Roman amphorae from Cyprus: integrating trade and exchange in the Mediterranean

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Volume I
Declaration

I, Anthi Kaldeli, confirm that the work presented in this thesis is my own. Where information has been derived from other sources, I confirm that this has been indicated in the thesis.

Signature
Abstract

This research focuses on the study of amphorae from Cyprus in order to reconstruct aspects of trade and the Roman economy in the eastern Mediterranean region, from the 2nd c. BC to the 7th c. AD. The amphorae, as the primary containers used in commercial activities, enable an insight into trading patterns and socio-economic processes. Trade was fundamental to the Roman empire for the accomplishment of the political strategy of economic exploitation of its territories. However, it is only fairly recently that research focused on the study of amphorae for the reconstruction of trade and the examination of the economy. Still, the bias towards the western part of the empire resulted in the obscurity of the eastern exchange networks, and the lack of sufficient knowledge concerning the broader mechanisms underlying trade. Despite the growing work currently undertaken in the eastern Mediterranean, trading activities in the eastern part of the empire remain largely unknown. Thus, by analysing data from a number of sites on this strategic island and combining them with existing evidence, the aim is to provide with this thesis an original contribution to the understanding of the complex economic activities of the island and the eastern Mediterranean region, and between the two parts of the Mediterranean. The main concern is the development and application of a solid theoretical and methodological framework for the investigation of production, trade and exchange, and consumption, as well as the associated social and ideological implications, and the diachronic changes.
For my parents, Charalambos and Androula Kaldelis
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Chapter 1. Introduction

1. Background to the research project

This research project focuses on the study of amphorae from Cyprus in order to reconstruct aspects of trade and the Roman economy in the eastern Mediterranean region, from the 2nd c. BC to the 7th c. AD (i.e. the early to the late Roman periods). The amphorae, as the par excellence containers used in commercial activities, provide an insight into socio-economic patterns associated with agricultural and craft production, trade and exchange, and the consumption of their perishable contents (section 1.1). Furthermore, the island's strategic position in the exchange networks operating in the eastern Mediterranean makes it important for the study of trade in this part of the empire, which is largely unknown (see below).

Trade was fundamental to the Roman empire, as it provided the means to accomplish the political strategy of economic exploitation of its territories. Facilitated by the existence of a uniform currency and a common market, trade acquired a Pan-Mediterranean character, which encouraged regional interaction and promoted socio-cultural unity and economic expansion within the empire (section 8.2.5). However, previous studies on the Roman economy overlooked the economic and political importance of trade. Instead, they favoured a variety of explanations ranging from ideas developed from modern economics (cf. Rostovtzeff 1957), deterministic approaches, and interpretations stressing agriculture as the dominant form of economic activity (cf. Finley 1973; Jones 1974; Greene 1986).

It is only recently that research focused on the reconstruction of trade for the understanding of the economy (cf. Hopkins 1980), following general developments in the archaeological study of trade. In the absence of adequate literary evidence, study is mainly restricted to the archaeological evidence, including the amphorae. This renewed interest resulted in the construction of distribution maps and trading patterns, and elucidated our knowledge of the traded products and shipping conditions. However, research mainly concentrated on the western part of the empire (section 2.1) and failed to address fundamental issues relating to the broader mechanisms underlying trade. The failure to address such issues is evident in the ongoing debate concerning whether the Roman economy is a market economy (Greene
1986, 50-52). Moreover, researchers have inclined towards explanations, such as famine and food shortages (Garnsey et al. 1983, 2) for explaining intensification of trade, rather than considering the role of market forces.

The Roman period in Cyprus, which follows the Ptolemaic, begins in 58 BC with its conquest. Cyprus' central position in the eastern Mediterranean sea networks, manifested in the prosperity reflected in the archaeological record, and the previous intensive archaeological work on Roman urban and rural settlements (section 3) enable the systematic study of this area’s economics. Albeit restricted, the research on the amphorae hitherto conducted on the island (cf. Hayes 1991, Lund 1993, Rautman 2003, Demesticha 2001) is evocative of active and systematic exchange networks, characterised by diachronic changes and complex exchange patterns. Although such studies have become more frequent in recent years, no attempt has as yet been made for a concrete and synthetic study aiming at understanding the extent and character of such variability, and the related economic aspects.

The current study, stemming from a preliminary assessment of the amphora studies conducted on the island, is the result of the recognition of the potential to obtain an understanding on these overlooked issues based on the amphorae found on Cyprus. The principal aim is to provide an original contribution to the understanding of trade and exchange of the island and the eastern region, but also of the economic processes of the empire as a whole. Analysis focuses on assemblages collected from sites in the cities of Paphos, Kourion and Amathus (section 3.1). The integration of material from other Roman cities was not possible at present, either because their study has been assigned to foreign missions, or because of the present political situation on the island which prevents the conduct of archaeological work. For a fruitful synthesis of the economic landscape, however, all available published data from the island are equally considered. An essential role was also played by data from throughout the Mediterranean, as they formed the basis for ideas concerning trading networks (section 5.2). The establishment of clear-cut objectives and the application of a solid theoretical and methodological framework for their accomplishment constitute the basis on which the research builds (section 1.2). The objectives and the research model, including the chapters of the thesis, are described in detail below (section 1.2). Before their discussion, however, it is pertinent to
underline first certain aspects related to the role of the amphorae in the study of trade (section 1.1).

1.1. The role of amphorae in the reconstruction of trade, and the current state of research

Amphorae are ceramic containers used throughout antiquity for the transportation and storage of products. It is believed that they evolved from the so-called Canaanite jar, which appeared as early as the 15th c. BC in the Syro-Palestinian coast of Canaan (Peacock and Williams 1986, 20). Their shape, generally speaking with vertical handles and usually a tapering bottom, shows a design aiming at facilitating bulk transportation on land and sea. In the Roman period, and in particular from the Republican period onwards, they became the main vessels associated with the trading of foodstuffs, such as wine, olive oil, fish products, and occasionally fruit, within and outside the empire. Their presence as far as India is a valuable indicator of far-reaching exchange contacts (De Romanis and Tchernia 1997; Tomber 2004, Williams 2004). The complex typology constructed concerning the amphorae produced and circulated in this period as well as the great variation existing in rims, handles and bases in particular, reflect the expansion of production and exchange activities (section 1). Even though particular types were initially associated with specific regions, production expanded in areas other than their origins. A study focusing on theoretical issues relating to the development of stylistic variation characterising the various Roman types would be most intriguing and valuable. These types, often developed from the Hellenistic prototypes, frequently enable the identification of their origins and contents. Thus, amphorae constitute the main material in the archaeological record which enable an insight into the production, trade and consumption of agricultural produce and everyday essentials.

The study of these vessels for the reconstruction of commercial activities is supported by the scientific techniques used in the archaeological study of ceramics for the identification of their provenance and contents. Such techniques are petrographic and residue analysis. Most importantly, the development of quantitative analysis, sampling and statistical techniques, enables the study of their distribution and the development of trading patterns. This kind of analysis is sustained by the common occurrence of the amphorae in excavations and their wide geographical distribution. Additional information on commerce is provided by the painted
inscriptions (*tituli picti*) and stamps, which occasionally appear on amphorae, and may refer to the date and centre of production, or to the contents (section 7.0.3). It is this kind of information which motivated the first interest in amphorae from an epigraphic and philological point of view. It was not until the development of trade studies in the archaeological field in general that their significance was realised for the examination of commercial and economic aspects (section 2.1). Their key role in understanding patterns of production and exchange constitutes a review of the development of their study essential. This is provided in chapter 2. At this stage it is suffice to say that the information obtained from every stage in the course of their study, and in particular since 1899 with Dressel’s recordings of types based on their inscriptions (section 2.1), is currently used in the most constructive manner for the better understanding of economy.

1.2. Objectives, research model and thesis outline

A number of objectives are posed, aiming at contributing to the reconstruction of the complex economic activities of the eastern empire, and elucidating the character of trade in the empire as a whole. The primary objective is to identify the areas with which the island was commercially linked, and examine the processes and mechanisms by which the amphorae were exchanged on an intra- and inter-regional level, as evidenced by the spatial patterning. It is also essential to try to define the volume of these exchanges. At this point I should underline that in the text the word ‘trade’ often takes the meaning of distribution or exchange. However, it does not necessarily imply market trading, as a number of mechanisms, the identification of which is one of the major aims, may be responsible for the amphora circulation evidenced in the patterns (chapter 6).

Further to the study of distribution, I will focus on the examination of aspects of production and consumption for an adequate understanding of Roman economics. As the examination of these aspects follows the economic cycle (Earle 1982, 8), the process of production will be studied first followed by distribution and finally consumption. Nevertheless, there is an evident inclination towards the study of distribution, as this constitutes the research’s main objective. Despite the importance of the other two processes, the lack of further information at present, owing partly to the limited stratigraphic evidence and partly to the absence of petrographic analyses, makes their examination more speculative. In those chapters (chapters 7 and 9) I am
mainly concerned with advancing ideas, which will hopefully form the seed for future investigation.

Moreover, it is important to understand how economic organisation, exchange, and interregional interaction affected socio-cultural change. A meaningful interpretation requires the examination of these issues within the broader economic, socio-political, and ideological context, which developed after the eastern Mediterranean became part of the Roman empire. A contextual approach is necessary in order to understand the variability of the processes generating the data, and to address neglected issues, such as the value of products, imitation of types, and diachronic change. The dynamic analysis of these perspectives will move Roman trade studies beyond the descriptive sphere and will attempt the synthesis of available data from other areas in the Mediterranean.

The concern at this stage is to identify the broad distribution patterns in which Cyprus was involved throughout the Roman period by looking at the totality of the amphora types imported to each city under study (section 1). This will encourage inferences concerning possible networks in the eastern part of the empire, and the underlying mechanisms, by taking into account the knowledge on Roman economy and other non-economic factors. It is also important to look at the way in which production processes are reflected in the data and achieve an initial understanding on the consumption of the various products and the associated social implications. These steps are essential for understanding the possible problems and inherent limitations of the research. They also provide the starting point for a more elaborate analysis in the future, focusing on the distribution of individual types, contextual and stratigraphic data, the identification of production centres and their relation to agricultural aspects.

The fundamental process for addressing these issues entails the development of a consistent theoretical and methodological framework, aiming at linking the theory to the data, by means of quantification, model building and statistical techniques. The construction of the theoretical framework is crucial as it provides the ideas that will be explored, determines the methods that will be used in the analysis, and facilitates the building of the research design (Orton 2000, 9-11). As the research is concerned with the study of exchange within an empire, the main theoretical models involve World Systems Theory, concepts developed within Substantivist and Formalist economic anthropology, Neo-Marxism, and political economy. Thus, the
main theoretical perspectives and their application to the Roman economy are presented in chapter 4, followed by the methodology in chapter 5. Background information concerning the development of amphora studies and the character of Roman Cyprus, for a better understanding of the material and its context, is provided in chapters 2 and 3, respectively.

