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## INSCRIBED INSTRUMENTA DOMESTICA AND THE ECONOMY OF HELLENISTIC AND ROMAN CRETE

Angelos Chaniotis

### **1. Introduction**

Inscriptions on pottery, especially amphora stamps and potters' signatures on clay lamps, but also tiles, weights, and the like, which give us the names of producers, owners of workshops, owners of objects, traders, and eponymous magistrates have long been recognized as a useful source of information for the study of economic production and of the circulation of goods. Recent studies have drawn attention not only to the importance of this material, but also to the problems of method and interpretation connected with its use in economic studies (e.g., Harris 1993; Blondé and Muller 1998). What has emerged from the relevant discussions is the need for detailed regional studies that consider this material in close connection with other evidence for economic activities and with the general characteristics of local economy.

This paper is primarily concerned with the question of how the Cretan inscribed *instrumenta domestica*, both those produced in and those imported to Crete, reflect the peculiarities and the development of the Cretan economy from the Hellenistic to the Imperial period. Although the focus of this study is on the Hellenistic economy, it will be necessary to consider in some detail the evidence from Roman Crete as well. It is the comparison between the two periods that allows a better understanding of the character of the economy in Hellenistic Crete.

### **2. *Instrumenta Domestica and the Epigraphic Habit: Questions of Method***

The starting point of this study is the observation that the inscribed *instrumenta domestica* are subject to the same methodological problems as those involved in the study of the 'epigraphic habit' in general (Chaniotis 2004). Studies of epigraphic habit(s) have a strong quantitative component; but in order to give meaning to numbers, one needs to take into consideration various parameters. The most important – and often least noticed – is the state of research. In the case

of Crete one cannot ignore the fact that central Crete has for many decades been the object of more intensive research than the eastern and western parts of the island; this was to some extent due to the organisation of the local Archaeological Service until the 1960s, with its seat in Herakleion. It is only in the last twenty years that more intensive excavation and survey work has been conducted in eastern and western Crete.

Furthermore, because of the one-sided interest in Minoan Crete – but also due to the staffing of the local Archaeological Service and the local Museums primarily with specialists of the Bronze Age – a large part of the Hellenistic and Roman material remains unpublished. One is lucky enough if the discovery of lamps and amphora stamps is mentioned in a rather general manner in the reports in the *Archaiologikon Deltion*; but anyone who has worked in the local museums knows that most of the instrumenta domestica are not only unpublished, but also not recorded in their catalogues. A characteristic example suffices to show the dimensions of this problem. Polina Sapouna published a catalogue of 342 lamps with relief representations found in the systematic excavations of the Idaean Cave between 1982 and 1986 (Sapouna 1998). In an appendix she presented more than 100 lamps found in various other parts of Crete, usually during salvage excavations, and preserved in various local museums (Sapouna 1998, 175–200; cf. *SEG XLVIII* 1202 bis). With a very few exceptions, these lamps had never been mentioned in any report and most of them do not have a museum inventory number. The material published by Sapouna includes 25 lamps with signatures of the workshops of Gamos, Romanensis, Troilos, and Zosimos. If this seems a rather small number, one should be reminded that until 1950, when the publication of *Inscriptiones Creticae* was completed, only 34 inscribed lamps were known (see Table 5.1); and that in the fifty years that followed this material was enriched only by another 50 pieces.

The state of research explains also the spatial distribution of the evidence: the material found in sanctuaries, which are often the object of systematic excavations, is over-represented in comparison with the material found in settlements, that are often only the object of rescue excavations. Let me again mention only two extreme cases. Before the systematic excavation of the sanctuary of Zeus Idaios (the 'Idaean Cave') only four inscribed lamps of the Imperial period were known from this site (*I.Cret.* I,xii 4–7). The excavations of Jannis Sakellarakis in the years 1982–86 have added another 131 pieces (cf. Sapouna 1998, 94–117; *SEG XXXVI* 813; *XLVIII* 1212; Chaniotis 1999c, 296 n. 43). From the city of Chersonesos, one of the largest settlements in Roman Crete and the object of rescue excavations for more than thirty years, only two inscribed lamps are known (*I.Cret.* I,vii 27–8), and one can only speculate about the masses of relevant material hoarded and unrecorded in the Museum of Herakleion. These examples show that quantitative studies based on the material from Crete are at best indicative, often misleading and sometimes completely wrong.

But the problems of method not only result from these deficiencies of modern

research; they are also inherent in the material itself. Changes in the use and distribution of *instrumenta domestica*, both locally produced and imported, are the result of a variety of developments that need to be taken – but often are not taken – into consideration in studies that attempt to exploit them as a source of information for economic studies. Among the factors that influence the use of inscribed *instrumenta domestica* one should mention socio-political and economic developments, the familiarity with writing (Harris 1995), contacts with other regions, uniformity or heterogeneity, and the integration or the isolation of the island. In order to understand the situation in Crete one needs to relate the area under study to the broader picture, i.e., to the distribution of inscribed *instrumenta domestica* in the rest of the Hellenistic and Roman world. We cannot detect peculiarities and evolutions in Hellenistic Crete if we limit ourselves to an endoscopic analysis which considers only the material of the Hellenistic period and only the Cretan material. We need to compare the situation in Hellenistic and Roman Crete with that of the Hellenistic and Roman world in general.

Neither a comparison between Crete and the rest of the world, nor a complete presentation of the inscribed *instrumenta domestica* found in Crete, or of Cretan material found in other areas, can be undertaken in this paper. By focusing on a few selected examples I will rather approach the question of how a study of this material can meaningfully be used for the study of the Cretan economy.

### ***3. Inscribed Instrumenta Domestica in Hellenistic Crete***

The inscribed *instrumenta domestica* from Hellenistic Crete represent a large variety of items, from owners' inscriptions on pottery to seals and sling bullets.<sup>1</sup> Leaving aside texts that are not related to the study of economic production, and isolated objects, such as the public measures (*sekomata*) in Dreros (*SEG XVIII* 392), and Gortyn (*I.Cret.* IV 251), I will consider here only the larger groups of inscribed *instrumenta domestica*: tiles, loom weights, stamped amphora handles, inscriptions on Cretan 'Hadra vases', and sling bullets.

#### ***3.1. Tiles***

Inscribed tiles have recently attracted the interest of scholars who study the organisation of pottery workshops (e.g., Doulgeri-Intzesiloglou 1998; Debidour 1998; Intzesiloglou 2000; Billot 2000). The published Cretan material is not so abundant as to allow any statistical analysis; in addition to this problem, some preliminary reports provide no information on whether an inscription was stamped or engraved on the tile before firing by the producer, or was engraved after firing by a dedicator. This is, for example, the case with some of the tiles found in the sanctuary at Simi Viannou. The conclusions drawn from this material are, therefore, anything but firm.

In Crete, inscribed tiles have primarily been found in sanctuaries.<sup>2</sup> The inscriptions consist of ethnics, personal names, names of divinities, and monograms. Even when these texts are not abbreviated or fragmentary, they are still difficult to interpret. The ethnic names recognized on tiles probably refer to the cities that sponsored the building activities;<sup>3</sup> one may assume that they were produced by private workshops for public building projects. The theonyms, occasionally combined with a personal name, designate the divinities for which the buildings were constructed.<sup>4</sup> The interpretation of personal names is in most cases a matter of faith.<sup>5</sup> Only when the name is part of a dating formula (*epi* + genitive), as in Korkyra (*IG IX I*<sup>2</sup> 1071–1136), may we be sure that we are dealing with the name of a magistrate. In all other cases the names in the genitive or in the nominative may belong to the owners of workshops or to the potters who produced the tiles, to the private persons who sponsored a building or to the magistrates who were responsible for the project.<sup>6</sup> Only in one case we can safely identify the individual named on tiles found in the Asklepieion of Lassaia (Zenas, son of Apollonios) with a man known to have served as an agoranomos in Gortyn, i.e., in the city which controlled this sanctuary (Chaniotis 2000). But even in this case we do not know whether Zenas carried out the construction activities at the Asklepieion of Lassaia as a private sponsor or as part of his duties as a Gortynian magistrate,<sup>7</sup> since the inscription on the tile does not mention his office.

