

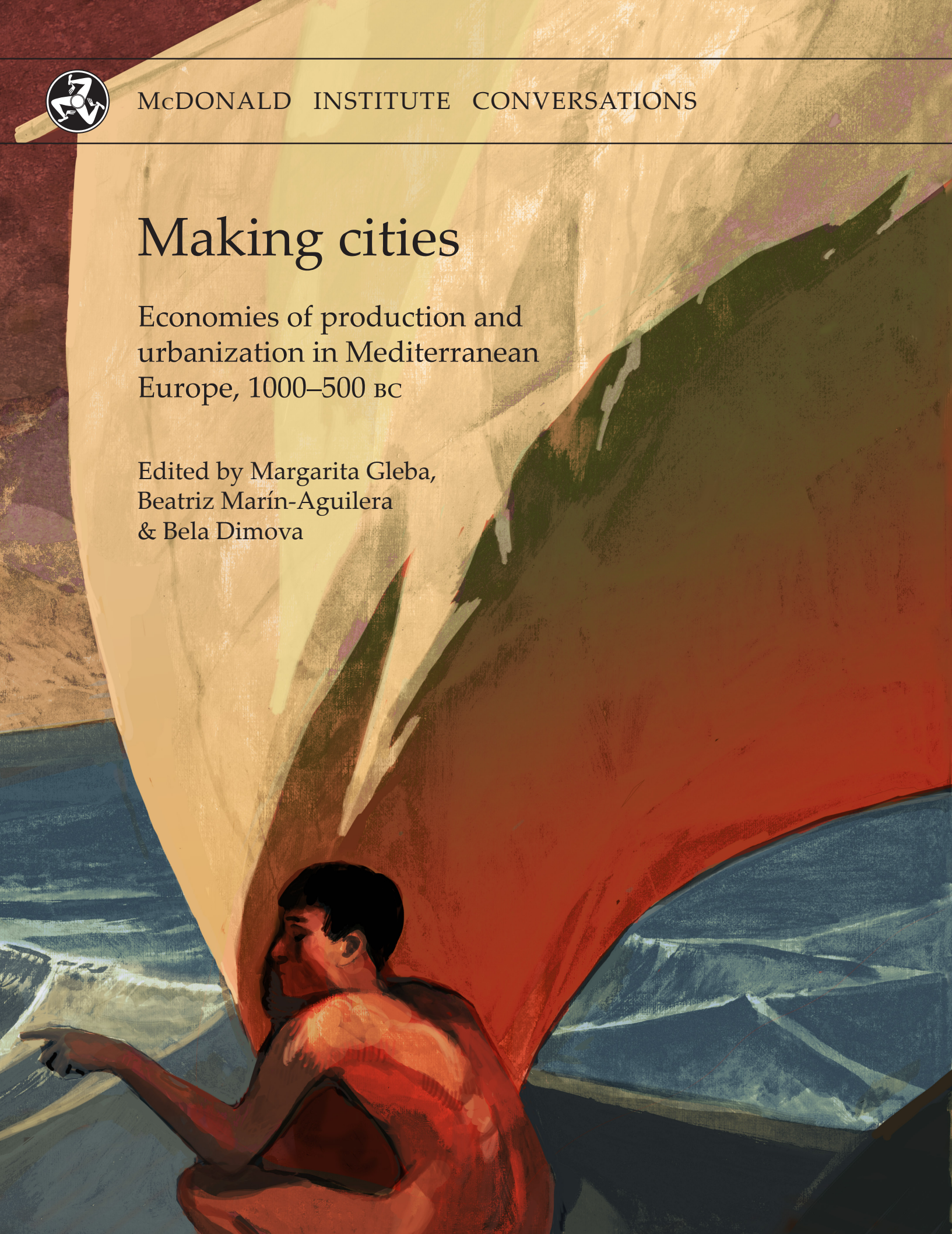


McDONALD INSTITUTE CONVERSATIONS

# Making cities

Economies of production and  
urbanization in Mediterranean  
Europe, 1000–500 BC

Edited by Margarita Gleba,  
Beatriz Marín-Aguilera  
& Bela Dimova





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Edited by Margarita Gleba,  
Beatriz Marín-Aguilera & Bela Dimova

*with contributions from*

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## Chapter 6

# Making Cretan cities: urbanization, demography and economies of production in the Early Iron Age and the Archaic period

Antonis Kotsonas

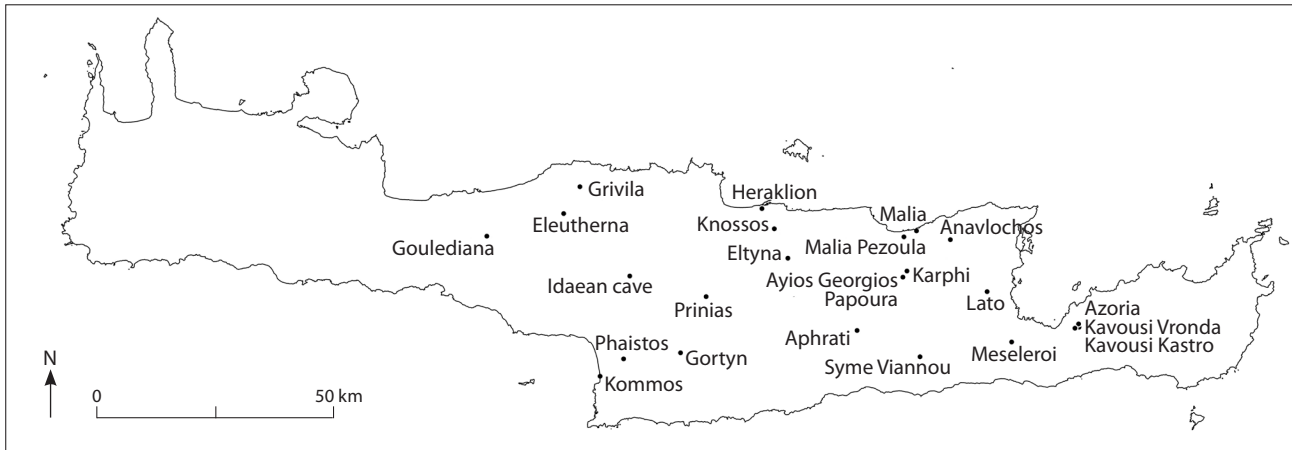
Mediterranean urbanization, c. 1000–500 BC, including its demographic and economic correlates, has been the focus of several collective research projects of the last two decades. These projects have sought to integrate the insights of major theorists like Max Weber, Numa Denis Fustel de Coulanges and Gordon Childe, with the results of fieldwork and other research on different sites and regions of especially Greece and Italy (e.g. Damgaard Andersen *et al.* 1997; Attema 2004; Osborne & Cunliffe 2005). Crete receives no discussion in these studies, but the island's cities have attracted considerable attention in chapters in collective works on urbanization which pursue diachronic and cross-cultural perspectives (e.g. Morris 1991; Haggis 2013; Fitzsimons 2014), and they have been discussed at length in region-specific analyses which have proliferated in the last decade (e.g. Sjögren 2003; Wallace 2010a; 2010b; Whitley 2014; Gaignerot Driessen 2014; 2016; 2017; Haggis 2014a; 2014b; 2015; 2020; Lefèvre-Novaro 2014; 2020).

Crete was renowned for its many cities in Classical antiquity. This was largely due to Homer, who refers to the island's 100 cities in the *Iliad* (2.649) or 90 cities in the *Odyssey* (19.174) (on Homer and Crete see Kotsonas 2018). These references may have been promoted by the pronounced political fragmentation of the island in historical times. Indeed, Paula Perlman (2004) has inventoried 49 Archaic and Classical Cretan *poleis*, and roughly as many other settlements on the island. Although the degree to which all these Cretan *poleis* were functioning as city-states is open to debate, James Whitley (2014, 143–4; based on the data from Hansen & Nielsen 2004) has made an interesting comparison between the number of polities on Crete and other Aegean and Mediterranean islands in the sixth century BC. This comparison reveals that Sicily, which is four times bigger than Crete, only had a few more cities than the Aegean island. Also, Cyprus, which is comparable in size to Crete, and Euboea, which is

less than half the size of Crete, had four times fewer *poleis*. Although unpretentiously gross, this comparison has the merit of highlighting the high number of Cretan *poleis*.

The plethora of Cretan cities contrasts with the state of the research on the vast majority of these sites. In 1901, the Cambridge Classicist William Henry Denham Rouse responded to the first systematic excavations of settlement sites on the island, Knossos and Phaistos in particular, as follows: 'Crete has yet ninety-eight cities left to explore; it is too soon to explain everything' (Rouse 1901, 274). This is probably still the case after more than a century. Past and current research has offered many valuable insights but large-scale systematic fieldwork remains limited thus hindering any nuanced, ground-up understanding of synchronic and diachronic variation in the development of Cretan cities. Indeed, Donald Haggis, who has made major recent contributions on the subject of Cretan cities through his excavations at Azoria and through published work on urbanization, almost echoes Rouse in noting (pers. comm. 2017): 'Ironically, about cities on Crete we know next to nothing'. As Haggis (2014a, 14–15; 2014b, 120; 2015, 219–21) explains, Crete's rich and early record of public inscriptions and the fascination of ancient historians and philosophers with the island's institutions has had two unfortunate effects: a) it set Cretan cities firmly within the purview of the historian, and b) it basically rendered their physical morphology and material condition as irrelevant.