In chapter 6 the intention is to present the patterns resulting from quantification analysis on which the study of production, distribution and consumption builds. Each of the economic processes is examined in distinctive chapters (chapters 7, 8 and 9). Due to the limitations inherent in this thesis, discussion of the various types, including their morphology, dating, occurrence, origin and contents, takes place in an accompanying appendix (App. 3.1). At this point I should underline that the illustrations provided for the known amphora types are reproduced from a number of publications, as in most cases it was impossible to obtain permission for producing original illustrations myself. As a result, photographs are provided for only part of the newly identified types. Furthermore, appendices are provided for chapters 6, 7, 8, and 9, presenting the graphs resulting from statistical analysis and tables to facilitate ‘reading’ the information obtained from the data. For expediency of the reader the supplementary information sited in the appendices, including tables and figures, are presented in a separate volume (Volume II). A synopsis of the objectives achieved in the thesis is finally provided in Chapter 10.
Chapter 2. The development of amphora studies

2. Introduction: Definition and role of amphorae in the study of trade
The definition of amphorae as the predominant containers for the transportation and storage of products throughout the Roman empire, both temporally and spatially, has already been noted in the introductory chapter (section 1.1). Through time the interest in amphorae has shifted from their epigraphic evidence, to their morphology and the creation of typological catalogues and the study of their quantities for an insight into trade patterns. It was not until recently that researchers realised their significance for addressing issues related to trade and exchange (cf. Tomber 1988, Reynolds 1995). Currently, the study of the amphorae is a multifaceted field exploiting all available information for the sound ‘reconstruction’ of all economic aspects. Thus, for a better understanding of their archaeological significance it is essential to review the diachronic stages of their study. These largely correspond to broader archaeological trends as formed initially by perspectives of traditional archaeology and subsequently of processual archaeology. Such a review will also demonstrate the necessity to move the study of the amphorae further, as attempted in the present thesis, with the development of models entailing socio-economic theory and statistical techniques.

2.1. The development of amphora studies
The beginning of the study of amphorae in the late nineteenth century is linked with the period’s academic enthusiasm concerning ancient epigraphy. In particular, Heinrich Dressel in 1899 in his magnum opus Corpus Inscriptionum Latinorum (Vol. XV) identified and published a great range of amphora types in reference to their inscriptions (Peacock and Williams 1986, 5). Amphorae continued to be the subject of sporadic studies in the years to follow, such as Schöne and Mau’s combined work (1909). However, a renewed interest in these ceramic containers occurred in the mid twentieth century. Within the perspectives of traditional archaeology, at this primary level research was mainly restricted to classification based on stylistic features. The identification of types was (and still is) largely based on the ‘Dressel’ types, presented in Dressel’s original catalogue. Thus, further types are named after researchers (cf. Almagro 1955; Lamboglia 1955; Benoît 1961; Zevi 1966; Beltrán
1970; Pascual 1974; Riley 1979) who established more refined typologies. Additionally, types are often named after the sites in which they were identified. This tendency has resulted in the creation of a complex nomenclature and the attribution of diverse names to the types, frequently leading to confusion. Equally important is Callender’s (1965) study on stamps, which had not previously formed the subject of intensive research.

The interest in amphora studies is largely connected with the development of underwater archaeology and the recovery of vast amphora assemblages in shipwrecks (Peacock and Williams 1986, 3). Amphorae identified in shipwrecks are particularly significant for dating purposes as they present a “precise point in time” (Peacock and Williams 1986, 17). To provide a more recent example, Parker’s (1992) work on Roman shipwrecks offers valuable evidence on the circulation of amphorae. Indeed, a future study that would incorporate evidence from shipwrecks identified in the eastern Mediterranean and data collected from inland excavations would be most intriguing. However, it must be underlined that in comparison to the western Mediterranean, underwater surveys in the eastern basin are rather recent.

A key role in the progress of amphora studies was also played by improvements in the excavation methods of important Roman sites during this period, such as Carthage (Fulford and Peacock 1984), Benghazi (Riley 1979), and the Agora in Athens (Robinson 1959). The stratified contexts from these sites enabled the establishment of rough circulation dates of a large number of amphorae, despite the inherent difficulties due to their slow typological evolution (Fulford et al. 1984, 117). An accurate chronology is also provided by the tituli picti and stamps, which continue to attract much academic interest (cf. Rodriguez-Almeida 1983a, 1983b; Remesal Rodriguez 1982; Hassall and Tomlin 1982, 1984, 1994).

In the last decades research does not only focus on the descriptive approach, but has moved further on a more holistic analysis for the deduction of data with economic implications. This advance must be assessed in association with the change that occurred in the approach to the study of the Roman economy and the emphasis on the role of agriculture, production, exploitation and trade (section 4.1). Grace’s (1979) work on the association of the amphorae and wine trade constitutes an early example of the realisation of this potential. The emphasis put on the analysis of ceramic material in particular for the understanding of economic processes, implied the adoption of new methods. The fact that these build on the typological
catalogues mainly established in previous years demonstrates the significance of the past descriptive approach.

The progress achieved within the archaeological discipline concerning the study of exchange in past societies was crucial for the achievement of these objectives. This development is largely related to the application of a wide range of scientific techniques used in the archaeological study of ceramics for the identification of their provenance and contents. Such techniques include petrographic and residue analysis. The recent work of Tomber and Dore (1998) concerning petrography in Britain shows the usefulness of compiling such information. In particular, sourcing methods, such as thin-section analysis and chemical analysis (section 5.1.3.5), revealed that individual forms were often manufactured in a number of production centres across the empire. Thus, source identification together with distribution analyses enabled the reconstruction of trade routes operating throughout the Roman world. Residue analysis on the other hand, applied on the pores of the ceramic vessel, reveals the perishable contents once transported in the amphorae. It therefore provides an insight into agricultural production, the products traded from various areas, and consumption.

The adoption of quantitative analysis, sampling and statistical techniques in archaeology enabled the examination of amphora distribution and trading patterns. The application of mathematical techniques was made possible by the common occurrence of amphorae in excavations and their wide geographical distribution. Apart from the study of networks, distribution analysis constituted an additional method for the identification of production centres. In this case the source may be indicated by the high concentration of a type in one area and its dispersal in other directions (Orton et al. 1993, 203). It must nevertheless be underlined that the classic 'fall-off' distribution analysis (i.e. gradual dispersal from the source) does not always apply to the amphorae. As these containers were involved in trade it is possible to have a higher concentration of a type in a more distant location, if that was the target market. Supplementary to this methodology for acquiring an understanding on commerce is the information provided by the painted inscriptions (tituli picti) and stamps, which occasionally appear on amphorae. This information may refer to the date, centre of production, or the contents.

Despite these advances, studies were until recently restricted to the western Mediterranean (section 2). The bias is best reflected in the fact that the majority of
the classified amphorae involve western types. The scientific techniques noted above have hitherto been used mainly for the description of western trading networks, reflecting the general tendency of the study of Roman trade (section 1). Apart from the afore-mentioned studies, marking the establishment of amphora analysis as a distinctive field, seminal studies such as these published in the *Collection de l' Ecole Francaise de Rome* (Baldacci et al. 1972; Vallet 1977; Lenoir et al. 1989) mirror the systematic tendency to examine exchange in the western Mediterranean. As amphora studies are abundant, it is impossible to outline them all in the current discussion. It is nevertheless pertinent to note the important ‘guidebook’ published by Peacock and Williams (1986). This work, which has been particularly useful for the conduction of the research presented in this thesis (section 5.1.3.3), demonstrates in the best way the inequality in research. More recent studies, such as these of Martin-Kilcher (1987, 1994) and Tyers (1996) show the constant interest in understanding the economics of the western part of the empire.

This bias resulted in the trivial understanding of trade and exchange in the eastern part of the empire and inhibited the study of economic links between the two parts of the empire. In particular, apart from the lack of comparable typologies of eastern amphorae (Abadie-Reynal 1992, 361), the direction of western products to the east is still largely unknown (Panella 1986, 631). Justifiably, the past sound examples of such research in the eastern Mediterranean, primarily involving the Athenian Agora (Robinson 1959), Caesarea (Riley 1975) and Knossos (Hayes 1983), were not adequate for the development of extensive typologies and the creation of concrete ideas on eastern economy.

The more systematic research that has begun in the eastern Mediterranean in the last decade, partly as a result of increasing systematic excavations in the area, seems very promising. However, the general attempt to ‘make up’ for the previous negligence logically implies a focus primarily on the identification of eastern types. As a result, a dynamic analysis of trading activities between various eastern Mediterranean regions is still pending; this issue has hitherto been addressed solely circumferentially. Nevertheless, studies such as those conducted by Reynolds (1995, 2005) have revealed a wide range of eastern types and have shown the potential for such a synthetic analysis. The proceedings of the conference held at the Danish School at Athens (Eiring and Lund 2004) demonstrate in the best way the research undertaken in the eastern part of the empire in recent years.
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The on-going surveys in various regions, such as the Red Sea (Maxfield and Peacock 2006) and Rough Cilicia (Rauh and Slane 2000) result in an even greater corpus of data, gradually ‘opening’ the way for comparative studies. In addition to inland research, underwater activities, mainly along the Turkish and the Levantine coast, gradually reveal the cargoes once transported on ships in the eastern part of the empire. Furthermore, the increased interest in the petrography of eastern ceramics (cf. Meyza 1995; Rautman 1995; Williams 2005) results in the progressive establishment of production centres and facilitates the establishment of typologies. Besides, the current systematic excavations on eastern Mediterranean sites (e.g. Abadie-Reynal 2007) enable the establishment of detailed chronologies for more secure comparisons with the western Mediterranean. Another recent development, enabling more immediate comparisons between finds from different sites, is the publication of amphora types in the internet (e.g. Tyers 1996; Rothaus and Slane 1997; Keay and Williams 2005). The use of such technological means will hopefully benefit the amphora studies, as it encourages the identification of amphorae and facilitates their study.

2.2. The development of amphora studies in Cyprus and the role of the present thesis

The state of amphora studies in Cyprus is compatible to that from other eastern Mediterranean regions. Despite the vigorous archaeological investigation on the island for about two centuries (section 3) the amphorae were, until fairly recently, overlooked. The first attempt to record amphora types involves the publication of some specimens identified in the necropolis of Ktima (Deshayes 1963) and later in Salamis (Diederichs 1980). However, more detailed analyses did not occur until 1991 with Hayes’s publication of the amphorae identified at the House of Dionysos in Paphos, followed by Lund’s (1993) publication of the surface material from Palaepaphos. This development was partly the result of the broader interest in amphora studies in the eastern Mediterranean during this period, and partly the result of previous work on the island concerning Roman fine wares. In particular, Hayes’s studies on Cypriot Sigillata (1967) and other fine wares (1977) demonstrated that Cyprus was a production centre and emphasised its link with commercial activities. Thus, the variability in the typology presented in these sparse studies and the growing evidence from the eastern Mediterranean in general, made it clear that a
larger scale analysis was needed to identify the types circulating throughout the Roman period and to elucidate economic issues (section 1.1). As noted in chapter 5, information acquired by past research is solely indirectly used to form ideas on patterns and for comparative purposes. With the exception of recent studies by Rautman (2003), Marquie (2004), and Winther Jacobsen (2004, 2005), studies on the island focused on the presentation, and not the quantification, of types.

Regardless of the recent interest in eastern Mediterranean amphorae and their exchange our knowledge on the two parts of the empire is still uneven. Hopefully this study represents a step forward in the study of amphorae as it attempts a synthesis of available data from the island and the Mediterranean as a whole. Despite the inherent limitations, I hope to create the basis for more studies in the future aiming at understanding trade and exchange within the Mediterranean. Although the present study is built upon a concrete theoretical and methodological framework (chapters 4, 5) following the line of enquiry outlined by post-processual archaeology (cf. Johnson 1999), it still draws on the classification of amphorae according to morphological traits. In other words, it also shows the necessity of using data and information obtained within traditional methodological structures for a more complete, solid reconstruction of trade and exchange.
Chapter 3. Roman Cyprus: a brief outline of its economy, the chief cities, and the sites under study

3. Roman Cyprus: introducing its economy

Cyprus was central in the trade and prestige-chain exchanges taking place in the eastern Mediterranean from the Bronze Age onwards (Knapp 1991; 1996; Karageorghis 1996) due to its geographical location and its sources of copper. In fact, the successive change of rulers from Assyrians to Egyptians, Persians, and Ptolemies did not affect its active involvement in trade. Research has revealed its involvement in Roman times in the trade of valuables, such as ivory and pearl oysters from Arabia to the west (Michaelides 1995, 211-219; 1996, 139).