Privately sponsored building projects are not entirely absent in Hellenistic Crete. The restoration of a temple and its roof in Olous was, e.g., under public supervision, but the funds were provided by a private *choregos*; another shrine in the same city was dedicated by a private person (*I.Cret.* I,xxii 8–9). Also the names of individuals written (after firing?) on tiles found in the sanctuary of Hermes Kedrites in Simi Viannou seem to belong to private dedicators;<sup>8</sup> an inscription attests the dedication of a shrine to Hermes Kedrites by a certain Nikanor in this sanctuary (*SEG XXVI* 1046).

Nonetheless, most of the evidence for building projects in Hellenistic Crete refers to *public* projects.<sup>9</sup> Of course, this may be due to the nature of the evidence, which in Hellenistic Crete is predominantly public. Since evidence for private benefactors is almost entirely lacking, it is safer to assume that most of the inscribed tiles were destined to be used in buildings built with public funds. Unfortunately, the inscribed tiles of Hellenistic Crete offer us no information concerning the organisation of production.

### 3.2. Loom weights

Things are more clear in the case of the numerous loom weights.<sup>10</sup> They are found in private houses, graves and sanctuaries, in the latter case obviously as dedications of their owners (Chaniotis 1992, 320). When they are not inscribed with individual letters (numerals or abbreviated names),<sup>11</sup> they bear personal names, usually the names of women.<sup>12</sup> We may safely assume that these women were the owners of the looms.

In post-Minoan times wool-weaving is known mainly as an occupation of women. This can be inferred from legal texts referring to the items woven by women, from epigrams and the iconography of grave monuments (Chaniotis 1999b, 206–7). In Classical and Hellenistic Crete, wool-weaving basically covered the needs of the household and was not – at least not primarily – intended for sale or export. There is no evidence for the export of wool products to other parts of Greece before Roman times. The mention of typical Cretan garments, such as the *esthema* and Cretan *mandye* (Pollux, *Onomasticon* vii 60, II p. 69.3–6 and vii 77, II p. 73.27–8 ed. Bethe), prove the knowledge other Greeks had of Cretan textiles, but do not necessarily attest exports on a large scale.

In the Classical period the clauses of the great legal inscription of Gortyn confirm the assumption that the products of this activity remained in the household. The relevant clauses provided that the divorced woman and the childless widow received ‘half of whatever she has woven’; similarly, if a wife died childless, ‘half of whatever she has woven’ was to be returned to her heirs (*I.Cret.* IV 72 col. II 45–54, col. III 24–30, 31–7; cf. Koerner 1993, 475). The law knows nothing about an income deriving from the weaving activity of the women, although it takes into consideration the income women might have attained from their other property (land and livestock). In Classical Gortyn, textile production was obviously not meant for trade. Unfortunately, we lack analogous documentary evidence from Hellenistic Crete.

Since the annual need of wool for clothing probably did not exceed two or three kg per person, i.e., an amount of wool which could be produced by four or five sheep (Halstead 1981, 327–9), the wool-weaving practised in the household does not necessarily presuppose a specialized pastoralism. Things may have been different in some parts of Crete where shepherding occupied a more prominent position (Chaniotis 1999b, 206). The products of a third-century establishment for the dyeing and weaving of wool at Kolonna in Lasithi perhaps did not just cover the needs of an individual household (Watrous 1982, 22), and this probably holds true for the textiles produced in a Hellenistic house in Eleutherna, where a great number of loom weights was found (Tsigounaki 1994, 158–67). 345 loom weights were unearthed in a single house, as compared, e.g., to a total of 793 loom weights found in the entire city of Olynthos (sixth-fourth century) and 656 loom weights in the ‘Unexplored Mansion’ in Knossos (tenth century BC–third century AD). In some parts of Crete, particularly in the uplands, in certain periods and under certain conditions, shepherding and related activities took the form of a specialized trade which compensated for the lack of other resources (e.g., arable land); the Hellenistic period seems to have been such a period of more intensive specialised pastoralism in certain regions of Crete (Chaniotis 1999b, 197–205). The inscribed loom weights attest the importance of the textile production for the needs of individual households and in some cases (e.g., in Eleutherna) for trade.

### 3.3. *Amphora stamps*

The contribution of amphora stamps to the study of Hellenistic economy does not need to be underlined here. Recent studies on the chronology, the mode of production and the distribution of Rhodian and Thasian wine amphoras, but also on the problems connected with the interpretation of this material, have greatly enhanced the awareness of the methodological questions involved in the exploitation of amphora stamps for economic studies (Gabrielsen 1997, 64–71; Debidour 1998, 591–606; Debidour 1999, 307–21; Bozkova 1999, 323–35; Rauh 1999; Lund 1999; Garlan 1999a; Garlan 1999b; Garlan 2000; Finkielsztejn 2001; Lawall, this volume). In the following short overview I will discuss the foreign amphoras found in Crete and the Cretan amphoras separately.

#### *Foreign amphoras on Crete*

Compared to the material known from other areas of Hellenistic Greece and Asia Minor the number of published stamped amphoras of Crete is very limited. The following example may demonstrate the current state of research: Paula Perlman published in 1999 a useful list of 44 stamped Rhodian amphora handles from Crete, including five inedita from Leuke and Xerokambos (*SEG XLIX* 1243 and 1251); the publication of a single excavation in Trypitos in 2000 almost doubled this material by adding another 38 pieces (Papadakis 2000, 115–121 nos. 5–17, 19–43; *SEG L* 938–983). Further stamps have now become known from Kommos (Csapo, Geagan, and Johnston 2000, 131 nos. 92–4) and Knossos (*SEG XLIX* 1236–7). The limited statistical value of Perlman's list – and of the material hitherto published, in general – is so evident that no further comment is necessary. I will return to the conclusions that Paula Perlman attempted to draw from this material later. It should be added that besides the Rhodian amphoras, we may infer from preliminary reports and publications that amphora stamps from many other areas have been found in Hellenistic Crete: from Chios, Korinth, Italy, Knidos, Kos, Mende, Peparethos and Thasos.<sup>13</sup>

Paula Perlman has drawn attention to the evidence provided by the Rhodian amphora stamps found on Crete (Perlman 1999, 151), associating this material with the trade interests of Rhodes. She has observed a 'correspondence between the regions of Rhodian interest on Crete and the regions where there is evidence for foreign trade, particularly with Egypt' (i.e., the eastern end of the island, the south coast, and the north-south corridor from Knossos to Mesara). Perlman is certainly right when she stresses the need of studying the Rhodian amphora stamps, but I see a series of problems with her conclusions, the less serious being the fact that her observations are based on evidence that is statistically insignificant. I should underline two methodological issues. First, Perlman considered the Rhodian amphoras found on Crete in isolation; however, if we place the less than 100 Rhodian amphora stamps hitherto known from Crete in the context of the general patterns of distribution of Rhodian wine amphoras in the Eastern Mediterranean (cf. Lund 1999; Rauh 1999), they seem entirely

inadequate for any conclusions about the economic strategy of Rhodes. Just for the sake of comparison I note that a single excavation in the agora of Thessalonike has yielded 60 Rhodian amphora stamps, almost as many as the whole of Crete (SEG XLVIII 865).<sup>14</sup> The second methodological problem is the fact that Perlman discussed the Rhodian amphoras in isolation from the amphoras from other wine producing centres that have been found in substantial numbers in Crete (see note 13). For instance, in Trypitos (near Seteia), from where we have a relatively closed find of 64 amphora stamps of the third century BC (Papadakis 2000), two thirds are from Rhodes (43), but there are also 20 examples from other areas, for example Knidos (at least four), and Kos (at least three). The stamped amphora handles from the 'Unexplored Mansion' in Knossos present a similar situation: 54 per cent of the stamps are Rhodian, the rest of the material represents a wide range of provenances (Korinth, Thasos, Knidos, and Italy; Sackett, Grace *et alii* 1992, 138–41). There is a third problem: as I will attempt to demonstrate later (§ 5), evidence for relations with Ptolemaic Egypt does not equal evidence for *trade* with Egypt.