My paper is conceived as a response to these concerns, as indicated by the reference of my title to 'Making Cretan Cities'. This title is more than a twist on the title of the conference that led to the present volume, and of other relevant literature (e.g. Creekmore & Fisher 2014); indeed, it is intended as a reaction to recent important literature which aims to promote the 'reading' and 'writing' of Cretan communities (e.g. Gaignerot Driessen



**Figure 6.1.** Map of Crete showing sites mentioned in the text (J. Wallrodt, revised by C. Stefanou).

2014; Perlman 2014). This aim implicitly perpetuates the ‘linguistic turn’ that characterizes archaeological and anthropological literature of the 1970s and 1980s, which treated the archaeological record as text, and material culture as passive and simply reflective of social realities, thus reproducing the problems noted by Haggis. The field would probably benefit more from closer attention to current interpretative paradigms, especially the ‘material culture turn’ that pervades recent anthropological and archaeological literature, which focuses on the material and other non-textual (e.g. phenomenological) qualities of culture and acknowledges the physical properties of material remains and their active role in shaping social realities (see, e.g. Hicks & Beaudry 2010). I find that a programmatic emphasis on the ‘making’ of cities, as pursued by the present volume, best reflects current archaeological and anthropological thinking, and best promotes the understanding of the physical and socio-economic dynamics of urbanization in Early Iron Age and Archaic Crete.

In pursuing this approach, I return to an argument I have made before (Kotsonas 2002) on the importance of the seventh century BC for the physical, political and socio-economic transformation of Cretan cities. However, the present analysis brings in new and less well-known evidence and recent fieldwork, which expand and enrich the range of current interpretations and generate hitherto underexplored perspectives on Cretan urbanization, demography and economy.

### Urbanization

This section explores urbanization in Crete from the beginning of the Early Iron Age to the end of the Archaic period by focusing on questions of settlement size, nucleation and the formalization of physical

space, and site abandonment. The broad chronological overview is balanced by closer attention to five sites: Kaphi, Malia Pezoula, Knossos, Prinias and Azoria (Fig. 6.1). These sites are chosen because they have received extensive fieldwork, and also because they capture some of the different conditions and the major developments that characterize Cretan urbanization in different parts of this broad time-span.

Bronze Age Crete had a notable tradition of large urban centres, which is fairly exceptional for the Aegean (Whitelaw 2017). Habitation typically centred on lowland and coastal sites, and urbanization increased markedly over the Protopalatial and Neopalatial periods, but decreased gradually after the mid-second millennium BC (Whitelaw 2017, especially figs. 7.3, 7.9, 7.10). In the end of the Bronze Age, the Minoan settlement pattern was largely dismantled; numerous lowland and coastal sites were abandoned and many new sites were established at defensible locations, often at a distance from the coast (see, e.g. Nowicki 2000; 2002; Wallace 2010a, 54–68; Wiener 2021). The new settlement pattern persisted – with considerable modifications – to the Classical period.

The type-site for this new settlement pattern (but also an extreme example of it) is Kaphi (Fig. 6.2), which was founded in inland east-central Crete c. 1200 BC and was abandoned c. 1000 BC (Pendlebury *et al.* 1937–1938; Nowicki 1987; 1999; 2000, 157–64; 2002; Wallace 2012). The settlement extends on steep-sided peaks that rise above 1100 m asl and occupies c. 3 ha (an estimate that is currently re-evaluated by Saro Wallace in light of her fieldwork at the site). The location and the altitude make the site inhospitable, but Kaphi commands a view over an extensive part of central Crete. The houses of Kaphi are organized in densely built quarters with agglomerative building complexes





Figure 6.2. Plan of Karphi (courtesy of the British School at Athens).

separated by paved streets. A small temple barely stands out in the settlement layout, but shrines and evidence for cult are attested in several rooms, which has been taken to suggest decentralized authority. However, recent fieldwork has raised the possibility of two buildings of special function at different parts of Karphi (Wallace 2012, 5–7, 12, 18, 41–42, 52, 58–59 on Buildings A1 and MG1).

John Pendlebury (1939, 16, 303–5) attributed the dismantling of the Cretan Bronze Age settlement pattern and the establishment of Karphi and other such sites to some threat from the sea. This interpretation remained popular for long, but has now waned. Recent attention to the ecology, economy and settlement pattern of the micro-regions surrounding these sites has led to major advances in interpretation (Haggis 1993; 2013; Nowicki 1999; 2000; 2002; Wallace 2003; 2010a, 49–166; 2010b), including the observation that the new defensible sites vary markedly in their extent, from less than half a hectare to 4 ha (Wallace 2010a, 62, fig. 11), and also in the size of the population they held (Nowicki 2002, 156).

Large or medium-sized defensible sites are well documented by the excavations at Karphi, Kavousi Vronda and Kastro, and elsewhere (see e.g. Nowicki

2000). However, the small sites of this type have largely remained obscure. An exception to this rule is the site of Malia Pezoula, which was fully excavated recently, and remains little known. Located on a low rocky hill lying southwest of the prehistoric palace and town of Malia, and commanding a view of the north coast of Crete, Malia Pezoula is a defensible but not inaccessible site which dates from the eleventh and tenth centuries BC (Mandalaki 2006). The site involves a stand-alone building complex, which has a central room supplied with benches and a bin, and is surrounded by 15 more rooms (including storerooms), which preserve evidence for two architectural phases. The coarse and plain ware ceramics and other finds suggest the storage and consumption of foodstuffs on a domestic scale. Trial trenches in the immediate vicinity established that this compound stood in isolation, and identified remains of tools and small-scale industrial activities in an area with flattened rock immediately south of it.

Malia Pezoula covers only 0.04 ha (Mandalaki 2006, 1134) and is unlike any other excavated Cretan site of the period. Cretan settlement sites of comparable size are typically classified as farmsteads (Haggis 2005, 34–6; cf. Sjögren 2003, 40–2). However, only a few Cretan Early Iron and Archaic sites have hitherto

been – tentatively – identified as farmsteads, and all are inadequately researched (Sjögren 2003, 40–2, 48; Wallace 2010a, 71–2, 332–6). If it is a farmstead, Malia Pezoula would be the first of its kind in Crete to be fully excavated, and a rare breed for the Aegean as a whole. The site could have been economically and politically dependent on a larger site (cf. Wallace 2010a, 71–2), suggesting a level of settlement hierarchy that was previously poorly documented in this period. Alternatively, it could be part of a cluster of interconnected sites, like those identified by Haggis (1993; 2005, 81–5; 2013) in east Crete.

The abandonment of Malia Pezoula in the tenth century BC conforms to a much broader pattern of settlement abandonment. At the time, more than half of the Cretan settlements, which had been established in the end of the second millennium BC, were swept away. According to Saro Wallace (2010a, 231–66; 2010b, 66–8; cf. Nowicki 2002, 168–72; Gaignerot-Driessen 2017, 515–16), the abandonment of these sites relates directly to the concurrent trend for settlement nucleation, which is observed in many of the surviving sites, some of which grew further over time and later became the island's Classical *poleis*.

Relying on surface investigations of dozens of sites, Wallace's model is probably the most elaborate to date and has considerable strengths. However, I find it is somewhat lacking in the coverage of individual stratigraphic contexts and, more generally, of the major lowland sites that survived the end of the second millennium BC (Kotsonas 2011a), which is why I place particular emphasis on the case study of Knossos below. Haggis (2014a, 120, 138; 2014b, 13–15; 2015, 225–8) has also stated his appreciation of Wallace's model, but he has also expressed some concern over its emphasis on the formative role of the tenth century BC, a period which is poorly represented in the excavation record of Crete, as few Protogeometric settlements have been excavated to any considerable degree. Also, as Haggis observes, Wallace's model is too gradualist to account for the complexity of excavated settlements, and it reduces the emergence of Cretan *poleis* in the seventh and sixth centuries BC to little more than the intensification and the formalization of socio-economic conditions and structures developed in the tenth century BC. The cases of Prinias and especially Azoria, which are treated below, suggest a much more complex and discontinuous model of urban and societal development.

The emphasis that Wallace and other authors place on the new defensible sites that characterize the transition from the Late Bronze Age to the Early Iron Age is reasonable, but it has tended to downplay or obscure the complexity of settlement patterns on Crete

of this period, and especially the evidence from major lowland sites that survived the upheavals of the period. Knossos and Phaistos are well-known examples of this phenomenon and show signs of nucleation in the tenth and ninth centuries BC (Wallace 2010a, 68–71). However, there are more sites of this type, including Grivila in the district of Rethymno, northeast of the town of Perama. Situated on a low hill, which overlooks the Mylopotamos plain and controls what was probably the main ford of the ancient river Oaxos, Grivila is an extensive Bronze Age site showing continuous occupation into the Early Iron Age, as confirmed by trial trenches and surface investigations (Platon 1951, 441; Hood *et al.* 1964, 56–8). Grivila confirms that in the Mylopotamos plain, as in other major lowlands of Crete, at least one major, probably urban centre of the Bronze Age survived the upheavals of the end of the second millennium BC.