The Roman period on the island begins in 58 B.C., with its conquest. Its annexation is marked by the procurement of 7000 talents from the Ptolemies' treasury by its first consul, Cato the Younger (Aupert 2000, 34). The island was administered by governors under the authorisation of the Roman proconsuli of Cilicia (Pavlides 1987, 19), and in 22 BC it became a distinct senatorial province. Roman sites on the island have been the subject of systematic excavation, but the archaeological record has generally been studied within the realm of traditional archaeology. Despite the focus primarily on the description of finds, the undervalued role of trade and the lack of extensive research on the trading links of Cyprus in the study period (section 1.2), sparse written sources and archaeological investigation still demonstrated the high degree of economic prosperity reached due to sea commerce.

Evidence is provided particularly by the development of the coastal urban centres of Paphos, Kourion, Amathus, Salamis, Kition, and Kyreneia (App. 1, fig.1) (Michaelides 1996, 143). Generally, Roman organisation of the island was founded upon pre-existing Hellenistic structures, but further developments were achieved according to the Roman urbanisation model (cf. Woolf 1997). These included the building of temples, gymnasia, rich villas, fora and markets, theatres and baths. An advanced road system facilitated trade within the island (Bekker-Nielsen et al. 1991; Bekker-Nielsen 2004). The best example of the continuation of the Hellenistic
tradition is provided by the maintenance of Paphos as the island's capital upon Roman conquest (section 3.1.1).

Literary sources (cf. Ammianus Marcellinus XIV.8.14 and Strabo 14.6) indicate that the Cypriot economy relied mainly on the cultivation and trade of products such as grain, wine, and olive oil, and the extraction and trade of copper, timber, and mineral medicaments (Michaelides 1996, 139). It also enjoyed a wide reputation for shipbuilding. Archaeological enquiry also demonstrated that production of fine pottery and coarse wares was another important aspect of the economy under Roman rule (Hayes 1967, 65-74; 1977, 96). Economy, as Michaelides (1996, 140) suggested, was in the hands of wealthy landowners and the people involved in commerce.

Evidence for the expansion of sea trade and the importance of the island in maritime networks is provided by the large number of ports, harbours, and anchorages along the coasts. These are identified by archaeological investigation, or are listed in ancient literary sources (Leonard 1995, 227-242). It is worth mentioning that trading activities around the Cypriot coast had already increased from the Hellenistic period (Moore 2003). The great range of ports and harbours in the Roman period manifests the operation of varied trading networks and "complex maritime activities" (Leonard 1995, 229). In any case, only a few could have acted as major entrepots (e.g. Paphos and Salamis). The majority would have served as stops for ships travelling to other destinations or were used for intra-regional trade. Considering that, unlike areas such as Gaul and Britain (Fitzpatrick 2003; Williams 2003), Cyprus did not serve any military purposes to the Roman empire as it was not a base for the army, its role must have been purely commercial due to its centrality.

Analysis mainly focuses on material from sites excavated in the cities of Paphos, Amathus, and Kourion, due to previous extensive archaeological work and the acquisition of permission for study (section 1). From Paphos, assemblages primarily derived from the House of Orpheus and the Theatre, while for a better insight into the late Roman period analysis also focused on the material from a rescue excavation at the Customs' House (sections 3.1.1.1 - 3.1.1.3). Investigation in Amathus concerned the material from two sites: the city's Forum, dating from the Hellenistic to the late Roman period, and 'Amathus Palaea Lemesos' (A.PL), a site comprising a series of houses and a possible administrative centre (sections 3.1.2.1 - 3.1.2.2). Throughout the thesis Kourion is analysed last for a better understanding of
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the island's western and eastern networks, as it is situated between the aforementioned cities. The assemblage analysed from Kourion derived from a number of contexts excavated in the broader area of the Agora (section 3.1.3). The aim in this chapter is to present the principal features of these cities, as well as to give a brief description of the sites. It must nevertheless be underlined that our knowledge on the sites is restricted as they have not been published yet.

Other important centres were Salamis and Kition in the east, and Marion, Soloi, Lapethos and Kyreneia in the north. Although it was not feasible to include material from these Roman cities for a number of reasons (section 1), a brief description is put forward below. The aim is to avoid the creation of a wrong impression that trade primarily involved western and southern regions, as well as to highlight the centrality of the entire island in Mediterranean maritime networks. Material from these sites was not included in this thesis, but it still played an important role in the analysis. The frequent references made to them in the text testify to their essential role. For a better understanding of the significance of these cities and the reasons that prevented their incorporation in the analysis, it is pertinent to understand the current state of research and their character in the study period. Moreover, it is important to note that a number of surveys and excavations are taking place at present in hitherto overlooked areas, such as the Troodos plateau (cf. Moore 2003; Winther Jacobsen 2004, 2005) and the countryside (cf. Akamas, Panayia Ematousa, Kalavasos) (Fejfer and Mathiesen 1992; Leonard 1995b; Sorensen et al. 1998, Rautman 2003; App.1, fig.1). These are frequently noted in regards to intra-regional trade (sections 8.2.4, 8.3.4, 8.4.4). Due to the limitation of space, only a description of the larger urban centres is provided in the present chapter, as these have also been subject to more intense research. Although a more complete understanding of the island's economy will be achieved once these studies are completed, the available information is, where necessary, incorporated in the thesis.

3.1. The sites under study

3.1.1. Paphos

Paphos, situated on the west coast, was founded at the end of the 4th c. BC by the Ptolemies and in particular by Nicocles. The political and commercial control of the eastern Mediterranean that the city offered (Leonard and Hohlfelder 1993, 367-368) were the underlying reasons for its foundation, as it replaced the older city of
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Palaepaphos, situated further inland (App. 1, fig.1). Thus, it is often referred to as Nea Paphos, as opposed to Palaea (Old) Paphos. Its advanced harbour for ‘all winds’ is highly linked with its politico-economic role (Leonard and Hohlfelder *ibid*.). Under the Ptolemies, its harbour was the most important military post outside Egypt (Daszewski and Michaelides 1988, 9). Moreover, its residential and commercial sectors identified archaeologically (Daszewski and Michaelides *ibid.*) reveal an organisation tightly linked with the prospect of economic growth.

It is because of these qualities that Paphos became the capital of the island under the Ptolemies. It is thus not surprising that it remained the capital of the island under the Romans, and in particularly during the peak of Roman maritime commercial activities across the Mediterranean world (1st-3rd c. AD). As such, it was the seat of the administrators and the *proconsul* of the island until the middle of the 4th c. A.D. when Salamis assumed this role (Maier and Karageorghis 1984, 249). Its political and economic position conferred the distinction of minting coins; a right that was retained throughout the Roman period. Extended excavations within the city have revealed the great level of prosperity reached, particularly during the early Roman period, both in the public and private life. To mention but a few, the extensive archaeological record includes the city’s walls, the Theatre (section 3.1.1.2), the Odeion, the Amphitheatre, the Agora, and a number of temples. Economic expansion and wealth is especially attested by the rich villas adorned with mosaics, which have merited intensive and systematic investigation as early as the beginning of Cypriot archaeology. One such villa is the House of Orpheus, material from which is analysed in the present thesis (section 3.1.1.1).

A range of titles, such as ‘Sebaste Claudia Flavia’, bestowed to the capital of Roman Cyprus, listed by Daszewski and Michaelides (1988, 10), highlight its role further. Destruction caused by earthquakes threatened on occasions its prosperity. The rebuilding of the city by Augustus following one such event is perhaps the best example of the favour the city merited. Although Daszewski and Michaelides (*ibid.*) stress that Paphos lost its metropolitan character with the transfer of the capital to Salamis in the 4th AD, present analysis (section 8.4.5) has revealed that it continued to influence the island’s trade patterns. From the 5th to the 7th c. AD, Paphos became the seat of one of the island’s bishops. The numerous churches dating to this period identified in the city and its periphery manifest that despite its limited influence in political life it was still one of the island’s important centres.
3.1.1.1. House of Orpheus

The so-called ‘House of Orpheus’, material from which is analysed in the present thesis, is a typical rich Roman villa decorated with mosaics, located in the so-called ‘Mosaics Area’. The significance in studying the assemblage from this site lies in its elite context, as it permits an insight particularly into exchange and consumption patterns of high-ranking social groups. The site was systematically studied in the 1980s but at present only a rough guide is available (Daszewski and Michaelides 1988). A detailed publication and continuation of research is in the excavator’s immediate plans (Michaelides pers. comm.). The colonnaded atrium and the rooms around it reveal a building of a traditional type, also encompassing a bath complex. The rooms with the mosaic floors (Daszewski and Michaelides 1988, 47-52) are situated in the west of the site.

Existing evidence reveals two phases of the building, the first demonstrating a different architectural plan. A date for this early phase is not available yet, but the range of Hellenistic amphorae I observed during the analysis probably places this phase sometime in this period. A future systematic study of the Hellenistic ceramic material will give the exact dates. Michaelides (1988, 47), based on available evidence but acknowledging the need for a systematic study of the material, places the latest phase in the late 2nd - early 3rd c. AD. However, a number of amphora types I identified that, according to Hayes (1991), date to the 1st c. AD (section 6.2.1.1) suggest an earlier date. Apart from the architecture and the elaborated mosaics, the elite character of the site is also attested by marble and clay statuettes, coins, coarse and imported fine pottery, lamps, and masks.

3.1.1.2. The Theatre

The Theatre of Paphos is situated at the edge of the town, near the north-eastern gates, in an area traditionally called ‘Fabrika’ (Green et al. 2004, 5). Although amphora material from the theatre is not directly associated with a particular social group, it can give a general understanding of consumption patterns, as the performances held brought the community together. Considering the central role of the theatre in public life, the site may have been used for exchange activities. The economic role often acquired by such central points has been widely considered in De Ligt’s (1993) work. This may explain the identification of fish-based amphorae in such a context (section 6.2.1.2). The neighbouring city-gate may be another reason
for the operation of exchange activities in the area as products were imported and exported from this point.

A detailed publication of the Theatre is in preparation. It is nevertheless possible to place its construction around 300 BC, based on epigraphic evidence. Although alterations occurred in the mid 2nd c. B.C., the changes that took place under Augustus were greater (Green et al. ibid., 2004, 12-13). These may have been part of the restoration undertaken by the emperor following the destructive earthquake noted above (section 3.1.1). In any case, the most important alterations occurred in the 2nd c. AD under the Antonines, as part of the greater work on theatres within the eastern Mediterranean (Green et al. ibid., 13-17). Although each phase must be considered within the broader political and socio-economic framework, the mid 2nd c. AD represents the peak of the monument (Green et al. ibid., 10).

The main architectural features of the Theatre are not of interest in the present thesis, but it is worth noting the most imposing, which are the sitting area (cavea), the orchestra and the stage (cf. Green et al. ibid., 10-12). The sitting area underwent alterations in antiquity, as it expanded several times to increase audience capacity. According to the excavator (Green et al. ibid., 5, 10), in its later phase it was designed to fit around 8000 spectators. Moreover, under the Antonines major architectural elements were remodelled by using marble.