Paula Perlman's achievement is to have drawn attention to a material that has been ignored in studies of the Cretan economy. But sound conclusions on the economic relations of Rhodes with Crete require the consideration of a much wider context. One needs a comparative study which will consider both the diffusion of Rhodian amphoras in the Aegean and the presence of amphoras of other origins in Crete. The material hitherto published is still insufficient for such a study. The presence of Rhodian amphoras on Crete alone cannot be taken as evidence of any particularly intensive export of Rhodian wine to Crete – more intensive than that to other areas.

Crete was undoubtedly part of the Rhodian strategy, but primarily because of the Rhodian claim to a hegemonic position in the south-eastern Aegean, as Hans-Ulrich Wiemer has recently demonstrated (Wiemer 2002a, 174–6), because of Crete's geographical position on the trade routes (Viviers 1999, 228–9), and because of the very clear and present dangers caused by Cretan pirates, which are neither a modern invention nor the result of 'ethnic stereotyping'.<sup>15</sup>

#### *Cretan amphoras*

Analogous caution is necessary with regard to Cretan amphoras, the importance of which has also been overestimated by Perlman (1999, 147). Locally produced amphoras with stamps or dipinti are almost entirely lacking (cf. note 2), with the exception of about ten handles of wine amphoras produced in Hierapytna in the third century BC (Marangou-Lerat 1995, 122–3). Seven pieces have been published so far: six handles stamped with the seal of Sosos of Hierapytna – five of them found in Alexandria (SEG XLII 805; Marangou-Lerat 1995, 123 E1 and E3) and another piece found at Trypitos on Crete (SEG XLVII 1410) – and an amphora stamp with the abbreviated ethnic *Hierapytnion* also found at Alexandria (SEG XLII 805). Sosos' name appears both in the genitive (without *epi*) and in the

nominate; he was either an eponymous magistrate or (more probably) the owner of a pottery workshop. The six Hierapytnian amphora stamps in Egypt cannot be seriously taken as evidence for wine trade. A comparison with the thousands of amphora stamps of Rhodos, Thasos, and Knidos and the hundreds of the stamps of other producers of wine (e.g., Chios, Sinope, Chersonesos, the 'Parmeniskos group', etc.) is devastating. Six or even six hundred amphoras filled with Cretan wine could easily have found their way from Crete to Egypt aboard the ships which continually brought Cretan mercenaries to the kingdom of the Ptolemies for more than 150 years.<sup>16</sup>

These amphoras were produced in a short period of time, possibly in a single year, perhaps for a single shipment. A limited production and distribution of amphoras is by no means an exceptional case. We know of several other Hellenistic cities with a very limited number of stamped amphoras, usually found in the immediate vicinity of the city: e.g., Hephaestia on Lemnos (*SEG XLVII* 1329), Maroneia in Thrace (*SEG XLVII* 1066), Pydna in Macedonia (*SEG XLIX* 763), Ouranopolis in the Chalkidike (*SEG XLVIII* 813), and the island of Ikos (*SEG XLVIII* 1185).

In addition to the Hierapytnian amphoras one should mention trade marks on an amphora found at Kommos (Csapo, Geagana and Johnston 2000, 132 no. 95) and a wine amphora with the name Enipas in the dative (inscribed before firing) found at Lato (*SEG XXVII* 630; cf. LGPN I, s.v.). The name in the dative obviously designates the wine purchaser ('for Enipas').

The limited evidence for Cretan amphora stamps confirms what Antigone Marangou has estimated with regard to Cretan wine production in the Hellenistic Age (Marangou 1999, 269–70). She has concluded that Crete enjoyed rural development with modest wine-producing facilities. This type of organisation can be illustrated by the remains of an agricultural installation of the third century BC on the territory of Apollonia (the present Agia Pelagia). It was composed of stores for stocking wine and a small fulling mill of approximately 25 m<sup>2</sup> (Marangou-Lerat 1995, 61–3; Marangou 1999, 270). An inscription from Kydonia dated to the third century BC informs us of areas occupied by vineyards. The plots mentioned range from 0.17 to 2 ha. and production may be estimated at about 3 hl for small parcels of land and at about 40 hl for the largest (*I.Cret.* II,x 1; Chaniotis 1988a, 82–3; Marangou-Lerat 1995, 11–3; Marangou 1999, 270). Cretan wine hardly finds any mention in the ancient literary sources of the Classical and Hellenistic period (Marangou-Lerat 1995, 9–10, 13), as opposed to the many references in the Imperial period (§ 4.1). A single workshop producing wine amphoras in the Hellenistic period has been identified so far (Keratokambos), as opposed to the seventeen workshops known to have operated in the Imperial period (Marangou-Lerat 1995, 35–60; cf. Portale and Romeo 2001, 264–6, with regard to the limited number of Cretan amphoras in Hellenistic Gortyn); its products are only known from the site of production (Marangou-Lerat 1995, 67–8). Cretan wine was certainly an object of trade within the island and it was



occasionally exported, but the Hellenistic evidence supports the assumption that viticulture essentially responded to local needs.

### 3.4. *Hadra vases*

The 'Hadra vases' are the only identifiable product of Cretan manufacture exported in large quantities and certainly one of the most important products of Cretan pottery in the Hellenistic period (Guerrini 1964; Callaghan 1984; Cook 1984; La Rosa 1984; Callaghan and Jones 1985; Enklaar 1986; Giannikouri 1996/97; Mangou 1997, 149–50; Zervoudaki 1997; Chaniotis 1999b, 184; Perlman 1999, 147; Portale 2000). This pottery group owes its name to a cemetery near Alexandria, where these vases were used as funerary urns, primarily for foreigners (Enklaar 1998, 18–9; cf. *SEG* XXXVIII 1680). Cretan Hadra hydriae have been found in Crete (Gortyn, Itanos, Kommos, Knossos, and Phaistos), Eretria, Egypt, and Rhodes; Knossos and Phaistos seem to have been the main centers of production in the third and second century.

The importance of the export of Cretan 'Hadra vases' to the island's economy should not be overestimated as evidence for a 'Creto-Egyptian trading network' (Perlman 1999, 147). Vases are known to have been brought to Egypt by mercenaries – e.g., prize vases with figured decoration (Callaghan 1980, 35). Some of the Cretans whose ashes were deposited in the Hadra vases are explicitly identified as envoys or hostages (*SEG* XLVIII 1973; Cook 1966, 8 A 7). It is conceivable that this ware reached Alexandria and Eretria aboard the same ships, which brought the thousands of Cretan mercenaries who served in the Ptolemaic army (note 15) and the soldiers who are known to have served in the Macedonian garrison of Eretria (Chaniotis 1996, 27 n. 118). The same explanation has been offered for the Cretan Hadra vases found in the Hellenistic cemetery of Rhodes (Giannikouri: 1996/97, 251). Another group of Cretan pots had the same destination: amphoras decorated with relief emblems ('Plakettensvasen'), probably produced in west Crete (Georgiadou 1994, 146; Markoulaki 1997).