Knossos is the best explored of these lowland sites which present continuous occupation (Hatzaki & Kotsonas 2020). However, excavated settlement remains of the Early Iron Age are here sandwiched between Minoan and Roman strata, and they are almost invariably disturbed by later stone robbing. This has led to uncertainties and varying interpretations over the nature and extent of the Early Iron Age settlement.

The first scholar to address this issue was Stylianos Alexiou in 1950. To account for the different cemeteries and burial plots found around the Knossos valley, Alexiou (1950, 296–7) suggested that Knossos in this period was small in size and was surrounded by a number of villages, each with its own burial ground. In his view, habitation in the Knossos valley was scattered, and the Classical *polis* emerged through *synoecism*, in accordance with a model described by Aristotle (*Politics* 1252b).<sup>1</sup>

A different interpretation of the character of the settlement of Early Iron Age Knossos emerged among the British excavators in the late twentieth century (e.g. Hood & Smyth 1981, 16–18; Coldstream 1984). According to this, Knossos of the period was nucleated and was served by the surrounding cemeteries, but remained small in size. Satellite settlements, including a coastal site under modern Heraklion, were located at considerable distance. The principal proponent of this view, Nicolas Coldstream (1984; 2000, 260–1; 2004, 59–61; 2006, 584–8), envisaged a nucleated settlement of 12.5 ha extending from the area of the Minoan palace to the east slopes of the Acropolis hill.

Coldstream's rejection of Alexiou's case for dispersed occupation is convincing, but his argument for a relatively 'small Knossos' is questionable. Indeed, it is challenged by the recent excavation of evidence for Protogeometric occupation in a test trench under the Roman Villa Dionysus. In Coldstream's view, a distinct Protogeometric hamlet is represented by this

site, which lies less than 300 m north from the north limit of his reconstruction of Early Iron Age Knossos (Coldstream 2000, 299; Coldstream & Hatzaki 2003, 299–300). However, this find can now be seen to lie well within the wide scatter of Early Iron Age – including Protogeometric – material revealed by the Knossos Urban Landscape Project (KULP), as discussed below.

More recently, Todd Whitelaw (2000, 225, table 1; 2004, 156, fig. 10.8) proposed a more dynamic model of settlement development, which involved considerable expansion and contraction. According to Whitelaw's estimates, the site grew from 4 ha in the eleventh century BC (Subminoan period), to 7 ha in the tenth and ninth centuries BC (Protogeometric period), then jumped to 27 ha in the eighth century BC (Geometric period), and shrank to 10 ha in the seventh century BC (Orientalizing/Protoarchaic period). On the other hand, Lena Sjögren (2003, 31, 39) estimated that Knossos extended over c. 11.5 ha in the eighth century BC and perhaps grew to 35 ha in the seventh century BC.

The size of Early Iron Age Knossos can be revisited in the light of the findings of the Knossos Urban Landscape Project, an intensive urban survey covering the Knossos valley, which commenced in 2005 and is directed by Todd Whitelaw of the British School at Athens and University College London, and Maria Bredaki and Andonis Vasilakis of the Ephorate of Antiquities of Heraklion. The distribution pattern of the material which was collected by KULP and dates from this period (Fig. 6.3) was recognized as surprisingly extensive since preliminary study of the pottery by Whitelaw in the first years of the project (Grammatikaki *et al.* 2005–2006, 108; Bredaki *et al.* 2006–2007, 108; Kotsonas *et al.* 2012, 221–4; Kotsonas *et al.* 2018, 66–72). Fairly dense scatters of sherds from this period extend over an area that is very extensive relative to the norm for Aegean sites of the Early Iron Age. Although this distribution includes both domestic and burial contexts, the study of the material and the distinction between residential and outlying burial areas has helped generate a new estimate for the settlement of Protogeometric to Orientalizing/Protoarchaic Knossos, which is much larger than previously assumed and covers 50–60 ha (Kotsonas 2019; Hatzaki & Kotsonas 2020, 1038).<sup>2</sup> This area is much larger than Coldstream's Knossos and does not involve the surrounding villages proposed by Alexiou. Indeed, KULP yielded no evidence for outlying villages in the vicinity of the Fortetsa cemetery, nor has any such evidence been recognized in the area around the North Cemetery that was available to be surveyed. Satellite sites are only attested by rescue excavations beyond the area surveyed by KULP, and one such site was at coastal Heraklion (Rethemiotakis & Englezou 2010, 198–9).

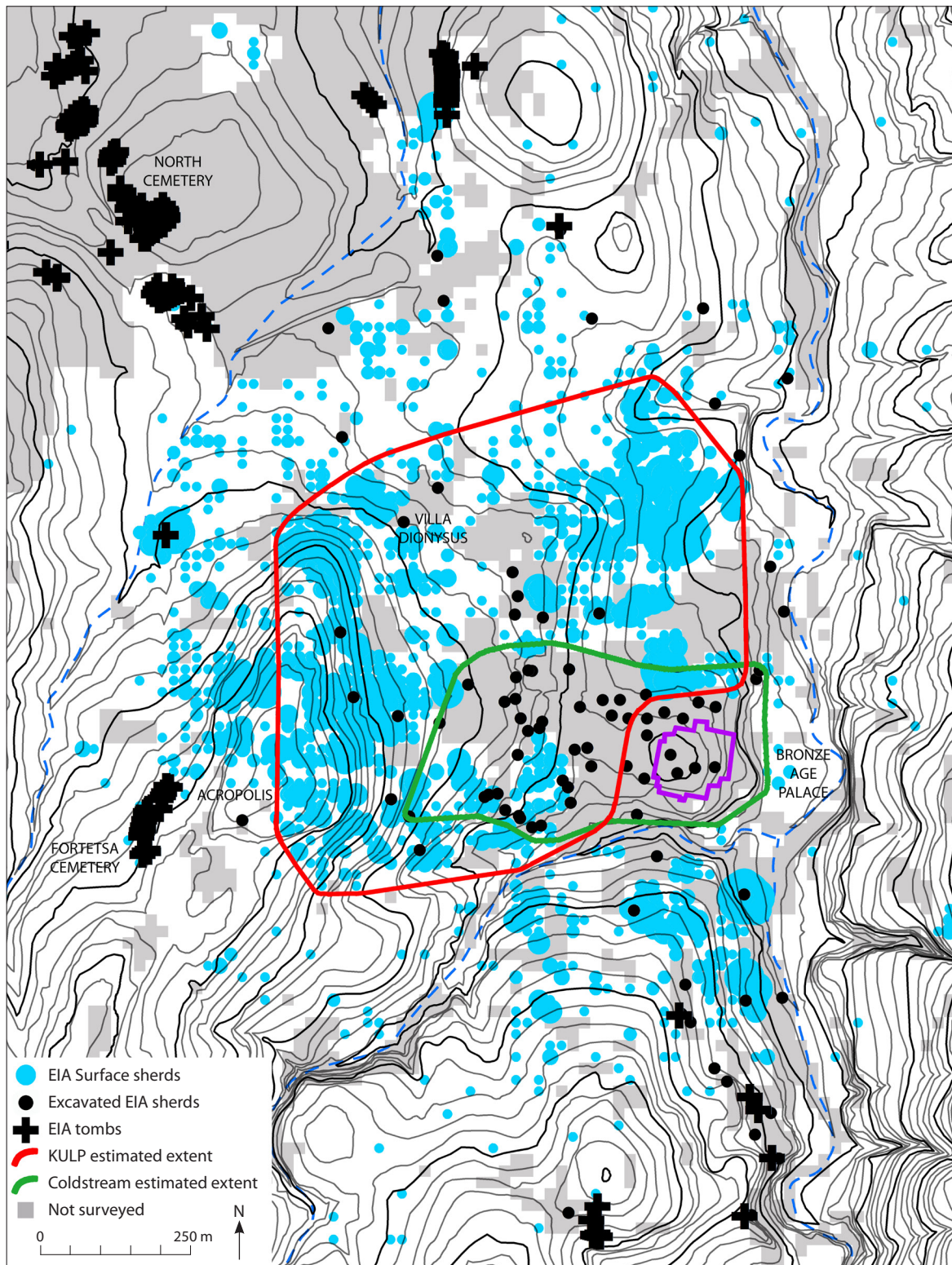
The argument for a 'large Knossos' fits the picture of prosperity that is indicated by the rich discoveries made in its extensive cemeteries (Brock 1957; Coldstream & Catling 1996; Antoniadis 2017). Indeed, Coldstream has observed that: 'if the size of a community were measured by its cemeteries, then Early Greek Knossos would be by far the largest city of its time in the Aegean world' (Coldstream 2006, 584; cf. 1984, 312; 2004, 62). The Homeric epics also suggest the authority of the site by having Idomeneus, the king of Knossos, lead the large Cretan contingent that sailed to Troy (*Iliad* 2.645–52; Kotsonas 2018). Lastly, the conception of Knossos as a centre of considerable economic and political influence over north central Crete pervades many recent interpretations of sites like Eltyna, Prinias and the Idaean Cave (Matthäus 2000a, 274; 2000b, 541–2; Rizza 2008, 302; Rethemiotakis & Englezou 2010, 197–200).