The decline of the Theatre is placed at the end of the 4th c. AD i.e. in the late Roman period, as a consequence of the damages caused by the major earthquake of 365 AD. In the 5th c. AD architectural members were used as building material in neighbouring churches, while the site was quarried for building stone (Green et al. 2004, 22-25). The excavator (Green et al. 2004, 24) described the area in this period as a "scene of devastation". Nevertheless, the continuation of economic endeavours in the area, attested by the imported amphorae and the probable pottery wasters (chapter 7) pointing to the existence of local workshops, suggest that this idea should perhaps be reconsidered. Furthermore, despite the abandonment of the Theatre, the continuous activity in the broader area enables the examination of the economy of Paphos into this period. The traditional academic idea is that all sites of late Roman Cyprus were abandoned in the mid 7th century AD due to the Arab raids (Gabrieli et al. forthcoming). However, following a comparative study, similarities were observed between certain deposits from the Theatre and secure deposits from Egypt dating to this period. Thus, contrary to previous ideas, material from the Theatre
possibly shows the continuation of habitation, therefore emphasising the need to reconsider the data (Gabrieli et al. forthcoming). This assertion is supported by a coin of Constantine IV from the Theatre dating to the late 7th century (Green et al. ibid., 25). Kilns manufacturing glazed pottery show that the site was still thriving economically in the Medieval period.

3.1.1.3. The Customs House
The assemblage from the Customs House was studied as it offered an insight into exchange in Paphos during the late Roman period. It is nevertheless a rather confined assemblage as it derives from a rescue excavation. The time limits imposed to such a kind of research, as well as the lack of publication, resulted in the lack of further information concerning the context of the site. Our knowledge is limited in that it relates to the city’s ancient walls, close to the modern Customs House. It is likely that the walls also had earlier phases, but these are not studied yet. A wall protected the city in the Hellenistic period, when it was first established, but it possibly underwent changes in later years. The part of the wall close to the Theatre reveals that alterations occurred around the late 4th century. Although the context of the material from the Customs House is unknown, an association with exchange activities would not be impossible. Parts of the walls could have been used for exchanges and commercial transactions, as these marked the boundaries of the cities. Another possibility is that it represents a dump. Such deposits are not uncommon, considering the one identified close to the walls of Kourion (Parks et al. 2001).

3.1.2. Amathus
The city of Amathus situated in the south of Cyprus (App. 1, fig. 1), dates back to the late Bronze Age / early Geometric period (Aupert 2000, 17). Unlike the rest of the Cypriot cities, Amathus is believed to have been founded by autochthonous Cypriots, i.e. Cypriots that did not become part of the Greek tradition following the Greek colonisation. Another theory suggests that the city was founded in the 9th c. BC by Phoenicians. Habitation was continuous, from the Geometric to the late Roman period. As revealed by the rich archaeological record, the city thrived both culturally and economically as early as the Geometric period. Economic development is also reflected in the establishment of local pottery production dating to this period (Aupert ibid., 18, 20). Egyptian and Greek imports, as well as intense contacts with
the Phoenicians attested in the material culture, show the well-established commercial position of the city in the eastern Mediterranean from the 10th to the 8th c. BC (Aupert *ibid.*, 19).

In the Archaic period that followed (late 8th – 6th c. BC), Amathus became the capital of one of the island's kingdoms, until the Classical period. Wealth continued to be secured through active involvement in the trading and exchange activities which were flourishing in the eastern Mediterranean basin. According to the ancient historian Skylax an anchorage facilitated trading pursuits with other eastern regions (Aupert *ibid.*, 21). The persistence of commercial relationships over this period in which rulers of the island changed from Assyrians to Egyptians and subsequently to Persians emphasises the city's economic strength. The history of Amathus in the Classical period is particularly intriguing. Contrary to the rest of the Cypriot kingdoms that revolt against Persian domination, Amathus defended the Persians (Aupert *ibid.*, 27). Although this period may be characterised as troublesome, because of the Greco-Persian wars, archaeological finds continue to expose a picture of wealth and prosperity, which continued in the following Hellenistic and Roman periods.

The fate of Amathus from the end of the 3rd c. to the mid of the 1st c. BC is linked with the Ptolemaic reign. In comparison to the preceding periods, Amathus lost its strategic and economic importance (Aupert *ibid.*, 33), which was now retained by Paphos (section 3.1.1). The most noticeable change is noted in the port which fell into decay (Empereur 1985), as the Paphian harbour became the most important harbour in the region outside Egypt. The relative decline of the city, also evidenced in the abandonment of the Acropolis, continued under Roman rule. Archaeological evidence suggests that the city did not revive until the Antonines (Aupert *ibid.*, 34). Despite the earlier decline however, Amathus retained its importance as a religious centre; a reputation granted by the temple of Aphrodite since the Archaic period (Aupert *ibid.*, 26, 31, 34). The underground channel identified in the city relating to the religious and ritual life, constitutes a unique find on the island and further highlights the religious importance of Amathus (cf. Flourentzos 2004).

In sum, the recovery of the city is evidenced in the architectural remains, such as the developments in the Agora (see below), the Baths, its gates, the fountain and the nymphaeum (Aupert *ibid.*, 39-42). In the late Roman period Amathus, like
Chapter 3

Paphos, became the seat of one of the island’s Bishops. A number of churches (Aupert *ibid.*, 35) provide testimony for the city’s perseverance within the changed socio-political and ideological landscape characterising the history of the island during this period.

Excavations in Amathus began as early as the late 19th century by a British mission, followed by the Swedish Cyprus Expedition in 1930. From 1975 until present systematic investigation began under the auspices of the French School of Athens. At the same time, systematic research is undertaken by the Cyprus Department of Antiquities. As a result of the intensive archaeological enquiry, publications include individual studies on architectural elements and artefacts from the broader temporal spectrum. A systematic account of research is mainly published annually in the *Bulletin de Correspondance hellénique*. However, to date no attempt has been made to analyse and publish the amphorae identified in this city. Sparse references include an amphora type published by Touma (1989), and Empereur’s designation of Amathus as a probable amphora production centre (1985, 1989). Apart from very general accounts, the Agora has not been published either, while ‘Amathus Palaea Lemesos’, the second site included in the current thesis, is currently under publication (Flourentzos *forthcoming*). In any case, a brief summary of known information regarding these sites is given below.

3.1.2.1. The Agora

The Agora was excavated by M. Loulloupis from 1976 to 1991, but unfortunately as noted above the material uncovered remains unpublished. In 2000-2001 the site was re-examined by the French Mission, but only a brief analysis is as yet provided (Prête 2001) Situated around the centre of the city, it comprises a paved square enclosed by porticos on three sides, with a monumental fountain in the centre. The shops are located at the western part of the square. Prête (2001, 60-63) gives a detailed account of the development of the Agora from the Hellenistic to the Roman period.

According to Prête (*ibid.*, 59-60) the Agora dates from around 300 BC until the 4th c. AD, but was mainly abandoned in the 7th c. AD with the Arab raids. In any case, the area probably continued to be used as an exchange centre from the 4th to the 7th century, even if it lost its former function as a market, as attested by the numerous late Roman amphorae. It is hard to imagine that the Amathusians ceased to use a pre-
existing area, tightly associated with market exchange for centuries, for their exchange activities (Michaelides *pers. comm.*).

### 3.1.2.2. Amathus Palaea Lemesos

The area is situated on the slope of the acropolis, at the lower part of the city. According to the excavator (Flourentzos 2004, 34), this site probably involves houses comprising simple rooms. Another building comprising two rooms may be, as the excavator believes, a probable administrative centre or generally a building of higher status, as attested by the associated finds. The building demonstrates the different phases of the site. In particular, the columns associated with the entrance, the bases that probably once supported arches, and the frescoes may belong to the Roman imperial period, and particularly to the 1st c. AD (Flourentzos *ibid.*). Collapses dating to the 4th c. AD, most likely relating to the 365 AD earthquake, show that the site continued to the middle Roman period. Destruction levels moreover, dating to the 7th c. AD by coins, reveal that this habitation site existed throughout the late Roman period. Although the character of the particular building is not clear yet, its proximity to the Agora may imply an economic role.

The site is very important for a number of reasons. First, it enables an insight into production, exchange and consumption patterns from an 'ordinary', i.e. non-elite, context. As investigation of domestic contexts usually involves elite villas (as is the case with Paphos), the evidence provided by this site is particularly important. Flourentzos (2004, 36), based on the frescoes adorning some of these houses, suggests that some of them are possibly associated with rich landowners. However, as these houses do not present the monumental character found for example in the Paphian villas, which followed the Roman archetype, it is possible to assert that they belonged to individuals of a lower, or rather 'ordinary' social status. Second, the site covers the entire Roman period, therefore encouraging diachronic comparisons of the economic aspects under study. The site is currently under publication, but an analytic account of the stratigraphy and the various contexts was not available when the present research was conducted. Thus, analysis involves broad patterns that will hopefully provide the basis for a detailed study once the site is fully published.
3.1.3. Kourion

The founding of Kourion in the Late Bronze Age is associated with Greek, and in particular with Achaean and subsequently Dorian colonisation during the 13th and 12th c. BC (Christou 1987, 9). As with Amathus, material culture reflects the serial domination of the island by Assyrians, Egyptians, Persians, the Ptolemies and finally the Romans. The archaeological record demonstrates the level of prosperity reached at the city under Ptolemaic and Roman rule. Economic flourishing is specifically shown by the fact that Kourion is hitherto the only city associated with production during the Hellenistic period (section 7.2.1). However, the most striking aspect concerning Roman Kourion is the complete devastation of the city by the 4th c. AD earthquakes. As a result of this absolute destruction, Kourion offers the unparalleled opportunity to study all aspects of life during this period.

As attested by the churches and late Roman ceramics, the city was rebuilt by the 5th c. AD (Christou 1986, 10). Like the afore-mentioned cities, Kourion was the seat of a bishop, even prior to the 4th c. destruction (Christou 1987, 9). Contrary to recent viewpoints asserting the probable abandonment of the harbour following the earthquake destructions, a late Roman church built on the sea shore close to the harbour provides, I believe, evidence for continuous usage for the conduct of maritime exchange activities (section 8.4.3). As is the case with churches situated close to other anchorages and harbours (e.g. Ayios Yeorgios, Paphos), this church was probably also built for sailors. The analysis of the amphorae conducted in the present thesis also suggests the existence of the harbour in the post-earthquake period (i.e. after the end of the 4th c. AD). Traditionally it is believed that the 7th c. AD Arab raids marked the collapse of this city as well (Christou 1987, 9). However, recent work by Hayes (forthcoming) on material from the basilica excavated by Megaw highlights the possibility that life continued after the mid 7th century. In the Medieval period the town was transferred to the nearby village of Episkopi.