To the best of my knowledge, this pottery was exported from Crete only to places where Cretan mercenaries served (Eretria, Egypt, Rhodes). It therefore seems plausible to associate these exports with the political and military relations of Crete. Of course, further studies on this material and on the centers of production may change this impression.

### 3.5. *Sling bullets*

War was one of the major occupations of the Cretans in the Hellenistic period. When they were not involved in their island in one of the countless minor and major military conflicts between their cities (Chaniotis 1996, 27–56), they were serving as mercenaries in foreign armies (Petropoulou 1985, 23–31; Launey 1987, 248–286). It is, therefore, not surprising if lead sling bullets, some of them

inscribed, are one of the largest groups of 'standardised products' in Hellenistic Crete. They have been found in several sites (Knossos, Lappa, Lato, Prinias, Seteia). The inscriptions consist of abbreviated ethnica (Knosion: *I.Cret.* Lviii 43–5; Gortynion: *I.Cret.* I,xvi 12; I,xxviii 28) and personal names (Aine.: *SEG XXXV* no. 1; Kleandrou: *I.Cret.* Lviii 46–7; cf. Pritchett 1991, 47; Me.: *I.Cret.* II,xxiv 24; Pa.: *I.Cret.* II,xxx 17; Sylada: *I.Cret.* II,xxx 16). The text AINE on three sling bullets found in eastern Crete (*I.Cret.* III,i 6; *SEG XXXV* 994 no. 1) has been interpreted as a form of the verb αἰνώ ('winnow') or of the adjective αἰνός ('terrible'), but an abbreviated personal name seems to me more probable (e.g., Aineas, Aineias, and Ainetos, all of them attested in Crete). The same applies to the text MOPA, tentatively read on a sling bullet from eastern Crete (*SEG XXXV* 994; cf. the name Morandros).

#### 4. *Instrumenta Domestica in Roman Crete*

The peculiarities of the Cretan economy in the Hellenistic period become evident when we compare the Hellenistic evidence with that of Roman Crete (c. 50 BC–c. AD 250). It is only from the late first century B.C. onwards that we have evidence for a specialized production, for standardisation and for a mass export of local products, especially of wine. In addition to types of inscribed *instrumenta domestica* already known from Hellenistic Crete, such as loom weights,<sup>17</sup> tiles (§ 4.2), and inscribed vases,<sup>18</sup> in Roman Crete we observe a larger variety of items, e.g., water pipes (§ 4.3), pottery with stamped signatures,<sup>19</sup> rings (*I.Cret.* I,xv 5; *SEG XXXIV* 923; XLVIII 1228 bis), gems (*I.Cret.* I,v 3; II,xvi 32), seals (*I.Cret.* II,xxiv 25; II,xxx 15; Bowsky 1999, 323 no. 61), weights (*I.Cret.* Lxi 5), a beauty case or mirror (*SEG XL* 774), and a roundel (*SEG XXXII* 893).

These objects reflect a change in the economic behaviour of the Cretans, a stronger integration into the trade networks of the Mediterranean, a more dynamic development of local production, specialisation, and production aiming at exports. I will discuss here the most significant groups, viz. wine amphoras, tiles, water pipes, and lamps.

##### 4.1. *Wine amphoras*

A radical change in the production and trade of wine can be recognized in the existence of identifiable centres of production of Cretan amphoras, in the many references to Cretan wine in the literary sources, and in the wide diffusion of Cretan amphoras in the Mediterranean (Chaniotis 1988a, 71–82; Marangou-Lerat 1995, 15–29, 35–60, 63–4, 67–94, 96–122, 124–54, 156–60; Marangou 1999, 270–8; Portale and Romeo 2000). In the Roman period we have not just seven, but several hundred stamps and painted inscriptions on Cretan amphoras, found in Greece, Italy, Gaul, and Africa. The texts refer to the type, quality, and provenance

of the wine, e.g., from Lyttos, Gortyn, Kantanos, and Aptera; the dipinti demonstrate a certain standardisation of production, as they use attributes for particular types of wine, such as *rubrum*, *athalassos*, *anthinos*, *passon*, *staphidites* etc. (Chaniotis 1988a, 74–8; Marangou-Lerat 1995, 124–54; Bowsky 1999, 318–22; cf. SEG XXXI 813; XXXIII 734; SEG XLV 1244; XLVIII 1205).<sup>20</sup>

It is quite probable that an ‘archive’ of c. 90 documentary ostraka from Chersonesos (second century A.D.), the only such group ever found on Crete, is connected with wine production and trade (Litinas 1999; SEG XLIX 1218). These ostraka, found in a well, comprise two groups. The ostraka of the first group record transactions that took place in March–April and November–December; the dating formula is followed by a list of names in the nominative (slaves, small shopkeepers, and hawkers?); amounts of *metretai* (a unit of volume for liquids) are written next to each name. In the ostraka of the second group the dating formula (late June–early July) is followed by two names, either in the nominative or in the dative (importers, wholesalers, and merchants?). The products measured day by day for a certain period (March–April, November–December) were probably wine and olive oil; the large amounts recorded indicate economic transactions on a large scale.

Unlike the sporadic evidence from Hellenistic Crete, in the Imperial period we do not have isolated items, but a wide distribution of inscribed Cretan amphoras. We know the names of individuals connected with this trade – producers, traders, and middlemen (Bowsky 1999, 318–22). The main features of wine production in Roman Crete are the standardisation and commercialisation of production, massive export trade, and the integration of the island’s production in economic networks that extended across the entire empire.<sup>21</sup>

#### 4.2. Tiles

Stamped tiles are already attested in Hellenistic Crete, but no workshop has been hitherto identified (§ 3.1). In the Roman period we may identify the products of a certain Lykos, son of Felix in Gortyn (Λύκου Φήλι(κος); Bowsky 1999, 323 no. 58). The second name leaves no doubt about dating this workshop in the Roman period, since the only names starting with Feli- in the *Lexicon of Greek Personal Names* are the name Felix and its derivatives (Phelikion etc.). Four inscribed tiles have been published, all of them with the same standardised text, inscribed before firing. They were found in the Odeion of Gortyn (*I.Cret.* IV 526), in the sanctuary of Asklepios in Lebena (*I.Cret.* I,xvii 58–59), and near the village of Zaros, northwest of Gortyn (*I.Cret.* I,xxxi 10). Lykos did not produce tiles for a particular building project; his products are quite widely distributed within Gortynian territory.

Two tiles found in the Odeion of Gortyn were produced by another workshop; however, the signature of the producer is fragmentary (*I.Cret.* IV 528). On another tile, again from the Odeion of Gortyn, I tentatively suggest restoring

the name Elpidianos (*I.Cret.* IV 527, [Ἐλ]πιδ[ιανοῦ]). Elpidianos is known as a producer of clay lamps in Crete (§ 4.4), and it is tempting to associate both the lamps and the tiles with the same pottery workshop; however, the restoration is anything but certain. Several tiles ('fragmenta nonnulla laterculorum') bearing the same signature (Μαρ., possibly an abbreviation of Μάρκου) were found near the Odeion (*I.Cret.* IV 531).

A tiliary under municipal management (or producing for public buildings) has been identified in Knossos (Sackett, Cocking et alii 1992, 409–10). Its products, fine Corinthian tiles, are marked with two stamps: the letters C.I.C. (Colonia Iulia Cnosos) and the labyrinth. They can be dated to the first century A.D.