The notable increase in the size of Knossos during the Early Iron Age begs the question of any decisive moment of expansion. Coldstream (1984, 319; 2000, 260; 2004, 61; 2006, 587) argued for a considerable expansion to the north in the late eighth century BC (Late Geometric period), with continued increase in the seventh century BC (Orientalizing/Protoarchaic period). One could relate this argument to the rise in the number of burials that is attested in the Knossos North Cemetery in the eighth century BC (Cavanagh 1996, 659–64; see below). On the other hand, Whitelaw (2000, 225, table 1; 2004, 156, fig. 10.8) drew on the data available before the beginning of KULP to estimate that Knossos grew dramatically in the eighth century BC, as explained above, whereas Sjögren argued for a notable expansion only in the seventh century BC (2003, 31, 39).

The current degree of chronological resolution of the evidence from KULP does not allow for any firm conclusions on the pace and decisive moment of expansion, but the plotting of the closely datable material suggests that the settlement was extensive already in the Protogeometric period, i.e. the tenth and ninth centuries BC (the latter century being favoured by the evidence for increase in the number of burials, on which see below). There is a tendency for Protogeometric sherds to be clustered on the eastern slopes of the Acropolis, raising the question whether this might have been the focus of the earliest post-Bronze Age settlement. On the contrary, the material of the eighth and seventh century BC is denser on the northern half of the site (especially in the northeast section), possibly indicating a shift of focus to flatter land (Kotsonas 2019).

Notwithstanding the changes involved in the process of urbanization in Early Iron Age Knossos, there is some scant evidence for continuity in the





**Figure 6.3.** Plan of the Knossos valley showing the surface scatter of Early Iron Age pottery collected by KULP (light blue), and comparing the estimates for the size of Early Iron Knossos provided by Coldstream (green line) and KULP (red line). Also indicated are the locations of: the Minoan palace (purple), Early Iron Age tombs (black crosses), and other Early Iron Age material (black dots) (T. Whitelaw).

topography and the layout of the settlement through this period. Indeed, the area of the Roman Villa Dionysus has yielded walls of the tenth to ninth century BC that show similar orientation to walls of the late eighth century BC (Coldstream & Hatzaki 2003, 300), though this orientation is standard in the west part of the city from the prehistoric through Roman occupation, and is dictated by the gradual slope of the land. Also, the burial locations used by the Knossians in the Early Iron Age do not change considerably between the Protogeometric period on the one hand (tenth and ninth centuries BC), and the Geometric and Orientalizing/Protoarchaic on the other (eighth and seventh centuries BC) (Antoniadis 2017, 29–38). Large clusters of tombs occur to the north and the west of the settlement, and only isolated examples to the east and the south.

The density of occupation of Early Iron Age Knossos cannot be easily estimated. The few well-explored Cretan sites of the earlier or later part of the Early Iron Age are densely built (e.g. Wallace 2010a, 104–13, 233–60, 271–84; see also above, on Karphi, and below, on Prinias), but all are on constrained hilltop locations. In Knossos, excavations in the area of the Unexplored Mansion and the Little Palace North have indicated the existence of unbuilt areas of considerable size (Coldstream 1992; Hatzaki *et al.* 2008). As Coldstream noted: ‘Long and continuous stratified sequences in any given trench are unknown; the site of a house in one period could often become open ground in the next – and *vice versa*’ (Coldstream & Hatzaki 2003, 299; cf. Coldstream 2006, 587). This suggests that habitation nuclei may have shifted over time within the overall settlement area.

Coldstream’s ideas on the critical stage of the late eighth century BC for urbanization in Knossos is echoed in recent work on other Cretan sites and regions. For example, Gortyn and Phaistos are often taken to have been synoecized in the late eighth or seventh centuries BC (*contra* Wallace 2010a, 337–8). The critical nature of the (late) eighth century BC for Cretan urbanization has also been highlighted in recent synthetic works on the archaeology of south-central Crete (Lefèvre-Novaro 2014, 180–4) and the Mirabello area (Gaignerot-Driessen 2016, 147–50).<sup>3</sup> In favouring this chronological focus and centring the discussion around the rise of the *polis*, these works seem to follow an agenda which pervaded Anglophone scholarship on Early Iron Age Greece during the 1980s and 1990s (e.g. Snodgrass 1980; Morris 1987) and also influenced my own work at the time (Kotsonas 2002), but which has waned markedly in recent years because of shifting ways of thinking about early Greek communities and of the notable difficulties in tracing the material

correlates of the early *polis* (Hall 2014, 68–90; Whitley 2020). However, the studies of south-central Crete and the Mirabello area in the Early Iron Age are commendable in developing bottom-up perspectives on urbanization and socio-political development, which remain to be evaluated further with the final publication of domestic assemblages and the refinement of ceramic sequences in these micro-regions – both issues being in need of much further work.

Notwithstanding the significance of developments in the eighth century BC, I identify clearer evidence for an important phase transition through much of Crete in the seventh century BC, as exemplified by the last two sites considered in this section, Prinias and Azoria. These two sites were founded during the transition from the Late Bronze Age to the Early Iron Age, like Karphi or Malia Pezoula; however, unlike these last two sites, Prinias and Azoria were continuously occupied to the Archaic period. Azoria had its physical landscape radically transformed in the latter half of the seventh century BC, and I think there may be evidence for a comparable development at Prinias in the mid- to late seventh century BC. This transformation produced the well-preserved town plans that characterize the two sites, but it also heavily obscured the earlier phases of occupation.

Prinias is strategically located on a triangular-shaped plateau called Patela, which controls a route connecting the southern and northern parts of central Crete (Fig. 6.4). Although the remains of two settlements of the Final Neolithic and Bronze Age have been identified in the vicinity of the Patela, the hill itself was only settled in the thirteenth century BC and was occupied until the mid-sixth century BC, at which time the site was destroyed (Rizza 2008). The Patela hill is surrounded by cliffs and is accessible only from the west (but this area was fortified at some uncertain point; see Rizza 2008, 76–80), which makes Prinias one of the defensible locations settled at the end of the Bronze Age. Pockets of material and – to a lesser extent – architectural remains of the end of the second and the beginning of the first millennium BC are attested in different parts of the site, but the preserved settlement plan largely dates from considerably later. The detailed study available for a specific city quarter at the southern part of the site revealed that nearly all surviving architecture dates from the mid-seventh to the early sixth century BC and has obliterated earlier architectural phases almost entirely (Rizza & Pautasso 2015). Material of similar date predominates in the published assemblages from nearly all other areas of the site (Rizza 2008), raising the possibility of an extensive remodelling of Prinias during the last century of occupation.





**Figure 6.4.** Plan of Prinias (after Rizza 2008, vol. III, tavola B; courtesy of the Prinias Archaeological Mission of the University of Catania).

The town plan of Prinias involves extensive residential quarters, which are composed of several rooms and are separated by streets (Rizza 2008). These seem to spread over the entire hilltop and – during the later part of the history of the site – its southwest foot, thus covering an area of over 11.5 ha (Sjögren 2003, 33, 39). A focus of cult activity spanning the entire history of the site has been identified on the southeast part of the plateau, which was transformed into an open paved area facing two stand-alone adjacent buildings, Temples A and B, by the late seventh century BC (D’Acunto 1995; against the identification of these buildings as temples see Lamage 2019).

The possible expansion and restructuring of Prinias in the second half of the seventh century BC recalls similar processes of urban transformation which are documented elsewhere in Crete. In 2002, I argued that this evidence, together with data from cemeteries and sanctuaries, as well as the appearance of the earliest public stone inscriptions (cf. Gagarin & Perlman 2016), suggests a major socio-political and economic transformation in Crete in the seventh century BC. It was a happy coincidence that in that same year Haggis and his team began excavating at Azoria to document and assess this transformation much more impressively than I could then anticipate, or could now summarize.<sup>4</sup>

In the Early Iron Age, Azoria housed one of the numerous small communities around the plain of Kavousi, including Kastro and Vronda which were mentioned above. By the end of the seventh century BC, most of these sites were abandoned and their population moved to Azoria, which grew a lot in size and flourished as an urban settlement until its destruction in the early fifth century BC (Haggis 1993; 2005; 2013; 2014a; 2014b; 2015; Fig. 6.5). The site expanded to at least 15 ha and was radically rebuilt in a planned way within a single phase. Megalithic, roughly concentric terrace walls were erected to physically support the hillsides and notionally tie the community together, while a thick cobble fill covered earlier levels. The labour and resources invested in creating domestic and communal spaces increased drastically, and new kinds of architecture designed as foci for supra-household interaction were introduced at this time.