As a Roman city Kourion encompasses a Theatre, initially constructed in the Hellenistic period but re-modelled in a monumental manner in the 2nd c. AD under the Romans (Christou ibid., 29), an Agora (see below), a 1st c. AD aqueduct, a Nymphaeum (Christou ibid., 16, 19), and Baths. These buildings survived with alterations throughout the Roman period. The sanctuary of Apollo Hylates, northwest of Kourion, constitutes one of the major religious centres of the island. Worship of Apollo on the site began in the 8th c. BC, and archaeological investigation has
exposed the different architectural phases of the temple, including the alterations that occurred throughout the Roman period (Christou ibid., 39-42). The temple too was destroyed by the 4th c. AD earthquake. A number of buildings associated with the temple, possibly used for the display of votives or as hostels (Christou ibid., 42), emphasise the prosperity of the city further. Another construction revealing the lavish life of the city during the early Roman period is the Stadium, situated between the city and the sanctuary. Built under the Antonines, the Stadium declined at the beginning of the late Roman period (Christou ibid., 33, 38). Other buildings, such as the Basilica, the so-called ‘Bishop’s Palace’ and rich villas adorned with mosaics, date according to the excavators mainly to the late 3rd – early 4th c. AD (Christou ibid., 15, 20, 25-28). These villas, following the Roman architectural plan with rooms developing around a central atrium, are that of the ‘House of the Gladiators’, and the ‘Building of the Achilles Mosaic’. Finally, the construction of the Baths and of the associated “Annexe of Eustolios’, also adorned with mosaics, is dated to the early 5th c. AD (Christou ibid., 30-33).

Such an impressive site reflects the intensive archaeological research conducted at Kourion already from the late 19th century. Investigation first began by Cesnola, but unfortunately in an antiquarian mode. In the early 20th century investigation continued in a more systematic way, and it also expanded in the environs of the city. After the 1960s mainly American missions focused on different parts of the city, such as the Basilica and the sanctuary, while the Cyprus Department of Antiquities began excavations at the Acropolis. Nevertheless, only sparse publications are available, concerning only some of the buildings (Wylde Swiny 1982; Soren 1987). The majority of ceramics and other finds remains unpublished, apart from exceptional studies, such as the one on terracottas (see Young and Young 1955), and a sparse articles on the ‘Kouriaka’ amphorae (see Meyza 2004). Excavations in recent years have expanded at the cemetery outside the city on the western slope of the hill (Parks et al. 2001). Their publication will hopefully yield fruitful information. As a result of the general dearth in the publication of the excavations it is very difficult to study the material within its broader context. In addition, it is possible that certain of the dates given to buildings by the excavators are inadequate and bound to change with the systematic study of the material.
3.1.3.1. The Agora and its environs
The material from Kourion analysed in the present thesis involves the excavations undertaken by the Department of Antiquities. These are located on the Acropolis, which includes the Agora, the drainage system and other buildings. However, as the excavations are not published yet and the ceramics recovered have not been studied as a whole, it was not possible to study the material in association with its context.

Despite the lack of a detailed study, it is possible to put forward some basic information on the broader area based on a brief account published by Christou (1982). The most imposing feature in the area is the aqueduct, comprising a number of cisterns, tunnels, and water pipes dating from the Hellenistic to the Roman period (Christou *ibid.*, 111). Moreover, columns from a stoa are associated by the excavator with the 2nd c. AD Agora, despite the inscription identified in the area referring to a 'gymnasium'. Only an alignment of the north and eastern colonnades is established, whereas that of the south and the western remains unclear. Christou (*ibid.*, 112) believes that the shops were located at the eastern part of the Hellenistic cistern situated at the stoa.

Apart from the Agora, at the east of the broader area excavation uncovered a series of houses, an impressive building, decorated with mosaics and frescoes, of an unknown character, and the Nymphaeum, associated with water and the worship of the nymphs (Christou *ibid.*, 112-113). After the 5th century revival of the city, following the 4th c. AD earthquake destruction, other buildings were also constructed. These were mainly built south of the Agora stoa, and are currently identified as houses (Christou *ibid.*, 113). Thus, despite the unfortunate failure in associating the material with the exact buildings in which they were found, it is important that we can have an insight into private life and direct trading activities from the early to the late Roman period.

3.1.4. Other important sites of Roman Cyprus
Salamis and Kition in the east of the island, Lapethos and Kyreneia in the north, and Marion in the north-west are among the important centres that could not be analysed in the present thesis (section 3). Salamis was the city which replaced Paphos in the late Roman period as the capital of the island (section 3.1.1). Although it is not directly part of the present analysis (chapters 6, 7, 8, 9), it plays a key role in the development of models and the 'reconstruction' of patterns relating particularly to
intra-regional trade. Already in the 19th century a number of travellers had visited the city and described a number of the visible remains, while the Cesnola brothers had collected antiquities (Caubet 1980, 51-53). Systematic excavations by the Department of Antiquities date roughly from the 1950s to the 1970s, i.e. until the Turkish invasion, but a great part of the city has been exposed, revealing its richness and diachronic significance. In addition, unlike other excavated cities, material from Salamis had been systematically published mainly in the volumes of Salamine de Chypre (1969 - 2004), as well as individually (Karageorghis 1969; 1999). These publications constitute an invaluable record of information that would have otherwise been lost. Albeit restricted, the publication of some Roman amphorae identified in the city (Diederichs 1980) is very important as it enables an insight into the circulation of types and the trading contacts of eastern Cyprus.

Founded in the 11th c. BC, Salamis was the most important kingdom; thus, it played a vital role in the political and economic life of the island throughout antiquity. Although from the Hellenistic to the middle Roman period Paphos was the capital of the island instead, Salamis did not lose its splendour. Public buildings, such as the Theatre and the Gymnasium, built by Trajan and Hadrian provide the best evidence for the city’s economic importance (Karageorghis 1999, 16). In the 4th c. AD, the emperor Constantius rebuilt the city with a number of alterations (cf. Karageorghis, ibid.), following the earthquake destructions and renamed it as Constantia. The churches constructed in this period, such as the so-called Campanopetra basilica (cf. Roux 1998), and the city’s walls show the continuation of prosperity and the strategic importance of the new administrative and economic centre. Indeed, the following analysis will show that this city probably influenced the economic patterns of the island and the eastern Mediterranean to a considerable extent.

Kition was also an important distribution centre. Apart for the transport of comestibles it was also used to trade copper from Tamassos to the Levant (Yon 1994, 15). However, despite the extensive research undertaken in this city, emphasis has been generally put primarily on the periods extending from the Late Bronze Age to the Classical (cf. Yon 1994, 15-18). In recent years investigation is also directed towards the Roman period, but at present only a brief account on some early Roman ceramics is available (Marquié 2004). The assignment of the Roman material to the
French mission prevented the study of the amphorae from this city as part of the present thesis, but hopefully a publication will soon be available.

Marion-Arsinoe, Soloi, Lapethos and Kyreneia are among the Romanised cities situated along the north coast (App. 1, fig. 1). Research is currently conducted solely at Marion-Arsinoe, revealing contexts ranging from Archaic to Medieval. Publications to date however only involve individual finds or preliminary reports that fail to give a more complete understanding of the city’s development in the period under study (cf. Childs 1999; Najbjerg et al. 2002). Nevertheless, the identification of a complex structure dating from the 2nd c. BC to the 2nd c. AD (Najbjerg et al. 2002, 139-150), decorated with frescoes shows the wealth of this city during the early Roman period. The middle and late Roman periods are attested by a basilica dating to these periods (Najbjerg et al. ibid., 146-150).

Investigation at the rest of the cities was conducted before the 1974 war, as a result of which access to the finds is forbidden. The unfortunate lack of publications implies the unavailability of archaeological material that would be invaluable for an insight into trading activities throughout the island. Despite the limitations in research at this part of the island, Soloi and Lapethos are briefly described here to show that the northern cities shared the same development and economic importance as the cities in the south.

The city of Soloi was one of the major sites first excavated by the Swedish Cyprus Expedition as early as 1927, and from 1964 to 1974 by the French University of Laval. Thus, it is perhaps the best studied city of the north coast. The few publications of the excavations manage to convey the character of the city, although they are often confined by certain limitations as investigations, especially the Swedish, were conducted at an early stage. The identified Archaic, Classical, and Hellenistic contexts (Ginouves 1989, 23-35) reveal that this city too developed at an early stage. Research however mainly focused on Roman contexts. In particular, the Swedish mission recovered the theatre and the temples of Isis and Aphrodite (cf. Westholm 1936), whereas the French the monuments of the ‘lower city’, i.e. the area below the Acropolis. Among them are a Roman villa, porticos, the Agora, shops, and the nymphaeum dating to from around the 2nd to the 6th or 7th c. AD (Ginouves ibid., 35-135). Prosperity of the city in the late Roman period is particularly evident by churches dating from around the mid 4th c. AD (Buckley 1985, 131) to the Arab invasions (cf. Tinh 1985). Unlike architectural elements, ceramics did not form part
of a detailed publication. They are only infrequently noted in a mere descriptive manner or even only photographed. Consequently, the lack of ample information prevented the incorporation of ceramic material into the present thesis.

Following Romanisation, Lapethos, which is another early kingdom, also retained its importance and enjoyed the facilities observed in the previous cities. Although its monuments have not been the subject of research, ancient writers notify us of an Agora, a gymnasium, a theatre and baths, providing evidence for such a development. Furthermore, the port, the associated storage facilities, and the city’s shipbuilding tradition portray the prosperity shared by the cities situated in the north coast as a result of their key role in the area’s commercial activities. Lapethos’ centrality in maritime networks is also attested by a reference made in the Acts of the Apostles as a stop in their voyage (Phokaides 1982, 36). The above background information on these cities will hopefully ‘substantiate’ certain hypotheses for exchange activities in the north coast put forward throughout the analysis.
Chapter 4. Theory on trade and exchange and its application to the Roman economy

4. Introduction
Current archaeological theory on trade and exchange developed as a reaction to the previous diffusionist and evolutionary approaches. In opposition to some processual ideas that social evolution was unilinear, the body of theory on trade and exchange underlined the view that social transformations were influenced by asymmetric interactions (Champion 1995, 1), and aimed at the identification of "the institutional structure of the society" (Adams 1974, 240). It emphasised the decisive role played by long-distance relationships in the development of past societies, and was concerned with the investigation of social change, hierarchical societies, and the emergence of civilisations. These theoretical developments derived primarily from economic anthropology, modern economics, and ethnohistoric studies. Adams's article (1974) shows the need to build on these studies in order to comprehend the systems of past behaviour, the entrepreneurial aspects of trade, and the impact of external factors and interactions on social change.

This chapter is concerned with the analysis of the central ideas of the theoretical models used in the project and their synthesis with the Roman context. Due to the limited application of a theoretical framework for the interpretation of the Roman economy, the selection of these models was mainly based on developments achieved in the study of trade and exchange of societies from a diverse temporal and spatial spectrum. The line of enquiry followed draws mainly on the character of trade and economy within the wider socio-political system of the Roman empire. Thus, for the better understanding of the nature and the effectiveness of the theoretical perspectives applied in order to address the objectives posed in the present thesis, it is imperative to first provide a synopsis of the development of the study of the Roman economy. Discussion will thereafter focus on the examination of the theoretical framework.
provided by world systems theory, Substantivism, Formalism, and Neo-Marxism and the economic processes under study, followed by their application to the Roman economy.

4.1. The development of the study of the Roman economy
The role of trade as a major component of the Roman economy has only fairly recently been acknowledged (section 1). The interest in understanding the impact of exchange and interactions in economy was largely triggered by the studies conducted by Hopkins (see below). In the long course of the study of the Roman economy, dating as early as Rostovtzeff (1957), different approaches were developed, but they nevertheless did not encompass trade as a form of understanding economic activities. The main tendency of these early approaches has been characterised as ‘modernising’ and ‘simplistic’ (Greene 1986, 14). The intention was merely the comparison between aspects of ancient and modern life, with the central implication that they encompassed economic policies (Lo Cascio and Rathbone 2000, 1). Albeit unsuccessful, the reaction to these viewpoints initiated the later developments in the study of ancient economics, primarily marked by the work of Finley (1973) and Jones (1974). These different approaches gave rise to the “primitivist” school of thought, as opposed to the earlier “modernist” school.

