historians often described the period as a Dark Age.[105]

Over the long term, and especially during the less visible second part of the eleventh century, climate change may have caused more arid conditions and so affected agriculture and population size in Greece.

[99] Monroe 2009, 237–8; Sherratt 2010. [100] Purcell 1990, 50–2.
[101] Horden and Purcell 2000, 137–52; Bresson 2016b, 60, 100–1. [102] Kroll 2008a.
[103] Le Rider and Verdan 2002, 141–52; Kotsonas 2006.
[104] Morris 2007, 217–19; on the theoretical framework chosen for this section, North 1991.
[105] For the use of the term: Kotsonas 2016.

However, well-explored sites such as Athens, Lefkandi, and Knossos continued to show signs of economic activity.

More recently, ancient historians have turned to the theory of New Institutional Economics, which emphasises the importance of institutions and organisations whose role is to regulate the performance of economic activities (Chapter 23, this volume).[106] It could be argued that after the palatial demise, households became the central organisations in determining economic performance. They would then have been required to be more effective in running their activities, with diversified strategies for the production, provision, and consumption of goods.

EIA households could be defined as adaptable socio-political organisations with fluid boundaries depending on the relationships and identities of their members.[107] They were kin-based but more independent than in the LBA palatial period.[108] Affluence depended on a network of relations among their own members and a network of others inside and outside their communities. Households have been ascribed to 'house societies' that, despite their regional and temporal variations, characterised the Mediterranean landscape.[109] Their continuous prominence from the Neolithic period, despite their variety in scale and breadth, was due to their ability to manage agropastoral strategies in the Mediterranean. In any case, access to land, livestock, and labour were important factors for the successful performance of household economies, and this period could not have been an exception.[110]

In order to profit and prosper, competition in 'transactions' among organisations is not only unavoidable but also necessary.[111] The archaeological evidence of communal and private feasting, burial offerings, and trade for the acquisition of necessary and desirable commodities, among other categories, records such competition among EIA communities across the Mediterranean. Indeed, it could have been one of the motives that drove Greeks and Phoenicians to set up homes away from home by the end of the eighth century, if not earlier.

So, it seems that the archaeological evidence reflects a period that is characterised by adaptive and resilient features, and which resulted in stability. Such stability becomes more visible in the archaeological data of the eighth century. The concept of resilience has been acknowledged outside the environmental science where it originates as a model to

[106] North 1991; Bresson 2016b, 15–27; J. G. Manning 2018, 27–32.
[107] Souvatzi 2008, 12; Huebner 2017, 6–9. [108] Foxhall 2014.
[109] Foxhall 2014; Halstead 2014, ch. 6; González-Ruibal and Ruiz-Gálvez 2016.
[110] Horden and Purcell 2000, 270–8; Halstead 2014, 311–14; Nakassis 2020.
[111] North 1991, 107–11; Bresson 2016b, 19–20.

understand a variety of societal transformations.[112] Erica Weiberg has argued that social resilience promotes the ability of communities to recover from environmental, socio-economic, and political stress as was evinced in the Early Bronze Age Aegean. Resilience theory employs the adaptive cycle as a key concept, envisaged as a figure of eight consisting of a 'front loop' that characterises phases of exploitation and conservation and of a 'back loop' that indicates those of release and reorganisation. In this scheme, the palatial system is seen to have become unstable and vulnerable, resulting in a release/collapse point, followed by the second phase in the 'back loop' of reorganisation. As Weiberg notes, this model 'allows post-collapse processes to be viewed as dynamic rather than being dismissed as Dark Ages'.[113]

Conclusion

After the demise of an organisational system that collapsed – perhaps more resources were consumed than produced – the accomplishment of the EIA is in managing to adapt to institutional structures, such as those of the household economies, that could first provide stability and in the long run maximise economic performance, before new transformations evolved in response to different socio-economic constraints that emerged at the beginning of the archaic period.

Further Reading

The up-to-date contributions in Lemos and Kotsonas 2020 provide detailed accounts of the complex archaeologies surveyed in this chapter. Bintliff 2012 offers a diachronic study of the archaeology of Greece, supplemented with discussions about its economies. Dickinson 2006 presents a general survey of EIA Greece, and Halstead 2014 ethnographic material related to pre-mechanised farming in the Mediterranean. The contributions in Knapp and van Dommelen 2014 allow the tracing of developments prior to and during the period discussed here, while Bresson 2016b deals with transformations in the course of the formation of poleis during the early archaic period.

[112] Holling and Gunderson 2002; Weiberg 2012; McAnany and Yoffee 2010, 10–11; Faulseit 2016, 6–8, 12.
[113] Weiberg 2012, 159; Faulseit 2016, 12–14.