The new kinds of architecture are best represented by two building complexes (see especially Haggis *et al.* 2007; 2011a; Fitzsimons 2014, 231–44): first is the Monumental Civic Building, a single large hall with a permanent-seating arrangement for assemblies and feasting. The food was prepared immediately to the south, in the Service Building, which involved store-rooms, kitchens and an olive press. A different mode of dining is indicated by the layout of the Communal





Figure 6.5. Plan of Azoria (2017) (R.D. Fitzsimons; courtesy of the Azoria Project).

Dining Building, which is internally differentiated into separate dining rooms serviced by kitchens and storage rooms. One of the most notable patterns observed in these buildings and in the surrounding houses of Azoria (which contrasts with the evidence from earlier Cretan sites) is that the animal and plant remains and associated tool kits are characterized by a lack of evidence for primary-stage processing. It seems that the urban centre was mainly a consumption zone, with production and processing taking place in the outskirts of the city and also in outlying farmsteads. Interestingly, archaeological evidence from both central and east Crete suggests that farmsteads spread considerably across the island's lowlands in the seventh and sixth centuries BC (Sjögren 2003, 40–2, 48; Wallace 2010a, 332–6).

A second notable pattern seen at Azoria concerns the degree of material elaboration at the houses in the urban centre (see especially Haggis *et al.* 2011b; 2013, 72–7; Fitzsimons 2014, 223–31). These houses are much larger than the Cretan houses of the Early Iron Age, and they show clearly differentiated functional spaces, which contrast the combined living, working and food producing rooms, which characterize earlier houses. On the one hand, the elaboration of these houses is considerably higher than is typical for Archaic Greece, and on the other, these houses show little differentiation between them. Judging by their form, their assemblages, their physical location within the settlement, and their relationship to public space, these houses must have been inhabited by elite groups, which maintained privileged access to the community's wealth and power.

The Monumental Civic Building and the Communal Dining Building at Azoria recall the epigraphic attestation of public buildings, such as *agoras* and men's clubs (*andreia*), in Cretan inscriptions of the sixth century BC (Gagarin & Perlman 2016, 93–5, 274, 278, 497, 500; cf. Wallace 2010a, 282; Lefèvre-Novaro 2014, 166–7). It is perhaps surprising that such structures are largely missing from the excavated portion of Prinias, the main building phase of which is only slightly earlier than that of Azoria.<sup>5</sup> Indeed, in some respects, the excavated layout of Prinias, with its densely spaced and less markedly differentiated structures, looks more backwards, to Karphi, than forward, to Azoria, with its large and monumental structures of communal character, its extensive storage and food preparation facilities, and its large and complex houses with clearly differentiated functional spaces. Although relatively small in size, Azoria provides the best evidence we have for urbanization in Crete, most notably for the development of a nucleated urban plan within a short time-span, and the erection of monumental communal buildings. More broadly, Azoria provides an exceptionally rich insight into the transformation of the

physical and socio-economic landscape of the island's communities in the seventh and sixth centuries BC. As emphasized by Haggis, urbanization in Crete is not incidental to the process of state formation, but a critical part of it (Haggis 2014a, 138; 2015, 254–5; Fitzsimons 2014; cf. Kotsonas 2002, 48–50).

Further insights on Cretan urbanization in the Early Iron Age and the Archaic period are provided in the following sections, which discuss key aspects of demography and of the economies of production on the island in the period in question. The discussion highlights a range of evidence which reaffirms the formative role of the seventh century BC for many communities on the island.

### Demography

Questions of demography were first introduced into discussions of Early Iron Age Greece by Anthony Snodgrass in 1977 (Snodgrass 1977, 10–18; 1980, 22–4) and have received (slowly) increasing attention in the last three decades. Such questions have largely been addressed on the basis of two kinds of evidence: the size of settlements (e.g. Morris 1991, 29–34; Hall 2014, 74–5), and the fluctuation in the number of burials at a given site (e.g. Snodgrass 1977, 10–18; 1980, 22–4). In Crete, population estimates have largely been based on the size of settlements. I elaborate on this approach below, but I place more emphasis on burial evidence from the extensive cemeteries of Knossos.

The excavation of considerable parts of several defensible sites dating from the end of the second millennium BC has allowed for reliable estimates of their population. For example, Karphi, which extends over 3 ha and is densely built, is taken to have housed between 625 and 1200 inhabitants (Nowicki 1987, 246; 1999, 158; 2000, 162; 2002, 156). Most defensible sites, however, were smaller in size and population. For example, Kavousi Vronta, which covered only 0.5 ha and shows a modestly dense pattern of occupation, is estimated to have had 100–150 inhabitants (Day 2016, 221; Klein & Glowacki 2016, 26). Lastly, in its 0.04 ha, the building complex at Malia Pezoula is likely to have housed a single extended family.

The notion that nucleated settlements grew in size and, accordingly, in population in the course of the Early Iron Age is explicit in gradualist approaches to Cretan settlements (Wallace 2010a, 236–8; 2010b, 67–8). This makes harder any estimate of the population of larger and long-lived urban centres. Ian Morris (1991, 29, 33; 2006, 74; 2007, 217, 219) estimated that Knossos extended over 100 ha (including the areas of the cemeteries) and housed a population of 1250–2500 in the beginning of the Early Iron Age, which grew to at

least 5000 by c. 700 BC. Relying on the same estimate for the size of Knossos, Jonathan Hall (2014, 75) proposed a population figure of 1200–2500 to 3000–5000. A different estimate, based on his above-mentioned model of settlement development at Knossos, is provided by Whitelaw. Whitelaw (2000, 225, table 1; 2004, 156, fig. 10.8; followed by Wiener 2021) proposed that the population of the city grew from 800–1000 people in the eleventh century BC (Subminoan period), to 1400–1750 in the tenth and ninth centuries BC (Protogeometric period), then jumped to 5400–6750 in the eighth century BC (Geometric period), and shrank to 2000–2500 in the seventh century BC (Orientalizing/Protoarchaic period). The new evidence from KULP and the revised estimate of the size of Knossos (50–60 ha) has invited a reconsideration of the population estimate for the site in the Early Iron Age: according to Whitelaw, if occupation densities were in the range of 50–100 people/ha, the site would have housed some 2500–6000 inhabitants at its peak (Kotsonas 2019; cf. Whitelaw *et al.* 2019; for comparison, see Whitelaw 2017, 125, 144). Higher densities are assumed by Wallace (2010a, 234–6; 2010b, 68), as she takes Protogeometric and Geometric Phaistos to have occupied some 50 ha (its maximum in the Early Iron Age) and to have housed a population of 13,000 (contrast the much lower estimate of 13 ha offered in Sjögren 2003, 33, 39). Likewise, for Archaic Azoria, which covered more than 15 ha, she estimates a population of 6000 people.

Fluctuations in the number of burials have hardly been used for population estimates in the literature on Early Iron Age and Archaic Crete. This partly depends on the understanding that such fluctuations cannot be taken as a direct index of fluctuations in the living population at a given site, and may depend on social and ideological developments affecting traditions of – or access to – formal burial (Morris 1987, especially 72–86). Nonetheless, it is worth considering how the burial record of Early Iron Age Knossos – the only Cretan site with a wealth of published burial data from this period – relates to questions of demography.

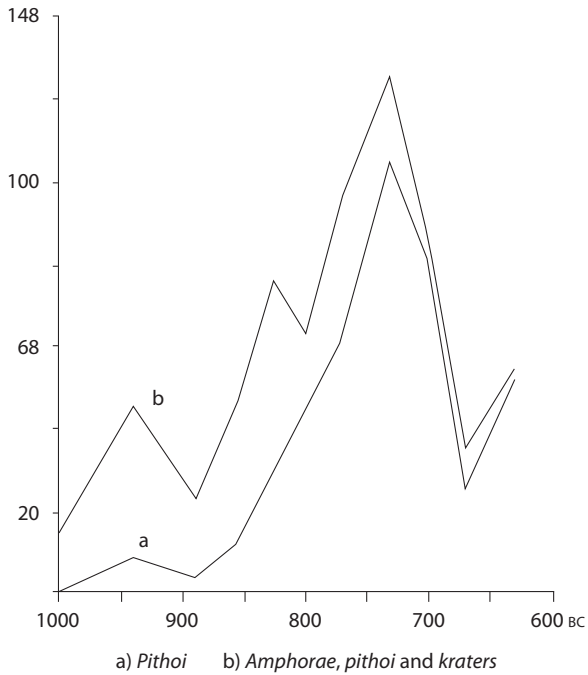
Because of the widespread use of collective tombs, estimates on the number of burials at Knossos is fraught with difficulties. In his study of the burials from the extensive Knossos North Cemetery, William Cavanagh (1996, 659) noted: ‘Given the fragmentary nature of the evidence, disturbances caused by the repeated use of the tombs, robbing and dilapidation, it is very difficult to produce reliable statistics’ on the number of burials; the problem is aggravated by the time constraints that the excavators had for excavating and documenting the tombs of this site. To compensate for these problems, Cavanagh (1996, 659–60, fig. 9) produced a graph with two estimates of the number

of burials at the Knossos North Cemetery (Fig. 6.6): a minimum estimate of 422 jars that typically contained cremations (these are both fine and coarse ware storage vessels, which are collectively – and confusingly – named *pithoi*); and a maximum estimate of 671 urns, which also includes *amphorae* and kraters, two vessel types that are known to have held cremations only occasionally. As Cavanagh (1996, 660) noted, ‘the truth probably lies somewhere between’ these two estimates.