The other inscribed tiles of Roman Crete are, unfortunately, either too fragmentary or too limited in numbers to allow any conclusions.<sup>22</sup> But the material known so far allows us to identify at least three separate workshops in Gortyn and another one in Knossos.

#### 4.3. Water pipes

Clay and metal drain pipes appear for the first time in Roman Crete. Most of them are known only from isolated attestations (lead: *I.Cret.* II, xiv 1; clay: *I.Cret.* I, xxvii 4; IV 535–6), but on three pieces one reads the same name (OYAPONTOΣ; Varro?; Bowsky 1999, 326 no. 72). Martha W. Baldwin Bowsky has tentatively identified this person as the owner of a villa (Bowsky 1999, 325), but it seems more probable that we are dealing with the name of a producer. Clay pipes with this stamp have been found in Rhaukos and its vicinity (*I.Cret.* I, xxvii 4 and *SEG* XXIII 531). Dryton, whose name is found on a lead pipe from Hydramia (*I.Cret.* II, xiv 1: σωλῆνες Δρύτωνος), may have also been a producer as well.

#### 4.4. Lamps

The identification of workshops, which has only tentatively been suggested in the case of tiles and possibly of water pipes, can be clearly observed in the case of clay lamps bearing the signatures of workshops. In the Hellenistic period signed lamps are already quite common in other areas, but they are unknown in

Signature and number of attestations	Attestations in Crete	Provenance
Eutyches (3)	<i>I.Cret.</i> I, ii 2 (Chaniotis 1992, 319 no. 14); two inedita in the Idaean Cave	Corinth (or Athens; cf. below)
Karos (1)	Martin 1997, 278 no. 36 ( <i>SEG</i> XLVII 1391 no.1)	Corinth

Karpos (1)	one ineditum in the Idaean Cave	Corinth
Loukios (6)	Magnelli 2001, 634 no. 10 (Baldini and Parello 2001, 136 no. 358); five inedita in the Idaean Cave	Corinth
Minikios (1)	Catling and Catling 1992, 306 L690 (with the wrong reading ΔΙΚΙΟΥ)	Corinth
Onesimos (1)	one ineditum in the Idaean Cave	Corinth
Preimos (7)	<i>I.Cret.</i> I,vii 27; II, v 57; II,xiii 22; Mercado 1974, 237 and note 40 (two pieces); two inedita in the Idaean Cave	Corinth
Sekoundeinos (1)	Bruneau 1971, 492 no. 52	Corinth
Sposianos (3)	<i>I.Cret.</i> I,xii 7 (with wrong reading: Eroteianos); Catling and Catling 1992, 306 L696; one ineditum from the Ideaeen Cave	Corinth
Zosimos (2)	Sapouna 1998, 197 no. 329–31e ( <i>SEG</i> XLIX 1202 bis); one ineditum in the Idaean Cave	Corinth
Elpidephoros (1)	Catling and Catling 1992, 300–1 no. L613	Athens
Ky. (1)	<i>I.Cret.</i> II,xxiv 21	Athens
Eutyches (1)	Catling and Catling 1992, 306 no. L695	Athens
Leonteus/Peirithos (2)	two inedita in the Idaean Cave	Athens
Neikandros (1)	<i>SEG</i> XXXII 912	Athens
Romanensis (9)	<i>I.Cret.</i> I,xiv 6; II,xxx 13; III,xi 9; Sapouna 1998, 200 no. 347–8b; Csapo, Geagan, and Johnston 2000, 132 no. 97; four inedita in the Idaean Cave	Knidos?
Communis (1)	Martin 1997, 274 no. 30	Italy
Centus (2)	two inedita in the Idaean Cave	Gaul

Table 5.1 Lamps of non-Cretan workshops in Crete

Hellenistic Crete; the only exception is a lamp produced by the workshop of Aristion (*I.Cret.* II,xxiv 17).<sup>23</sup> The first signed mould-made lamps make their appearance after the Roman conquest, in the late first century B.C. (Catling and Catling 1992, 264 nos. L61–2). From Roman Crete we know c. 160 signed lamps, and for the first time we can identify Cretan workshops, the products of which are not only widely distributed in the island, but were also exported to Berenike.

Signature	Attestations in Crete and Berenike
Ar. (1)	Knossos: Catling and Catling 1992, 264 L62
Gamos (77)	Crete: <i>I.Cret.</i> I,viii 42; I,xii 6; I,xvi 54; II,xxiv 19–20; II,xxx 6; III,iii 61; IV 540; <i>SEG</i> XXXII 906; <i>SEG</i> XXXV 986; XXXVII 754; Hayes 1971: 273 no. 53; Catling and Catling 1992, 273 no. L208, 281 no. L318, 306 L691–3 (five pieces); Martin 1997, 278 no. 38 ( <i>SEG</i> XLVII 1391 no. 2); Sapouna 1998, 175 no. 4–6 a–e, g–h, 179 no. 44–6 a, 182 no. 105–6 b, 183 no. 110–3 b, 184 no. 118 g, 190 no. 188–9 b, 190 no. 190 b, 193 nos. 274–5 a and f, 195 no. 312–3 a, 196 no. 325–6 b, 197 nos. 328–31 b and d, 197–8 nos. 332 b, e and g, perhaps 191 no. 260–2 g (twenty two pieces; cf. <i>SEG</i> XLVIII 1202 bis); Csapo, Geagan, and Johnston 2000: 132 no. 101; Baldini and Parello 2001, 123 no. 127, 129 no. 204; twenty seven inedita in the Idaean Cave  Berenike: Bailey 1985, 183 C 843, 848–850, 915, 966, and two more sherds (not in the catalogue)
Elpidianos (7)	seven inedita in the Idaean Cave
Keler (10)	<i>SEG</i> XXXIX 963; nine inedita in the Idaean Cave
Sergios (9)	<i>I.Cret.</i> I,xxiii 31; II,xxx 89; Baldini and Parello 2001, 130 no. 235 (to be restored as Σε[ργυ ου]); five inedita in the Idaean Cave
Symphoros (5)	five inedita in the Idaean Cave
YOS (? , 1)	Knossos: Catling and Catling 1992, 264 L65
Troilos (19)	<i>I.Cret.</i> I,xii 4–5; II,xvi 31; II,xxx 7; <i>SEG</i> XXXII 911; Catling and Catling 1992, 306 no. L689 (corrected in <i>SEG</i> XLV 1302); Martin 1997, 278 no. 39 ( <i>SEG</i> XLVII 1391 no. 3); Sapouna 1998, 191 no. 260–2 a (cf. <i>SEG</i> XLIX 1202 bis); eleven inedita in the Idaean Cave

Table 5.2 Cretan lamp workshops

In Roman Crete we know products of the Korinthian workshops of Eutyches, Karos, Karpos, Loukios, Minikios, Onesimos, Preimos, Sekoundeinios, Sposianos, and Zosimos, of the Attic workshop of Elpidephoros, Eutyches, Leonteus/Peirithos, and Neikandros, of the (Knidian?) workshop of Romanensis, of the Italian workshop of Communis, and of the workshop of Centus in Gaul (36 lamps). The provenance of some other signed lamps, known from isolated pieces, cannot yet be determined (11 lamps). The lamps produced by the workshop of Romansensis and by the Korinthian and Attic workshops are widely distributed in Greece and Asia Minor; their presence in Crete shows that the island was well integrated into the network of their distribution.