For Finley, the ideas of whom affected subsequent developments, agriculture was the underlying factor that motivated economy. The model of the ‘consumer city’ enhanced the emphasis put on agriculture further. It stressed the local consumption, and not the trading, of agricultural produce by self-contained centres. Only a limited role was conferred to trade, which was regarded as regional and restricted to valuables (Greene ibid.). Ancient economy was conceived of as a totality, characterised by the same general characteristics despite the spatial and temporal particularities. Thus, economic growth was refuted in the interpretation of aspects such as urbanisation (Andreau 2002, 34). The character of production was another key issue debated by Finley. Despite his reaction to earlier approaches concerning the direct intervention of ancient states in production, based on structured economic policies, he underlined the role of a central power, which controlled production (Lo Cascio and Rathbone ibid.).

These issues remain in the core of intense debating in the study of Roman economy. The impact of the state in production and the degree in which trade was responsible for the circulation of goods observed archaeologically and economic
development, still remain the subjects of fervent discussion. Famine (Garnsey and Whittaker 1983, 2) or the role of tax redistribution (De Ligt 2002) are some of the ideas advanced concerning possible motives for the circulation of goods. In 1980 Hopkins, as a reaction against the idea of a 'static' economy advanced by Finley and his followers, used models to show the interconnection of taxes, rents and trade and their impact on the integration of the Roman economy, resulting from political integration (Hopkins 2002, 210). His use of models on the other hand constitutes a novelty in the study of the Roman economy, and he moreover set the principles for the construction of such models. The underlying idea was that tax and rent payers had to trade their surplus in order to obtain money with which to pay their taxes and rents. In the long run, the taxes paid in kind also triggered trade as they were sold by the government in the provinces to obtain currency for other expenses (Hopkins *ibid.*, 216).

In the later "remodel" of the 1980 model, built on criticisms, Hopkins (2002) advanced further his ideas concerning economic integration and growth, especially in the first two centuries AD. Special attention was paid to the role of Rome, i.e. the major consumer city, as the nucleus and motivator of economic developments achieved in the provinces and the trade network which developed between them (Hopkins *ibid.*, 220-1). Further interrelated changes occurred in the increase of labour and production, urbanisation, migration, increase in employment and demand (Hopkins *ibid.*, 223-4). The role of coinage in understanding the character of trade was already highlighted in the 1980 model. In 2002, however, the author emphasised the impact of the circulation of bronze, silver and particularly of gold coinage, as well as the use of credit for inter-provincial payments, on the balance between tax-paying and tax-receiving regions. Bronze coinage in particular was used for local transactions, silver mainly for tax payments, and gold coinage for inter-regional high-valued trade (Hopkins *ibid.*, 225-8) (section 4.3.1.4).

Despite his focus on the economic integration of the empire, Hopkins does not reject the existence of local economies. His description of the Roman economy as a "relatively integrated monetary economy" (Hopkins *ibid.*, 229, 230), is at the centre of the current fervent debate concerning issues developed from the dialogue between Finley's ideas and Hopkins' advances. A central issue is the character and role of monetisation under the empire and whether the Roman economy should be regarded as a
market economy. Related issues are economic rationality, the role of agents (section 8.0.3), and the degree of connection of the Roman economy with capitalism (section 4.3.1.4). Although many ideas are credited to Finley and his followers, the current tendency generally stands between "primitivist" and "modernist" viewpoints. In brief, this tendency refutes the analogy of the Roman economy with modern capitalistic economies, but accepts the existence of advanced and conscious economic structures. At the core of research is the discussion of the reasons which prevented the Roman economy from developing into a capitalist economy (Samuel 1997). These issues are largely developed from Weber’s work (cf. Love 1991).

Although market economy was denied by Finley, the existence of markets and the intensification of market exchange through the use of a monetary system (Morley 2000; Zelener 2000; sections 4.3.1.3, 4.3.1.4) point to the operation of some sort of market economy. This topic is discussed in more length in section 4.3.1.4. According to Andreau (2002, 37), a pertinent question is to identify the level in which the trading of produce may generate structural changes. The same author \textit{(ibid.)} underlines the role of quantitative studies in the study of ancient trade for addressing this issue. Another essential issue in understanding whether the Roman economy was a market economy concerns the existence of conscious "economic forms of behaviour", i.e. of economic rationality, on the part of the state (Andreau \textit{ibid.}, 43). Such behaviour presupposes the formation of economic structures independently from social and political structures. It nevertheless does not imply the perception of economy as an "autonomous" formation. Again, this is an idea first advanced by Finley, although he believed that the ancients had no concept of the economy (McClellan 1997, 172).

The degree of direct state intervention in production and trade is another related topic concerning the existence of a controlled economy (section 7.1). Studies on the nature of banking (Andreau 1999), markets and exchange (De Ligt 1993), and the degree of direct state intervention in production and trade (Lo Cascio and Rathbone 2000, 4) (section 4.3.1.4), aim at elucidating the degree to which the Roman economy may be characterised as a market economy. The debate accompanying the assessment of these issues has made the study of the Roman economy a vibrant field of study. In our days it is supported and encouraged by increasing archaeological and epigraphic data, comparative data from other socio-economic contexts, and the application of models and
scientific techniques. These developments are used in the present thesis in the light of
the theoretical perspectives analysed below. Through this ‘dialogue’ I hope to
demonstrate the necessity of the application of a solid theoretical framework for
understanding these issues further.

4.2. World Systems Theory and the Roman empire
A general framework within which to examine trade and other economic aspects in the
eastern Mediterranean after its political integration into the Roman empire is offered by
World Systems Theory. Developed by Wallerstein (1974), this theory aimed at
describing and interpreting modern western capitalist economies and their role in world
domination. In his analysis, Wallerstein divided social systems into minisystems and
world systems. The former are restricted territorial and political systems, the economy of
which is based on human labour, limited specialisation, and reciprocal exchanges, while
world systems are greater spatially and encompass diverse cultural groups, which may
be politically unified, and are characterised by division of labour (Schortman and Urban
1992, 17).

Based on their political structure, world systems are divided into world empires,
which are politically unified, and world economies, which are not politically unified and
are linked by economic bonds alone (Schortman and Urban ibid., 17; Woolf 1990, 44).
World systems comprise a core, a periphery and a semiperiphery. Core and periphery are
linked by unequal exchange, as the core, an area “of strong state machinery...high
technological advance and sophisticated economic institutions” (Champion 1995, 6),
exploits the underdeveloped and dependent periphery. The role of the semiperiphery is
to absorb the pressures from the periphery and protect the core (Champion ibid., 16). As
a concept, the centre and periphery scheme was developed before the 70s, and was used
to emphasise the notion of centrality, spatial organisation, hierarchies of settlements, and
the imposition of power from the centre to the periphery (Champion ibid., 3). After its
wide use in the archaeological investigation of different social contexts, its structure is
characterised by variability, mainly concerning the nature of interactions between cores
and peripheries, and their genesis (Santley and Alexander 1992, 24-32).

World systems perspectives have been widely used by archaeologists to interpret
intersocietal interactions (cf. Sherratt 1993) or accumulation of resources from a
Chapter 4

periphery in pre-capitalist societies. Nevertheless, its use in pre-capitalist societies, and in particular, in the examination of prehistoric trade (Renfrew 1993, 7) has been largely criticised. Some of the criticisms attacked Wallerstein’s statements about the world empire being the only form of world system to have existed in pre-modern times and his neglect of a variety of socio-economic structures that fit into a world economy and never developed into world empires, as he advocated (Champion *ibid.*, 7; Chase-Dunn and Grimes 1995, 390). Wallerstein’s materialistic approach was also criticised, as he believed that economics determined all social aspects (Woolf 1990, 45) and ignored “the importance of differences in language, religion, ethnicity, and culture in structuring relations within world systems” (Schortman and Urban *ibid.*, 18). Furthermore, he rejected the economic and political role of luxury goods in societies (Champion 1995). Another major criticism was directed at the theory’s contrast between a developed centre and an underdeveloped periphery (Woolf *ibid.*, 45). However, as Champion notes (*ibid.*, 14), past peripheries were sufficiently advanced to provide the core with surplus, and should, therefore, not be conceived of as underdeveloped. The peripheral situation is one of the currently debated issues in social anthropology, and recent research focuses on the role of capital penetration in pre-capitalist societies in order to clarify the character of the peripheries (Nugent 1988, 79-87).

Despite the above criticisms, the Roman empire is a classic example of a ‘world system’, and specifically, of a ‘world empire’ (Woolf *ibid.*, 46). The core of the Roman ‘world empire’ was Rome, and in the later period, Constantinople. As such, it attracted the economic flows from the periphery by military force and tribute. The character of taxation throughout the Roman period is another key theme in the long list of debatable issues in the study of the Roman economy. The range of notions developed tackle aspects such as the level of taxation throughout the empire and the potential rise of the rate in the late Roman period, the existence of fluctuations between taxes raised in cash and in kind, and whether the taxes were uniform or higher in the agriculturally important regions (Rathbone 2002, 167). Hopkins (2002, 201-4) however, based on both macro- and micro-economic estimations of yields, argued that taxation was low. The underlying reason is that taxes initially raised by the expanding empire were simply destined to replace booty, as the needs of the state had not yet increased. As the empire expanded its territory, an increase of the rate would have consequences in the coinage system. Despite
this belief, he emphasises that the taxes initially raised by tax-collectors may have been significantly higher (Hopkins *ibid.*, 204). The poor, moreover, may have had to pay a large proportion of taxes, whereas the elites who controlled the levy of taxes may have been discharged.

The model of political economy, defined as "the processes governing the differential control of scarce resources" resulting in social complexity (Hirth 1996, 205), is central in understanding the economic processes resulting from such an asymmetric relationship between the core and the periphery. The central authorities of the peripheries, directly or indirectly, controlled and mobilised production and distribution by employing a variety of strategies (see sections 4.3.1.2, 4.3.1.4) necessary to meet the demands inflicted by the ruling elites of the core hegemony (Rowlands 1987, 5; Hirth 1996, 203). A critical aspect is that the local political elites were largely motivated by their desire for personal profit (Brumfiel and Earle 1993, 2; Hirth *ibid.*, 203). This situation had major social consequences in the periphery (Whitehouse and Wilkins 1995, 102, 103) as it engendered new forms of social relations, structured by the ideology conveyed by the centre (Hirth *ibid.*, 226).

As a ‘world empire’ the Roman empire was a political system encompassing a variety of diverse cultures and unequal social structures (Woolf 1990, 47). It is important to underline that apart from the unequal status between Rome and the provinces there were also significant differences in the status of the areas that came under Roman control (Sartre 2000). Diversity also characterised the level of development of the provinces prior to Roman conquest, as well as the process of their integration in the empire, including their development and organisation. Apart from inter-provincial differences and despite economic integration and the socio-economic impact of taxation, there were also differences within the provinces, such as between urban and rural economies and the existence of local economies (sections 4.1, 4.3.1.4).

Other ‘world empire’ features are the privileged channels of communication from one side of the Mediterranean to the other, and towards the frontier armies. Where the Roman empire differs from a modern world empire, as Woolf (*ibid.*, 52) argues, is not in scale, as claimed by Ekholm and Friedman (1982), but in the fact that its expansion served military and political purposes, instead of commercial. Its economy was determined by political, social, and military forces, which constitutes a major
difference between ancient and modern economies (Woolf *ibid.*, 49). Another difference is the absence of a semi-periphery, between the Roman core and the periphery. Instead, the Roman 'world empire' comprises a “buffer” or “third zone” at the frontiers, which was a major consumer of the empire's tribute and taxation due to the presence of military forces (Woolf *ibid.*, 48).