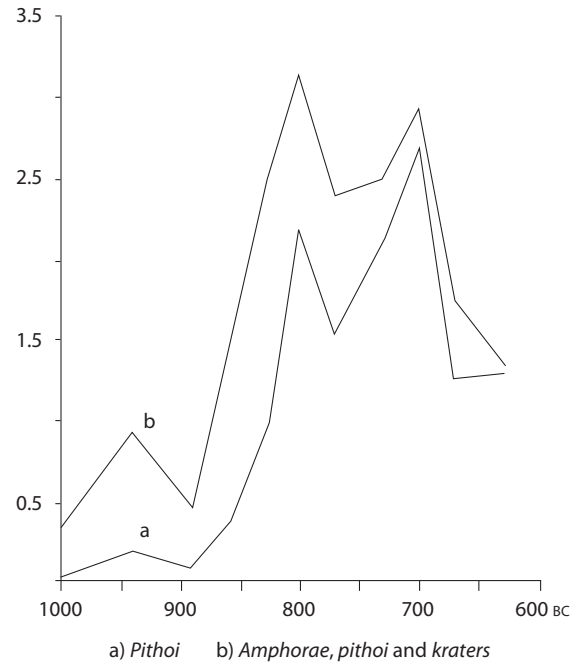
The estimates in question revealed relatively low numbers of burials for the earlier part of the Early Iron Age and a peak in the late eighth century BC. ‘No doubt ... it is a result of an increase in population’ according to Cavanagh (1996, 660; but see the scepticism in Antoniadis 2017, 51–3), who connected this pattern to the increase in the number of burials identified on mainland Greek centres in the late eighth century BC, as well as to the northward expansion of the settlement of Knossos in the same period, which was hypothesized by Coldstream (see above). Significantly, Cavanagh produced a second graph (Fig. 6.7), in which he correlated the number of (potential) urns used in the different ceramic phases of the Early Iron Age, with the estimated duration of these phases, which was uneven (with some individual phases extending over c. 20 years, and others over c. 50 years). This exercise revealed that the steep increase in the number of burials does not date from the late eighth century but from the second half of the ninth century BC, in the end of the Protogeometric period (Cavanagh 1996, 660, 662, fig. 10), which is a time of major expansion for Knossos, as now indicated by the findings of KULP discussed above.

Given the potential demographic value of Cavanagh’s analysis, I find it useful to compare the data from the Knossos North Cemetery to the data from the Knossos Fortetsa Cemetery, which basically covers the same time span (Brock 1957).<sup>6</sup> The latter cemetery involves two clusters of tombs, but is smaller than the former. The tombs of Fortetsa were excavated in the interwar period by different scholars, hence the documentation of the fieldwork is uneven. Also, the site was published by James Brock, who did not participate in the excavations, several decades after these were held, which had an impact on the quality of documentation. Nonetheless, the different excavators of the tombs at Fortetsa systematically addressed the question of the number of burials in the excavation reports on the different tombs. These reports do not settle most of the vicissitudes that Cavanagh noted and make accurate statistics impossible, but they make possible a fairly reliable estimate of the number of burials.

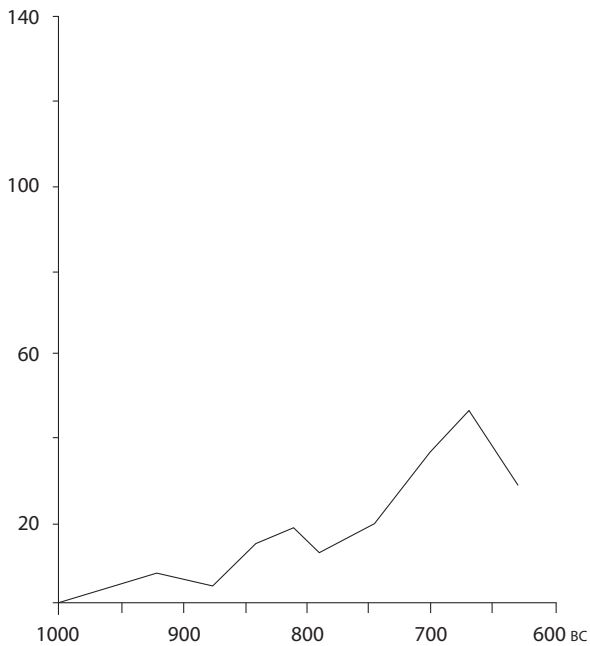
Figures 6.8 and 6.9 are designed to compare to the charts by Cavanagh as closely as possible.<sup>7</sup> These



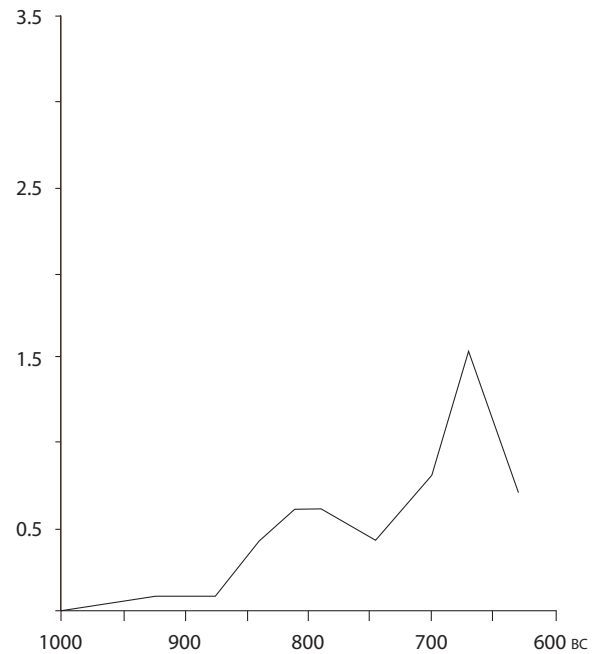
**Figure 6.6.** Knossos North Cemetery: maximum and minimum number of cremation urns over time (courtesy of the British School at Athens).



**Figure 6.7.** Knossos North Cemetery: number of cremation urns per year (courtesy of the British School at Athens).



**Figure 6.8.** Fortetsa Cemetery: number of burials over time (V. Antoniadis, based on data provided by the author).



**Figure 6.9.** Fortetsa Cemetery: number of burials per year (V. Antoniadis, based on data provided by the author).



two charts suggest that Fortetsa yielded considerably fewer burials than the Knossos North Cemetery, but also reveal similar patterns of fluctuation over time. At both sites, numbers remain low for most of the Protogeometric period, and show a decrease in the Middle Protogeometric period which perhaps indicates that the length of the period is actually shorter than usually assumed (Kotsonas 2008, 34). In Fortetsa, as in the Knossos North Cemetery, the first peak in the number of burials comes in the late ninth century BC. However, unlike the Knossos North Cemetery, Fortetsa shows the highest peak in the number of burials in the early seventh century BC (Early Orientalizing/Early Protoarchaic period), rather than the late eighth. A significant part of this peak (roughly one third) is made up by the numerous early seventh-century BC burials in Fortetsa tomb P/I (Brock 1957, 98, 101).<sup>8</sup> The notable increase in the number of early to mid-seventh burials manifested in this tomb has been observed – to a lesser extent – in other Knossian tombs (Kotsonas 2011b), but also in Tomb A1K1 at Eleutherna (Kotsonas 2008; cf. Agelarakis 2005) and tomb R at Aphrati (Levi 1927–1929), and is fairly representative of broader patterns of expansion in these cemeteries.

The notable increase in the number of burials in different Cretan cemeteries during the late eighth and especially the early to mid-seventh centuries BC may have some demographic significance. Indeed, this phenomenon may relate to the strong pattern of urbanization observed in Prinias and Azoria in the course of the seventh century BC. Conversely, the drop in the number of burials seen in both Fortetsa and the Knossos North Cemetery in the mid- to late seventh century BC cannot be taken to suggest a notable drop in population. Indeed, this drop can best be related to the demise of the established Knossian cemeteries from around 600 BC, to the probable introduction of different types of graves (single, as opposed to collective ones), to broader problems of the archaeological visibility of the sixth century BC in Knossos and other Cretan sites, and to major socio-political developments (Kotsonas 2002; Erickson 2010). In any case, this interpretation provides a warning against any straightforward interpretation of the demographic significance of major fluctuations in the number of burials.