The fact that for the first time we can also identify Cretan workshops is far more significant (123 lamps). The unsigned lamps of the 'Cretan type', which appear in the first century AD, have long been known and studied (Wardle 1972, 274; Mercado 1974, 235; Apostolakou 1987; Papadopoulou 1989; Catling and Catling 1992, 265–73); finds in Miletos and Berenike show that these lamps were exported (Menzel 1954, 19 no. 53; Sanders 1982, 34). Recent finds from the Idaean Cave now allow the identification of particular workshops (cf. Table 5.2).

The most important producer of Cretan lamps was Gamos. D.M. Bailey had located this workshop in Berenike, where eight lamps with this signature have been found (Bailey 1985, 183; cf. Martin 1997, 278; Baldini and Parello 2001, 123). The discovery and publication of 69 lamps of Gamos on Crete – twenty seven alone from the Idaean Cave –, show, however, that L. Mercado was right with her assumption that we are dealing with a Cretan workshop (Mercado 1974, 236). It was probably established on Crete by potters from Campania; the

Signature and number of attestations	Attestations in Crete
Charigonos (1)	<i>I.Cret.</i> II,xxiv 22
Euphronios (1)	<i>I.Cret.</i> II,xxiv 23
Kornelianos (1)	<i>I.Cret.</i> I,vii 28
Menemachos (1)	Catling and Catling 1992, 306 L688
Thasiakos/Persis (1)	<i>I.Cret.</i> II,xxx 12
Ti. Caesarius? (1)	<i>I.Cret.</i> IV 541 (Bowsky 1999, no. 57)
undetermined signatures (10)	<i>I.Cret.</i> I,i 1; I,ii 3; II,xxx 10–11; Catling and Catling 1992, L65, L 280, L282, L444, 306–7 L698; Csapo, Geagan and Johnston 2000, 132 no. 100

Table 5.3 Lamps of workshops of unknown provenance

signature *fecit Gamus* is known from a lamp of the type of the 'factory lamps' (Loeschke 1919, 308 note 476). It is known that Italian lamp producers and freedmen who had worked in Italian workshops migrated to Greece from the late second century onwards (Broneer 1930, 968; Williams 1981, 27, 367). The products of Gamos' workshop were exported from Crete to Berenike, where Cretan wine amphoras have also been found (Chaniotis 1988a, 77).

Another workshop of lamps that has been attributed to Berenike (Martin 1997, 278), but was probably located on Crete is that of Troilos. Seventeen lamps with this signature are known from various parts of Crete. We may suppose a Cretan origin also for the lamps of Elpidianos, Keler, Sergios, and Symphoros, since products of these workshops are hitherto unknown outside of Crete.

We may observe that the products of the local workshops clearly outnumber the imported lamps. The finds of the Idaean Cave are quite instructive: lamps with Cretan signatures make up more than two thirds of the signed lamps found in the Idaean Cave (see Tables 5.1–5.2).

### ***5. Inscribed Instrumenta Domestica and the Character of the Economy in Hellenistic Crete***

A comparison between the inscribed *instrumenta domestica* in Hellenistic and Roman Crete implies a dramatic change in the character of the island's economy. The development from an economy that primarily aimed at covering local needs to a production primarily oriented towards exports did not occur in the Hellenistic period, as maintained by some scholars, but only after the conquest of Crete by the Romans.

Subsistence economy by no means excludes trade activities (cf. Brunet 1999, 4–5 on Delos). In this context it is necessary to stress the essential difference between transit trade and the export of local products. In Hellenistic Crete trade activities are well attested, especially the trade with slaves and with war booty (Petropoulou 1985, 68–74, 80–1; Chaniotis 1996, 93–4; cf. Guizzi 1999); there is also evidence for imports to Crete (e.g., wine, works of sculpture, and luxury objects). There can be no doubt that the Cretans exploited the geographical position of their island for *transit* trade (cf. Viviers 1999); but there is no evidence for substantial exports of any *Cretan* product before the Imperial period. The scholars who underline the importance of trade for the economy of Hellenistic Crete tend to overlook this distinction between transit trade and trade in local products. Since this issue is of some importance for understanding the peculiarities of Cretan economy in the Hellenistic period, I should comment briefly on the recent views of two of the best specialists on Crete: Paula Perlman and L.V. Watrous.

In her aforementioned study Perlman (1999, 146–51) has presented a review of evidence which in her view is related to foreign trade; it includes the clause of



the safe use of Cretan harbours in proxeny decrees, the privilege of the customs-free import and export of valuables in honorary inscriptions, the numerous Hadra vases (§ 3.4) and the few Cretan amphora stamps found in Egypt (§ 3.3), the introduction of Egyptian cults into Crete, and the discovery of a workshop for wool production at Xerokambos. This evidence is, however, not at all unequivocal and should be interpreted with caution. I do not see what permits the conclusion that every ship that was guaranteed safety when sailing to a Cretan harbour was a *merchant* ship; it is not true that all the wares exported from Crete were *Cretan* products; and it is absolutely certain that many recipients of the privileges of inviolability, customs-free import and export, and the safe use of harbours were not merchants. At Olous the recipients of these privileges include, e.g., a soldier (*I.Cret* I,xxii 4 XI) and a doctor (*I.Cret* I,xxii 4 XIII), at Knossos envoys of Magnesia on the Maeander and an epic poet (*I.Cret* I,viii 10 and 12), at Gortyn the brother of a Ptolemaic general (*I.Cret.* IV. 208 A), soldiers (*I.Cret.* IV 215 C, 220) and artists (*I.Cret.* IV 222, 223 A). As a matter of fact there is not a single proxeny or honorary decree earlier than c. 100 BC which unequivocally reveals an economic context, whereas a military background is directly attested in many cases (Petropoulou 1985, 33–4). The rest of Perlman's evidence is equally problematic. Everything we know about the introduction of Egyptian cults into Crete reveals a military context; the cults were introduced by Cretan mercenaries returning from Egypt or by Egyptian troops on Crete (Spyridakis 1969; Magnelli 1994/95; Chaniotis 2002, 109). Also, it is methodologically problematic to make out of a single workshop in Xerokambos a wool industry. Perlman may 'see no reason to doubt' that its products were exported, but the fact remains that there is absolutely no evidence supporting this assumption. If there were so many foreign traders on Crete or Cretan traders abroad they certainly succeeded in concealing their identity, because not a single one of them is known.

If trade *with Crete, via Crete, or with Cretan products* had played an important part in the relations between the Cretan cities and the major trading center of this region, Rhodes, then one would expect to find relevant clauses in the treaties of Rhodes with Cretan cities. These documents concern themselves, however, with the recruitment of mercenaries and with piracy (Kreuter 1992, 65–89; Wiemer 2002a, 156–64). Also Perlman's claim that we are not able to demonstrate that pirate plunder contributed to the treasury of Hierapytna (Perlman 1999, 153) is based on a misinterpretation of a treaty of alliance between Hierapytna and Priansos which clearly attests the taxation of revenues from plunder and should, therefore, be rejected.<sup>24</sup>

I see similar problems with L.V. Watrous' views. Watrous (2001, 133–4) has correctly observed that there is recent archaeological evidence pointing to intensive agricultural exploitation in the Hellenistic period and to industrial activities at Matalon; he also draws attention to the doubling of rural sites in the Mesara 'in the Hellenistic period (ca. 325–69 B.C.)', to the numerous finds of stamped amphoras, and to Polybios' statement on the greed of the Cretans (6.45–

7). I very much doubt whether any of this can be regarded as evidence for an *export* economy in the *third and second* centuries B.C. The increased number of rural sites in the Mesara needs to be contextualised in order to become meaningful: it makes a huge difference if the new sites came into being before or after the destruction of Phaistos (c. 150 B.C.), since the late second and early first centuries B.C. form a distinct period in the history of Hellenistic Crete (cf. Chaniotis 1996, 56; Harris 1999, 355–6). The stamped amphoras *imported* to Crete provide no evidence for export trade, and whoever reads Polybios' comment in its context sees that it has absolutely nothing to do with export economy, but with the vices that the historian (in an exaggerated way) attributes to the Cretans: piracy and mercenary service.