Another advantage is that world systems theory copes with diachronic change (Champion 1995, 6), which is central to this research. However, as it overlooks the non-economic aspects of trade (Schortman and Urban 1987, 61), it is necessary to generalise and redefine the theory (Schortman and Urban 1992, 18, 19; Champion 1995, 7). Thus, in order to investigate the afore-mentioned social consequences and the role of ideology in the local political economy, as developed under political integration and exploitation, it is vital to incorporate further perspectives. I am here using concepts derived from formalist and substantivist economic anthropology, and neo-Marxism.

### 4.2.1. Formalism and Substantivism

The theoretical approaches developed by the two contrasting schools of economic anthropology, Formalism and Substantivism, have been the most influential in the study of economic development and social change of past societies. The core of formalist thought was that economic concepts applied to modern societies could be used as generalisations to explain the economic behaviour of societies of different levels of social complexity (Trigger 1989, 24). The formalists also underlined the importance of rational decision making of individuals in accordance with the available choices for social and economic change (Earle 1982, 2; Hodder 1982, 202). By contrast, substantivists advocated that modern and past economies are tightly embedded in broader social and political institutions and relationships, and therefore, should not be considered as an independent unit of human behaviour (Earle 1982, 2; Hodder *ibid.*, 199, 200) (cf. Sahlins 1972). Substantivists argued that economic behaviour changes with sociocultural change (Trigger *ibid.*, 25) and denied the role of individual decision-making in non-market societies. The prominent substantivist concepts were developed by Karl Polanyi (1957), who believed that a new theory, different from the theory of modern market economies, was needed for the examination of past economics. Influenced by the existence of an alternative economy in Russia, and Marxism
(Humphreys 1969, 166), he based his theory on comparative economics and developed the concepts of the exchange mechanisms of *reciprocity*, *redistribution*, and *market exchange* (section 4.2.1) that could be applied to the economies of past societies.

Despite this debate on the interpretation of economic behaviour, these positions are not as divergent as the two schools of economic anthropology assert. As Trigger (*ibid.*, 25) points out, the distinction between universal and restricted generalisations is not an absolute one, as the former may be applied to specific social situations and the latter can acquire a universal character. However, as the use of these perspectives in archaeological investigation has been subjected to criticism (Hodder *ibid.*, 201, 203), only general aspects will be incorporated in this research. Formalist theory is useful in that it provides the framework for the investigation of choice theory in trade with the use of mathematical approaches, and substantivist theory in that it offers the means to study the social implications of trade, as well as the exchange mechanisms developed by Polanyi.

### 4.2.2. Neo-Marxist concepts

The use of neo-Marxist concepts in archaeological investigation has been crucial for the examination of the ideological aspects embedded in trade and exchange of past societies. These studies have shown that ideology was transmitted with the transfer of information and symbolism, taking place in trade transactions and interactions, and that it impinged on the formation of social hierarchies (Earle 1982, 3; Hodder 1982, 199). In particular, ideology and information were transmitted by the symbolic meaning and the ‘value’ implanted in the traded materials, the mutual systems used in transactions, and verbal exchange between the exchanging parties (Renfrew 1975, 22-24). Despite the fact that world systems theory ignores the ideological aspects, ideology was central to ‘world empires’. Its transfer from the core promoted cultural unification of the political rulers of former independent states (Woolf 1990, 46) and impacted on local social structures creating new social ideologies (Deagan 2001; Morrison 2001). The study of imperial ideologies, albeit fairly recent, tackles issues relating to religion and ritual, power relations, as well as “the manipulation of provincial memories..., symbolic distinctions between centres and peripheries..., relationships between two imperial systems..., and the creation of new imperial cultures...” (Alcock 2001, 279). It is therefore crucial to
incorporate these perspectives for the examination of the ways in which ideology and symbolism influenced the economics of the eastern Mediterranean. It will also provide an understanding of how trade and economy facilitated and endorsed the establishment of the Roman empire in the Mediterranean.

4.3. The economic processes
The above theoretical models provide the basis for the examination of the socio-economic and ideological implications embedded within distribution, production, and consumption in Cyprus after it became part of the periphery of the Roman 'world empire'. Analysis will now focus on the theoretical aspects of these economic processes, and their operation in the Roman world. As noted in the introduction (section 1.3), distribution will be analysed first, as research primarily concerns the investigation of trade and exchange. The analysis of production and consumption, which precede and succeed distribution respectively, will follow, in order to obtain a better understanding concerning the processes accompanying trade and exchange. The role played by the political elite, within the broader political system (section 4.2), will be of primary importance, as the structure of the economic processes and the formation of social identities were the end result of such control (Hirth 1996, 208, 209, 225).

4.3.1. Distribution
The study of distribution requires the identification of the processes that resulted in what is observed in the archaeological record. These are the exchange mechanisms, and the associated socio-economic and ideological implications, as developed within the empire. As noted above (section 4.1.1) the exchange mechanisms were defined by Polanyi as reciprocity, redistribution, and market exchange. These types were initially equated with the evolutionary typology of tribe, chiefdom, and state (Renfrew 1993, 7). Despite the fact that these formed the framework for the study of past economics and their role in social change, their attribution to certain levels of social complexity was widely criticised.

According to Adams (1974, 239, 241) and Gledhill and Larsen (1982, 202, 203), these mechanisms (or modes of integration) proceeded simultaneously on many levels of social complexity, and their attribution to specific social contexts obscures other
important socio-economic sectors. Moreover, the empirical analysis of Polanyi’s theories on institutional developments is characterised as descriptive, static, and lacking an adequate explanation of the relationship between the different forms of integration, and their effects on societal structures. In order to demonstrate that Polanyi’s empirical analysis, on which his attributions were based, was wrong, Gledhill and Larsen examined the data from the Old Assyrian and Mesoamerican civilisations. It became apparent that the Old Assyrian civilisations were not solely redistributive systems and ‘marketless’, as Polanyi had argued. The harbours, also related to the palace, functioned as markets, and independent agents controlled resources and accumulated private wealth, while such economic activities were partly managed by the state (Gledhill and Larsen 1982, 204-208). Additional evidence from the Aztec empire also showed the importance of the private sector in trade, even in the presence of centralised political control.

Despite these criticisms, Polanyi’s exchange mechanisms still occupy a central position in the archaeological study of trade and exchange. Additionally, his work triggered the consideration of the variability of trade and interactions for the identification of alternative organising principles (Adams 1974, 239), and spatial distribution processes. These spatial processes have been summarised by Renfrew (1975, 41-43) as direct access to the source, reciprocity taking place between centres or at a mutual boundary, down-the-line trade, central place redistribution, central place market exchange, freelance and emissary trading, colonial enclave, and port-of-trade. Discussion will concentrate on the principal mechanisms of reciprocity, redistribution, and market exchange, on which the above distribution processes are based. Regardless of the criticisms, it is clear that in complex societies, such as the Roman, all three types were operating simultaneously. Thus, the adequate perception of the ways in which these mechanisms operated is very important as it offers an insight into the debate concerning the character of the Roman economy (section 4.2.1.4).

4.3.1.1. Reciprocity

Reciprocity is identified as the mutual exchange of items — and even persons — as gifts between the members of a society, or between societies (Sahlins 1972, 180; Renfrew 1975, 5). It implies the obligation to give a gift, to receive it, and finally to repay it
This definition was stressed in the pioneering anthropological studies of Malinowski (1922) on the *kula* exchange system of Melanesia, and Mauss's work 'The Gift' (1954). As gift-exchange is not highly structured as an institution, it mainly characterises exchanges in tribal societies, which lack central organisation. However, due to the strong social implications it exists through all levels of social complexity. Reciprocity is characterised by delayed return of a gift, and lack of equivalence in value of exchanged items. Further significant features are the symbolism, the amount of information, and the idea of peace that pass on with the exchange action (Renfrew 1975, 10; 1993, 9).

Reciprocal exchange may therefore be interpreted as a form of political contract and alliance between the exchanging parts. Inevitably, this kind of symbolism encourages the continuation of political and economic relations (Sahlins 1972, 167, 170, 173; Hedeager 1987, 130). Additionally, Polanyi considered reciprocity as "movements between correlative points of symmetrical groupings in society" (Humphreys 1969, 167). Sahlins (1972) refined this mechanism even further, as he distinguished between 'positive' reciprocity (among close kin), 'balanced' (between individuals of a common social context), and 'negative' (among individuals of disparate social contexts). Regional and interregional exchanges were crucial in non-hierarchical societies as they acquired the means for their survival, including security in time of war and local raw materials and goods (Dalton 1977). Literary sources give some examples of reciprocal exchanges during the late Roman period. These are mainly letters written by elites, referring to gift obligations, which occasionally include agricultural products (Whittaker 1983, 171). Reciprocity was also triggered by actions of benevolence of the elites, which is another aspect with economic, social and political implications encountered in the Roman world (Vivenza 1997). Moreover, despite the intensification of market trading as a result of the redistributive state taxation system (sections 4.1, 4.3.1.2), in rural areas transactions still occurred within a reciprocity framework.

### 4.3.1.2. Redistribution

Redistribution is associated with the emergence of political economy and centralisation (Renfrew 1975, 6, 12). As the definition of political economy implies (section 4.3.1.4), this mechanism aimed at the mobilisation, accumulation, and storage of goods to central
locations usually by the central authority. Thereafter, these were used for private consumption and activities, or distributed to the population (Earle 1982, 10; Hirth 1996, 216). Earle (1977, 213-227) distinguished a variety of ‘institutional mechanisms’ in redistribution, based on data from the Hawaiian chiefdoms, as opposed to Polanyi’s general definition. He therefore identified four mechanisms of redistribution, namely the levelling mechanisms (the redistribution of goods in ceremonies to increase the donor’s prestige), householding (the accumulation of produce from households), share-out (the redistribution of goods obtained communally), and mobilisation (the collection of goods for the elite’s advantage, and their redistribution to the population). According to Earle (1977, 217), “redistributions are widely represented at all levels of social complexity”, and it is only redistribution in the form of mobilisation that is central to stratified societies. In contrast to Service’s (1962) opinion that chiefly redistributive hierarchies developed in order to coordinate ecologically determined specialisation and distribution, Earle (1977, 217) argued that the role of redistribution (mobilisation) was to support the elites and finance their political activities. His thesis, according to the Hawaiian example, was based on the identification that the exchanges in specialised products were direct and not redistributed, and that redistribution was infrequent and therefore insufficient to support the entire population but only the elites.

Redistribution was a fundamental feature of the Roman empire, as it was integral to the exploitation of the provinces by the centre. It was controlled by the ruling elite who manipulated the exchange of goods to serve their own purposes. The most important redistributive mechanisms used in this period were the *annonae*. The *cura annona* was a kind of tax paid by the producing provinces in order to feed the population of the centre of Rome and, in the late Roman period, of Constantinople. Accumulation primarily involved grain and other foodstuffs carried in amphorae. When Rome was the capital these were taken via the port of Ostia, and probably other trading routes (Keay 1992, 357) and stored in the *Horrea* (Peacock and Williams 1986, 58). The emergence of redistribution is largely connected to the expansion of the empire after the Second Punic War (218-202 BC) when the population of the city of Rome increased to almost a million (Garnsey 1983, 118). As Italian cereal production in the second century BC declined (Lewis and Reinhold 1990, 61) the exploitation of the provinces increased to satisfy the demand. During the Empire the primary grain producing areas were North
Africa and Egypt (Garnsey *ibid.*, 120). According to Pliny (XVIII 66-8) Cyprus was also among the grain-exporting regions (Garnsey *ibid.*, 120). Grain imports to Rome are estimated to have reached ca. 150000 tonnes per annum (Garnsey *ibid.*, 118).