### Economies of production

A broad-based subsistence regime is assumed for Cretan communities throughout the Early Iron Age and the Archaic period. Earlier arguments for the development of economic strategies focused on pastoralism, which were based on the widespread attestation of defensible hilltop settlements in the transition from

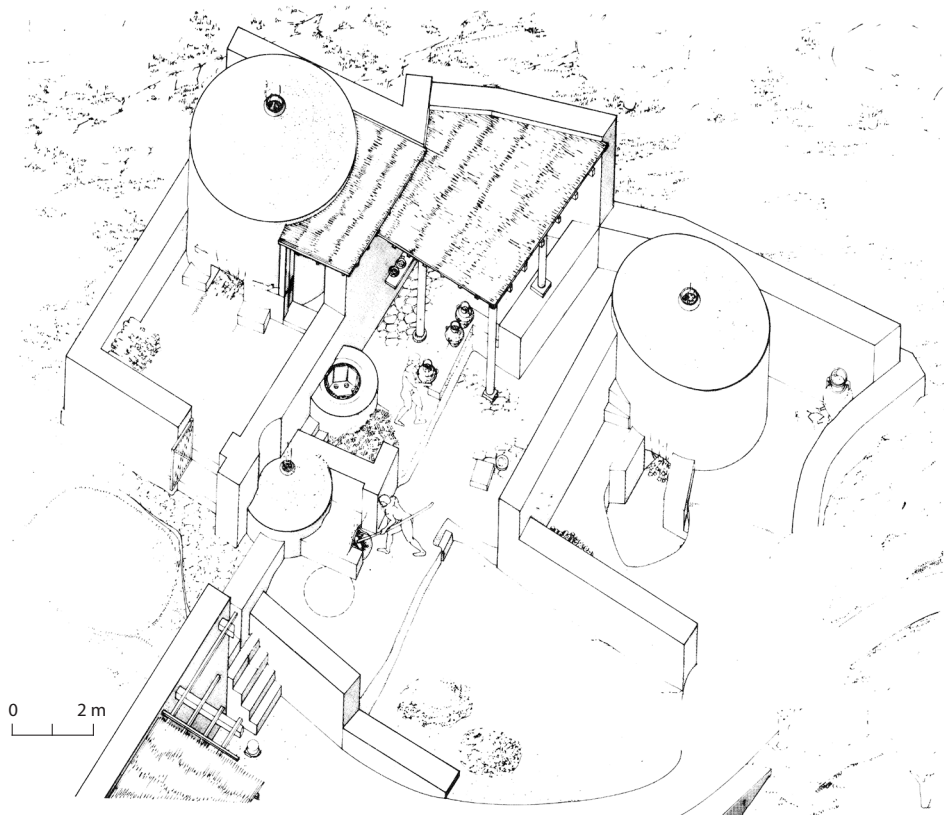
the Late Bronze to the Early Iron Age, have been found unconvincing (Wallace 2003; 2010a, 73–5). Nonetheless, the raising of live-stock is agreed to have been an important component of the Cretan economy through the first millennium BC, and is documented in textual sources from the Archaic period onwards (Chaniotis 1999, 192–205).

Other aspects of the economies of production in Early Iron Age and Archaic Crete have attracted less attention. However, scattered evidence from across the island sheds light on facilities and modes of production, and occasionally on their development through time.

Direct evidence for production facilities in Early Iron Age and Archaic Crete is relatively scarce with the exception of Knossos, which has yielded a range of remains from different phases. Several pottery kilns dating from the twelfth to the tenth centuries BC were recently unearthed at the Anetaki plot,<sup>9</sup> west of the Minoan palace (which was ruined already by the end of the second millennium BC), while a seventh-century BC kiln was established immediately southwest of this palace (Coldstream & MacDonald 1997). To the northwest, just north of the Little Palace, Eleni Hatzaki excavated a Late Bronze Age domestic area that was given to open air industrial activity from the tenth to the seventh centuries BC (Hatzaki *et al.* 2008). This activity, which was probably located on the side of a road and not far from domestic remains, involved two clay-lined pans of enigmatic use. Archaeobotanical remains from this area indicate the deposition of oil production waste, which is excellent kiln fuel. In the seventh century BC, the same area carried one or two drains or water channels, and hearth pits with evidence for ironworking.

Metalworking installations remain rare in the archaeological record of Early Iron Age and Archaic Crete. However, the fill of a terrace at Anavlochos yielded displaced fragments of a metallurgical furnace, stone tools, few bronze and iron pieces and about 250 kg of iron slag, in association with Protogeometric to Late Geometric pottery (Zographaki *et al.* 2012–2013, 524–5). Also, seventh-century BC remains of the smelting of iron come from the sanctuary of Kommos suggesting the activity of transient ironworkers, while seventh- and sixth-century BC unfinished bronze offerings from Syme Viannou are taken to indicate that a bronze workshop was attached to this sanctuary (Lebessi 2002, 185–92; Lefèvre-Novaro 2014, 114; Birringer 2015). Evidence for other small-scale industrial activity is limited to a few sites (Sjögren 2003, 76–8; Wallace 2010a, 284–5). Most notable is the case of the domestic quarter immediately southwest of the palace of Phaistos, which included a pottery





**Figure 6.10.**  
Reconstruction of the  
pottery workshop at  
Mandra di Gipari, near  
Prinias (after Rizza,  
Palermo and Tomasello  
1992, 155, fig. 35;  
courtesy of the Prinias  
Archaeological Mission of  
the University of Catania).

kiln (room G) and evidence for oil extraction (room Q and court located south of room AA) (Cucuzza 1998, 65; Sjögren 2003, 128–9). Also, an olive-press installation, an ironworking furnace, and a ceramic kiln were found at different areas of Azoria.<sup>10</sup>

The seventh century BC has yielded stronger evidence for intensive modes of production physically removed from urban areas. A pottery workshop with three kilns was located outside Prinias, and produced *pithoi* and other vessels (Fig. 6.10) (Rizza *et al.* 1992). Another cluster of kilns of similar size and date was found at Lato, and produced pottery and terracotta figurines (Ducrey & Picard 1969; cf. Sjögren 2003, 162; Wallace 2010a, 285). The kilns are surrounded by post-Archaic structures, but were probably lying outside any Archaic urban nucleus, like the workshop at Prinias. Comparable evidence comes from Gortyn, where large dumps of wasters and other ceramics from c. 600 BC suggest that the local potters' quarter was located outside the urban nucleus (Santaniello 2004). These finds indicate that specialized (ceramic) workshop complexes were regularly situated outside settlements in seventh-century BC Crete.

Textile production in Early Iron Age and Archaic Crete is not well understood. Nonetheless, it is clear that the complex administrative procedures which controlled this industry in the Aegean palatial world

of the Late Bronze Age did not survive in the centuries which followed (Nosch 2020, 592). Tools for textile production which are found at many Cretan settlements of the Early Iron Age and the Archaic period suggest domestic production, but otherwise prevent any understanding of the scale and the organization of the industry.<sup>11</sup> Our understanding of this industry will be promoted significantly by the study of large bodies of textile tools from Karphi and Azoria by the members of the PROCON project (Gleba *et al.* forthcoming). The project is also revisiting the rare textile remains from Crete of this period. The largest body of such evidence comes from the Knossos North Cemetery and basically consists of mineralized textiles made of linen and wool (Cocking 1996). The wool textiles are woven in weft-faced tabby weave, which is a technique that is typical for Greece, the Eastern Mediterranean and the Near East (Gleba 2017).

In the Aegean Late Bronze Age, textile production involved an extensive labour force of women and children, while men (shepherds and flax cultivators) procured the fibre, and served as fullers and weavers (Nosch 2020, 592). Early Iron Age Crete and Archaic Crete has yielded poor evidence for gender roles in textile production. 'A number of terra-cotta and stone weights used for weaving', which were found in Room 7 at Kavousi Kastro, led Harriet Boyd (1901,

138, fn. 7) to identify in it 'a workroom for the women of the family'.<sup>12</sup> Conversely, the skeletal analysis of a male burial of the seventh century BC at Meseleroi, in east Crete identified deep grooves on the teeth, which resemble grooves often seen on the teeth of people who spin thread (Vogeikoff-Brogan & Kirkpatrick Smith 2009–2010). This find suggests that spinning was not exclusive to females, as is often assumed in the literature (cf. the evidence from Argilos presented by Perreault & Bonias, this volume).

Complex modes of production are indicated by finished objects and their find contexts. The richest evidence comes from the study of ceramics. Late ninth century BC (Protogeometric B) stylistic groups from Knossos and Prinias suggest the work of specialized potters/painters, and – in the case of Prinias – the consumption of this pottery by exclusive elite groups (Kotsonas 2013, 237–8). Also, prolific pottery workshops are identifiable in Knossos in the eighth century BC (Brock 1957, 148–9; Coldstream 1996, 318–19, 322–4).