The evidence presented by Perlman and Watrous does not suffice to abandon for Hellenistic Crete the model of an economy primarily oriented towards subsistence. In a recent study (Chaniotis 1999b, 210–1) I have pointed to the differences that immediately emerge when we compare Crete with other parts of the Hellenistic world. It is true that with regard to the manufacture of pottery and terracottas, to some extent with regard to sculpture, Crete follows the trends of the Hellenistic world.<sup>25</sup> But many categories of evidence, well represented in areas which were integrated into the economic networks of the Hellenistic world, are entirely absent in Crete: We lack evidence for a long-distance trade in local products, for a specialisation in local manufacture, for Cretan merchants, and – more important – for the display of private wealth which characterises big and small Hellenistic poleis (luxurious dedications, foundations, private dedications of public buildings, contributions to festivals, impressive funerary documents, honorific decrees for benefactors, etc.). I have argued that this is not due to some coincidental gaps in our sources, but to the peculiarities of Cretan society and economy. Despite some evidence for increased prosperity in the first decades of the first century I can recognize a dramatic change in the *nature* of Cretan economy only after the Roman conquest.

William Harris has recently stressed the necessity of a detailed checklist of all of the island's *instrumenta domestica*, and of the Cretan *instrumenta* found elsewhere (Harris 1999, 354). In part knowing and in part only suspecting how much material remains unpublished, I think that there is still a long way to go before we have anything like a representative amount of this material. It is for this reason that the evidence I discussed in this paper should be treated with caution. I am more concerned with the methodological problems than with firm conclusions. But I think that the inscribed *instrumenta domestica* hitherto known, even limited in number and possibly not representative enough, indicate how rewarding a study of this material may be. Until new evidence is published, which may disprove this statement, I suggest that the inscribed *instrumenta domestica* of Hellenistic Crete are closely related to life in contemporary Crete: to pastoral economy and the production of textiles, to public constructions, and to the military activities of the Cretans.

## Notes

- 1 Clay seal: *SEG XXXII 892*. Gold snake: *SEG XLV 1318*. Moulded terracotta statuette: Higgins 1971, 278 no. 13. Pottery inscribed before firing: *I.Cret. I,xxviii 21*; *III,vi 25 (?)*; Csapo, Geagan, and Johnston 2000, 129 no. 83, 131 no. 91. Stamped vases: *I.Cret. III,ii 6*; *SEG XXVII 644* (undated). Inscribed vases (usually graffiti engraved after firing): *I.Cret. I,xii 3*; *SEG XXIII 558*; *XXX 1115*; *XLII 809*; *SEG XLIX 1240*; Csapo, Geagan, and Johnston 2000, 129 nos. 84–5. For lamps see below n. 23. Dedicatory inscriptions on vases (e.g., *I.Cret. I,xxviii 19*; *SEG XLV 1338?*) do not belong to the instrumenta domestica.
- 2 Asklepios (Lasaia): Chaniotis 2000. Athena (Archanes): *SEG XLIV 730 bis*. Athena (Prinias): *I.Cret. I,xxviii 20*, 24–5. Hermes Kedrites (Simi Viannou): Lebessi 1972, 202; 1973, 196–7; 1981, 5; 1985, 17 n. 4. Kommos: *SEG XXVIII 745 app.cr.* Zeus Diktaios (Palaikastro): *I.Cret. III,iii 3–5*. In other contexts: *I.Cret. III,vi 26–27*; *SEG XXXVIII 904*.
- 3 *I.Cret. III,iii 3–4* (cf. Chaniotis 1988b, 28 with n. 32); Lebessi 1973, 197. A monogram on roof tiles from the Asklepieion of Lasaia (*SEG XLII 804*) with the letters (ΓΡΤΥ) can possibly be interpreted as the ethnic Gortynion. For ethnic names on tiles see Orlandos 1966, 93–5. See, e.g., *SEG XLVII 554*, 565, 570, 727, 782; *XLVIII 602*, 670; *XLIX 615 bis*.
- 4 *I.Cret. III,vi 27* (Zeus or a theophoric name?); *SEG XLIV 730 bis* (Athena); *SEG XLII 804* (Asklepios). Possibly *I.Cret. I,xxviii 20* (Athena?). For names of divinities on tiles see, e.g., *SEG XXXIII 477* and *XLIX 644* (Zeus Naios in Dodona).
- 5 *I.Cret. I,xxxi 10*; *I.Cret. III,ii 5*; *SEG XXXVIII 904*; *XLIX 1230*; see also below n. 8.
- 6 For a discussion of this problem in Pherai see Doulgeri-Intzesiloglou 1998, 612–3 and the responses of Y. Garlan and B. Helly (*ibid.*, p. 617).
- 7 For the latter possibility cf. *I.Cret. I,xxiii 4*.
- 8 Lebessi 1972, 202 (Damithales of Lyttos, Satyros of Arkades); Lebessi 1973, 196–7 (Matrodoros son of Nikelos, Pamphias); Lebessi 1981, 5 (Aischylos of Arkades); Lebessi 1985, 17 n. 4 (men from Hierapytna and Priansos). The material from this sanctuary will be published by Ch. Kritzas.
- 9 Aptera: *I.Cret. II,iii 21*. Arkades: *I.Cret. I,v 5*. Chersonesos: *I.Cret. I,vii 5*. Dreros: Demargne and van Effenterre 1937, 30. Gortyn: *I.Cret. IV 251*, 254–255, 259, 261. Hierapytna: *I.Cret. III,iii 9*. Knossos: *SEG XLIV 728*. Lato (Sta Lenika): *I.Cret. I,xiv 2*; *xvi 2*, 21–35; Bousquet 1938, 389 no. 1, 405 no. 4. Lebena: *I.Cret. I,xvii 4–6*, 38, 44; *SEG XLVII 1403*. Lyttos: *I.Cret. I,xviii 12* (cf. *SEG XXXVI 814*). Malla: *I.Cret. I,xix 4*. Oleros: *I.Cret. III,v 1*. Phaistos: *I.Cret. I,xxiii 4*. Simi Viannou: Kritzas 2000, 81–97.
- 10 *I.Cret. I,ii 3* (Chaniotis 1992, 320–1 no. I 17); *I.Cret. I,vi 8*; *I,xvi 13–4*; *I,xvii 52*; *I,xxiii 25–6*; *II,ix 2*; *II,xxx 14*; *III,vi 31–34*; *IV 537*; *SEG XXXII 899*; *XXXII 913* (= *XXXIX 985*, undated); *XXXVIII 904* (undated); *SEG XLIV 722*; *XLIX 1229*; Sackett, Cocking *et al.* 1992, 402–4 nos. W34–55; Portale 1996/97, 347/348 nos. 161a–c and 169b; Magnelli 2001, 627–8 nos. 2 and 3a.
- 11 *I.Cret. I,vi 8*; *I,xvi 14*; *I,xvii 52*; *II,xxx 14*; *III,vi 32–34*; *SEG XXXVIII 904*; *XLIV 722*; *XLIX 1229*; Sackett, Cocking *et al.* 1992, 402–4 nos. W34–55; Portale 1996/97, 347/348 nos. 161a–c and 169b; Magnelli 2001, 627–8 no. 3a.
- 12 Archaresta: *I.Cret. II,ix 2*. Kaleneika: *I.Cret. II,v 56*. Nea: *I.Cret. I,xxiii 25* (Chaniotis 1989, 76); Magnelli 2001, 627 no. 2; Phyla: *I.Cret. I,xvi 13*; *SEG XXXII 899*. Tido or Tilo: *I.Cret. I,xxiii 28* (Chaniotis 1989, 79); Timola?: *SEG XXXII 913* (Chaniotis 1989, 80). Tryphera: Sporn 2002, 95 (the restoration ΤΡΥΦΕ[ΡΟΣ] should be corrected to Τρυφέ[ρας]). Vibia: *I.Cret. I,xxiii 27* (Bowsky 1999, 323 no. 62).
- 13 Brindisi: Sackett, Grace *et alii* 1992, 140 no. X25. Korinth: Sackett, Grace *et alii* 1992, 138 no. X2. Knidos: *I.Cret. III,vi 28*; *SEG XLIX 1239*; Sackett, Grace *et al.* 1992, 140 nos. X20–4; Papadakis 2000, 121–2 nos. 44–7 (*SEG L 970–972*). Kos: Papadakis 2000, 122–3 nos. 48–50