An increased investment in the production and consumption of costly and elaborate artefacts can be identified from the late ninth century BC. The bronzes from the Idaean Cave, especially the tripods, the 'shields' and the bowls, particularly the pieces that carry figural decoration, attest to both a rise in economic surplus and the role of overseas connections, especially with the Near East (Kunze 1931; Matthäus 2000a; 2000b; Galanaki 2001). Cretan jewellery presents a comparable pattern, as evidenced especially by the Knossos 'Tekke workshop', which used gold, silver, amber and rock crystal to produce elaborate ornaments. My investigation of the distribution of these four, precious and largely imported materials in Knossian tombs reveals a marked drop at precisely the period the workshop was active (Kotsonas 2006).<sup>13</sup> I have taken this to suggest that local elite groups controlled and regulated the flow of precious and exotic materials in eighth-century BC Knossos, and also managed the production and the distribution of the workshop's output.

In the seventh century BC, craft specialization, mobility and the investment of surplus increased (cf. Kotsonas 2017). This is evidenced especially by the attestation of prolific sculpture workshops, the output of which is manifested most emphatically by the architectural sculpture of Temple A at Prinias (D'Acunto 1995), and the numerous incised stelae found in the cemetery of this site (Lebessi 1976). Most of the stelae show warriors in full armour, but one stele illustrates a woman holding a spindle and a distaff.

The best indirect evidence for a notable increase in the scale and intensity of production in seventh-century BC Crete is provided by storage vessels (*pithoi*)

(Kotsonas 2002, 52; Brisart 2011, 243–53; Haggis 2013, 76; Lefèvre-Novaro 2014, 111–12). Although a systematic study of Cretan *pithoi* of the first millennium BC remains to be done, it is clear that these vessels increased in size and decorative elaboration during the seventh and sixth centuries BC. The production of Cretan *pithoi* apparently intensified in this period, during which groups of such vessels are found in extensive storage facilities at Azoria and Goulediana. The storage capacity of the facilities at both sites exceeds the needs of a single household and hints at community-level centralization and organization of foodstuffs. Indeed, the West Building at Azoria, which has an interior space of 140 sq. m and an estimated storage capacity of c. 31,000 l, dramatically affects our understanding of production economy not only in Archaic Crete but also in the entire Greek world (see especially Haggis & Mook 2017, 7–9). The scatter of fragments of Orientalizing/Protoarchaic and Archaic *pithoi* across the rural landscape, which is attested by surface surveys in central and east Crete, further indicates considerable changes in the scale and complexity of the production and consumption of foodstuffs on the island in the seventh and sixth centuries BC.

This brings the analysis to the issue of the economies of consumption, which is an important counterpart of the discussion above, but lies beyond the major research questions of this volume. Suffice it to say that this issue has received increased attention in recent years in the context of the archaeology of Crete. Most notably, the excavation at Azoria is the first project anywhere in the Classical Greek world to develop a set of research questions and methodologies specifically centred on urbanization and the economies of consumption.<sup>14</sup>

## Conclusion

In the last decade, the study of urbanization and socio-economic development in Crete of the first millennium BC has generated a fascinating and exceptionally dynamic discourse, which deserves close attention by specialists in other regions of Greece and the Mediterranean of the Early Iron Age and the Archaic period. The ideal way to promote this discourse and the understanding of Cretan cities is to test existing models of Cretan urbanization and current assumptions on the formative role of specific periods with problem-oriented, multi-pronged, systematic and extensive fieldwork, especially excavation at settlement sites. Such fieldwork can take us well beyond the textual paradigm that long dominated the study of Cretan cities and can generate a more nuanced understanding of the active and deliberate construction of urban and

social space. However, the history of research of the last decades suggests that Cretan archaeology of the first millennium BC can probably not support more than one or two such fieldwork projects at any one time. This means we also need to make the most of sites that have been researched extensively, but have hitherto not attracted the attention they deserve (often because they are not published in English): small sites like Malia Pezoula, to larger urban centres, like Prinias, Phaistos and Gortyn, can enrich the dataset provided by better known sites like Karphi, Kavousi, Knossos or Azoria. Less well-known sites can greatly enhance our understanding of urbanization, demography and economy in Early Iron Age and Archaic Crete, and can provide invaluable insights into the ‘making of Cretan cities’.

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### Notes

- 1 Along the same lines, but independently of Alexiou, Nowicki envisages that ‘LM IIIC Knossos consisted of a great number of villages and hamlets scattered over a huge area ... with several nuclei, the largest of which may have been in the area of old Minoan Knossos’ (Nowicki 2002, 153).
- 2 It is worth noting for comparative purposes that surface scatters of ceramics suggest a size of up to c. 40 ha for other Cretan Early Iron Age sites (Wallace 2010a, 62, fig. 11; 2010b, 67–8), and Phaistos is taken to have occupied a larger area of some 50 ha (Wallace 2010a, 234–6; 2010b, 68). Nonetheless, Haggis (2015, 228) has cautioned that in these cases ‘the actual distribution of material remains, their scale and meaning, by period, remain to be elucidated or at least critically evaluated’.
- 3 In more recent papers, Gaignerot Driessen (2017, 518–20) and Lefèvre-Novaro (2020) remain focused on the rise of the Cretan *polis*, but highlight the significance of the seventh (rather than – or in addition to – the eighth) century for this development. This comes, however, without due acknowledgement of earlier work which has argued for this at length (Kotsonas 2002) and, in the case of Lefèvre-Novaro 2020, of the groundbreaking relevant evidence from Azoria (Haggis 2014a; 2014b; 2015, esp. 229–31).
- 4 Haggis was the first to note this coincidence and to explain how my argument relates to his fieldwork at Azoria (Haggis 2014a, 120–1; 2014b, 11–17; 2015, 298, 230; 2020, 1079–83).
- 5 But note that Prinias Temples A and B are occasionally considered as *andreia* (Lamage 2019, 364–6), and also that early to mid-seventh century BC Azoria is poorly known yet, with the exception of the ‘Protoarchaic Building’ (on which see Haggis & Mook 2017, 16–19). In any case, the fortifications of Prinias compare to the monumental terrace walls of Azoria in terms of the energy invested in them and their symbolic role in tying the community together.
- 6 Numerous more tombs of the Early Iron Age have been excavated at Knossos, but the vast majority of these remains unpublished or is only known from preliminary reports. Accordingly, this material is not considered here. However, it is referenced in the entries I have composed for the online database of the project The Social Archaeology of Early Iron Age and Archaic Greece (<http://aristeia.ha.uth.gr/index.php>).
- 7 Figures 6.8 and 6.9 require some explanation. In the cases of a few tombs (P2 and P), the published reports give a straightforward list of urns and their date, but in most cases this information can be deduced from the descriptions of the excavation reports, which typically address explicitly the issue of the number of burials (these are inurned cremations, except for a couple of instances of inhumation), but are occasionally less straightforward than one would wish. Also, I drew information from Brock 1957, 147–51, as appropriate. Urns dated to more than one period (e.g. Middle Geometric – Late Geometric) were assigned to a specific period on the basis of probability as deduced from the numbers of burials securely assigned to the different periods. The Middle Orientalizing phase, which was established for the Knossos North cemetery material, was not used in the (earlier) publication of the Fortetsa cemetery. I have explained elsewhere that there is not enough ground to accept the existence of such a phase, and the material assigned to the Middle Orientalizing is best taken to belong to a transitional stylistic phase between the Early and Late Orientalizing periods (Kotsonas 2008, 35). For a different quantification of the burials from Fortetsa see Whitley 2015, 293, table 1.
- 8 This context was excavated and published as two different tombs, P and I, but it was explicitly identified as a single tomb, hence the conventional reference to Fortetsa tomb P/I, which I use.
- 9 I am grateful to Athanasia Kanta for sharing this information. For an overview of the excavation see Kanta 2018.
- 10 For the press see Haggis *et al.* 2011b, 46–61; for the ceramic kiln see Haggis & Mook 2014, 12–14; for the ironworking furnace see Haggis & Mook 2017, 17–18.
- 11 For textile production in Classical and Hellenistic Crete see Chaniotis 1999, 206–7. The weaving and dyeing



establishment at Ayios Georgios Papoura, which is mentioned in Wallace 2010a, 285, is not Archaic but Hellenistic in date, even though the structure has an Archaic phase.

- 12 The more recent investigation of the same room produced no further weaving equipment (Gesell *et al.* 1995, 107).
- 13 This excludes rock crystal, which is available on Crete.
- 14 See especially <http://www.ascsa.edu.gr/index.php/News/newsDetails/videocast-the-politics-of-consumption-in-an-archaic-cretan-city>; cf. Whitley 2014, 147–57.

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## Making cities

Large and complex settlements appeared across the north Mediterranean during the period 1000–500 BC, from the Aegean basin to Iberia, as well as north of the Alps. The region also became considerably more interconnected. Urban life and networks fostered new consumption practices, requiring different economic and social structures to sustain them. This book considers the emergence of cities in Mediterranean Europe, with a focus on the economy. What was distinctive about urban lifeways across the Mediterranean? How did different economic activities interact, and how did they transform power hierarchies? How was urbanism sustained by economic structures, social relations and mobility? The authors bring to the debate recently excavated sites and regions that may be unfamiliar to wider (especially Anglophone) scholarship, alongside fresh reappraisals of well-known cities. The variety of urban life, economy and local dynamics prompts us to reconsider ancient urbanism through a comparative perspective.

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