- (SEG L 973–975; cf. nos. 57–9). Mende: Csapo, Geagan, and Johnston 2000, 130–1 no. 90 (early Hellenistic?). Thasos: SEG XXXIV 914 (11 pieces); Demargne and van Effenterre 1937, 21 nos. 1–2; Sackett, Grace *et al.* 1992, 138 no. X1. Unidentified origin: SEG XLIX 1238; Demargne and van Effenterre 1937, 21 no. 3 (Simias?); Sackett, Grace *et al.* 1992, 140–1 nos. X26, X29–31. Papadakis: 2000, 123–4 nos. 52–64 (SEG L 977–983). Hadjidaki and Iniotakis 2000, 55, report the discovery of handles and bodies of amphoras from Chios, Kos, Mende, Peparethos, Rhodes, and Thasos in Phalasarna. Cf. also Portale and Romeo 2001, 268–9, for the presence of Hellenistic Knidian and Rhodian amphoras in Gortyn.
- 14 For numbers of Rhodian amphoras found in other areas see also Conovici 2000, 212; c. 120,000 in Alexandria, more than 4,000 from the Athenian Agora, more than 1,600 in Delos, more than 16,000 from Cyprus.
- 15 For ‘ethnic stereotyping’ as an explanation for the references to Cretan piracy in literary sources see Perlman 1999, 137–9. The documentary sources, however, leave no doubt about the reality of Cretan piracy: Brulé 1978; Chaniotis 1996, 93–4; Wiemer 2002a, 138–140.
- 16 For Cretan mercenaries in Ptolemaic Egypt see Spyridakis 1981, 55–83; Petropoulou 1985, 15–20, 23–34; Launey 1987, xii–xiii, 1152–69; Kreuter 1992, 41–43.
- 17 *I.Cret.* I,xxiii 27–8 (SEG XXXIX 981; XLIII 614); *I.Cret.* II,v 56, 58–9; IV 538–9; SEG XXXI 814; XXXII 899 (10 items); XXXIII 734; XXXVI 813; XLVII 1392 (5 items); Hayes 1971, 263 no. 78; Sackett, Cocking *et al.* 1992, 399–400, 402–6; Sporn 2002, 95. For the significance of loom weights for the economy of Crete see above § 3.2. I should note that for the first time we find loom weights with the same inscription found in different places: loom weights of Vibia have been found in Phaistos and in the Idaean Cave (Bowsky 1999, 323 no. 62).
- 18 *I.Cret.* I,viii 41; I,xvii 53, I,xviii 187; SEG XLVII 1398; Bowsky 1999, 325 nos. 67–71.
- 19 For the Arretine wares found in Knossos see Sackett, Grace *et al.* 1992, 142–6; Bowsky 1999, 332; cf. Eiring 2000; for Gortyn see Rizzo 2001. Stamped signatures on pottery found in other sites: *I.Cret.* I,xvii 53; I,xx 1; I,xxiii 31; II,xxx 18; III,iii 60; IV 541–2; SEG XXXIII 734; Csapo, Geagan and Johnston 2000, 132 nos. 99 and 102.
- 20 After the publication of Marangou-Lerat’s corpus of inscriptions on Cretan wine amphoras, the following amphoras have been published: Sackett, Grace *et al.* 1992, 142 nos. X34–38 (graffiti); De Caro 1992/93 (SEG XLVIII 1265); Magnelli 2001, 632 no. 8, 653 no. 33. For Cretan amphoras in Lyon see now also Lemaître 2000. On Cretan amphoras of the Imperial period see also Portale and Romeo 2001, 269–279.
- 21 It should be remarked, here, that also a large number of foreign amphoras were imported to Crete. For Gortyn see Portale and Romeo 2001, 279–302 (amphoras from Africa, Spain, Italy, Gaul, Syria/Palestina, and the Black Sea).
- 22 *I.Cret.* I,xvii 30; II,v 60; IV 529–30, 532; SEG XXXII 898; Csapo, Geagan, and Johnston 2000, 129 nos. 87–8.
- 23 For the production of wheelmade lamps in late Hellenistic Knossos, see Catling and Catling 1992, 261–5.
- 24 *I.Cret.* III,iii 4 = Chaniotis 1996, no. 28 LL. 53–8, αἰ δὲ τι θεῶν βωλομένων ἔλοιμεν ἀγαθὸν ἀπὸ τῶν πολεμίων, ἧ κοινᾷ ἐξοδοῦσαντες ἢ ἰδίαι τιμῆς παρ’ ἑκατέρων ἢ κατὰ γὰν ἢ κατὰ θάλασσαν, λαμβανόντων ἑκάτεροι κατὰ τὸς ἄνδρας τὸς ἔρποντας | καὶ τὰς δεκάτας λαμβανόντων ἑκάτεροι ἐς τὰν ἰδίαν πόλιν. According to the traditional interpretation of this clause (Brulé 1978, 106–15; Chaniotis 1996, 258 and 261; Wiemer 2002, 158) the terms ἰδίαι and κοινᾷ distinguish between ‘private’ and ‘public’ expeditions and attest a state-sponsored piracy on Crete; according to Perlman (1999, 161 n. 47) this clause made a distinction between expeditions undertaken ‘separately’ by one of the two parties and ‘jointly’ by Hierapytna and Priansos. But the formulation of the clause and the use of ἑκάτεροι rules P.’s interpretation out; the text clearly refers only to expeditions undertaken

by both partners (τινές παρ' ἑκατέρων..., ἑκάτεροι..., ἑκάτεροι ἐς τὸν ἰδίον πόλιν). There is also a problem with Perlman's interpretation of the treaty between Hierapytna and Rhodes (*Staatsverträge* III 551, lines 66–72): the Rhodians promised to aid the Hierapytnians if an enemy attempted to deprive them of 'the just revenues from the sea'. According to the communis opinio, this clause makes a distinction between just revenues (harbour revenues, customs, taxation of trade, income from transit trade), and unjust revenues (piracy); on the contrary, Perlman identified the 'unjust revenues' with harbour dues and transport taxes on Rhodian ships (Perlman 1999, 153). This cannot be accepted, not only because harbour dues and trade taxes cannot possibly be regarded as 'unjust revenues', but also for the simple reason that the Greeks used the unequivocal term *ateleia* to express the exemption from such dues.

25 E.g. Ducrey *et al.* 1976; Callaghan 1983 and 1992, 100–133. For Attic influence on Cretan sculpture in the early Hellenistic period see Papaoikonomou 1981 and 1982; Bowsky 1997.

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