The payment of taxes in kind was institutionalised and was under the direct control of the Emperor (Peacock and Williams 1986, 57). However, products such as wine and oil were also collected as provincial taxes, for the satisfaction of the elite’s and subsequently the population’s appetite. As noted elsewhere (section 4.1), the selling of the taxes paid in kind in the area where they were raised for the coverage of other expenses was an important stimulant of trading activities. Other commodities apart from foodstuffs engaged in redistribution were building materials, various luxury goods and slaves (Nash 1987, 89). An essential element of redistribution was the *annona militaris* for the provision of comestibles to the army (cf. Jones 1974, 628; Erdkamp 2002). The beginning of this kind of *annona* was the subject of intense discussion (Hopkins 1983b).

In the study period redistribution was based on the ‘mobilisation’ strategy, which benefited both the elite and the population of the centre. Moreover, ‘mobilisation’, as explained by Earle (1977, 217), was also functioning in the polities of the periphery, as the elites were accumulating products from their subordinates for their advantage. It is also worth mentioning that redistribution of these goods in feasts and ceremonies was not unusual in the Roman period. Evidence comes from literary sources, which stress the generosity of the Emperor or other members of the ruling elite (cf. Lomas and Cornell 2003). On special occasions and celebrations it was possible for them to distribute large amounts of valued products, such as luxury wines to the population (Peacock and Williams 1986, 59). By such highly symbolic actions they gained admiration and prestige from the populace, secured their position and, consequently, their control over them. In the late Roman period the Church also played a central role in redistribution (section 8.4.5).

### 4.3.1.3. Market exchange

Market exchange is the mechanism associated with complex societies. Its basic feature is the existence of a central place (Renfrew 1975, 10), a market that, unlike redistribution, provides a context which facilitates the promotion of exchange for profit (Earle 1982, 10). The medium of exchange is usually money or bullion (Renfrew 1975, 11, 53). As
goods are transferred from the production centres to market places it is a form of indirect exchange, due to the absence of contact between the producer and the consumer (Alden 1982, 85). As Hirth (1998, 452) notes, the principal functions of marketplaces are supply, distribution, and scheduling, as they concentrate staples at a central place and enable the distribution of manufactured goods, while they schedule the economic organisation of the production units. A basic component of the marketplaces, related to "sale and purchase decisions", is, according to Blanton (1998, 464), not negotiation, as argued by Hirth (1998, 451), but the "institutionalised structuring of information flow". Silver (1995, 39, 40) analysed further the symbolic connotations embedded in market exchange and emphasised the "trust-based relationships" and the "social contract" created in this form of exchange between the trader and the client/consumer. These symbolisms, as the author asserts (*ibid.*), result in the reduction of costs and generate "commercial contracts". Moreover, the existence and operation of market exchange in past societies required the order and security achieved by central authority, even though it may not have been under its direct control (Renfrew 1975, 11). Thus, markets facilitated the operation of the staple and wealth finance, for the benefit of the elites, which administrated market operations.

In the Roman period, market exchange was the predominant mode of trade and transactions (see below, section 4.3.1.4). Apart from sharing the main features outlined above, the markets of the empire functioned according to the "social and political institutions in which they operated" (Hirth 1998, 451). Moreover, they are distinguished into permanent and periodic markets, both kinds of which have in recent years become the subject of intense research (cf. Lo Cascio 2000b). A detailed study of the forms of the markets and fairs in the Roman world and the associated socio-economic aspects is provided by De Ligt (1993). However, one should not disregard the fact that exchanges, especially in rural communities, were also occurring between households, which could provision themselves (De Ligt 1990, 30, 31; section 4.3.1.1). One of the problems in the study of Roman markets is the identification of the rural or periodic markets, because of the absence of any architectural remains. As Hirth (1998, 458) demonstrated, however, it is possible to identify such markets based on contextual evidence and the distribution of exchanged items. A relevant concept is provided by central place theory, which emphasises that the size of markets is related to the size and the spatial hierarchy of the
spatial centres (Adams 1974, 243). Market exchange and its centrality in the Roman economy is analysed further in section 4.3.1.4 below.

4.3.1.4. Aspects of organisation and character of Roman trade
Exchange mechanisms are central in understanding the character of Roman trade and subsequently, Roman economy. Despite the diversities in the development of the provinces (section 4.2), a first inference can be made concerning the ‘Pan-Mediterranean’ character of trade (section 1). The development of commercial links between the polities, within the wider socio-political and economic integration of the empire, must be considered as a mobilisation strategy employed by the local elites to confront exploitation and meet the centre’s demands (Rowlands 1987, 5; Hopkins 2002, 204-8). As already noted (section 4.1), the intensification of market exchange and the use of coinage for transactions give rise to the debated issue whether the Roman economy should be interpreted as a market economy. Even though it is not the purpose of this thesis to address this major question, having examined the distribution mechanisms operating within the empire, it is essential to outline the key positions. These are central to the study of Roman trade and will form the basis for further investigation.

To start with the issue of coinage, money in the Roman period was subjected to market pressures, while its primary role was to sustain commercial activities, and determine wealth (Greene 1986, 46, 51). The monetary system in the Roman empire consisted of the aureus, i.e. a golden coin, and its denominations in silver denarii and copper asses, which were in turn denominated in further categories (Crawford 1970, 40-41). Despite the existence of local coinages in certain provinces or even cities (section 4.2), partly necessitated by the demand for small change, the monetary system, especially during the first two centuries, was generally characterised by uniformity throughout the empire (Crawford ibid.). The cessation of local coinage by the 3rd c. AD was considered by Crawford (ibid., 47-48) as the result of increasing economic pressures throughout the empire. The existence of uniformity in coinage has been attributed to the payment of taxes in money. Payments in money were also made to the army (Hopkins 2002, 199). Important evidence from Egypt demonstrates that monetisation, at least in this part of the empire, also involved the countryside which led to rural prosperity
(Rathbone 2002, 162). As De Ligt (1990, 25, 35) argues, monetisation in rural economies is characterised by regional diversity, while different exchange systems co­
 existed, including money transactions and barter exchanges. Following the above evidence, on one side of the debate is the belief that a monetary system existed, money was widely used throughout the empire, and an efficient policy regulated the administration and supply of currency (Greene 1986, 50). Another line of reasoning argues that the existence of denominations in Roman coinage is enough evidence for the existence of a monetary system (De Cecco 1985, 819).

At the opposite end of the spectrum, researchers contest that the political authorities did not exercise a systematic regulation of coinage and that market exchange was restricted to urban areas. Further arguments that refute the existence of a monetary system focus on inflation and the fact that not the entire coinage was sophisticated (a substantivist view). It is intriguing to observe that Crawford’s (ibid., 67) ideas that the monetary system was merely ‘simple’, as it failed to circulate consistently in all provinces in the 3rd c. AD, resulting in the generation of localised patterns of circulation, fall within this category of the debating. A similar impression, I believe, is obtained by his observations regarding the 3rd c. AD inflation (section 7.2) and the subsequent inability to develop a complex denominational structure similar to the one existing in the 1st and 2nd c. AD. Further arguments contest that coinage did not serve all the functions of modern money, as it was predominantly used as a taxation instrument, to store wealth, and as ‘objects’ of prestige gift exchange (De Cecco ibid., 814-819; Crawford ibid., 68). Again, Crawford’s (ibid., 68) interpretation of these different usages of coinage as varying monetary systems, affected by different fiscal systems, highlights the divergence of the Roman monetary system from modern systems embedded within market economies.

An equally significant feature in the investigation of the relationship between the Roman monetary system and market economy is the volume of the coinage which circulated across the empire (Crawford ibid., 62). Despite the difficulty in estimating its volume, Hopkins (1980) in an attempt to show the integration of coinage within the broader economic trends (i.e. taxation and trade), demonstrated the significant rise of coinage circulation from the late Republic to the 2nd c. AD. However, despite his initial assertion that generally the increase of coin circulation in one province implies the
increase in other provinces, in the subsequent review of his 1980 work he concluded that coin circulation was not vital in the “balancing of trade-, rent- and tax-flows” (Hopkins 2002, 213).

Recently researchers, such as Andreau (1987, 1999), have moved to the sphere of the organisation of banking and the investigation of the wider role of bankers in urban economies. As opposed to Finley, Andreau (1987) in his extended work illustrates with examples obtained from literary sources the function of an elaborate banking system operated by professionals responsible for different banking activities (the argentarii, coactores argentarii, coactores and nummularii). Despite the changes that occurred from the late Republican to the late Roman period, their responsibilities involved the receiving of deposits, the granting of loans and credit at auctions, and the change of money. Andreau (1987, 166) conceives of these changes as evidence for the non-static character of Roman financial activities. In my view this could be interpreted as an element for the existence of a market economy, but the possibility of indirect involvement of the elites in the activities of professional bankers marks a significant difference in relation to modern market economies. Although Andreau (1987, 373) acknowledges the possibility of occasional control by the elites, he believes that the freedmen professional bankers were generally independent. De Ligt (1991, 494) in his criticisms emphasises Andreau’s negligence to discuss such financial activities of the elites. This discourse provides yet another example of the current debate concerning the extent of elite involvement in economic aspects.

As noted in section 4.1 recent research partly concentrates on the comparison between modern market economies and the Roman economy. In particular, the main features of the market system in modern capitalism, is that it is exercised by private enterprise with the chief intention to expand wealth, and it is co-ordinated by a network of markets. Despite the fact that the Roman economy did have the second feature, as a network of markets existed, it was subjected to political authority, even when the private sector is apparent. The degree of direct political control, as previously noted (section 4.1), is another debatable issue. As occurred in past market societies (section 4.3.1.3), Roman markets were, albeit indirectly, regulated by local rulers, and taxation was imposed on markets, as well as on ships entering the harbours. It is believed that state intervention increased under the late empire (Garnsey and Whittaker 1998, 316-7;
As Chase-Dunn and Grimes (1995, 390) put it, the economies of the early world systems are characterised by the "use of the coercive power of states" and political centralisation. Indicative of this situation, largely stemming from the economic and political integration of the empire, is the dramatic increase in the investment of provincial senators in land (Hopkins 2002, 206). The steady increase of aristocratic wealth between the late Republic and the second century AD, and the measures introduced by the emperors to control their power, is another aspect employed by Hopkins (ibid.) to demonstrate the strength of the Roman political economy.

The involvement of the elites in commercial endeavours, for "the long-term accumulation of capital by productive investment" (Rathbone 2002, 164) is linked to the question regarding the existence of economic consciousness under the empire (section 4.1). Despite the previous conviction that the elites were not involved in trade activities in the Roman period, research has demonstrated that the aristocrats, town-councillors, or wealthy freeborn were private shippers and invested capital in trade (Hopkins 1983a, xxiv; Garnsey 1983, 122, 125) (also see section 8.0.3). The produce in markets, however, was sold by agents of a lower status. In the literary sources, traders are referred to as navicularii or negotiatores, terms that may refer to traders from both social groups (Garnsey 1983, 129). The relationships between the various agents and traders have been largely investigated by researchers such as D'Arms (1981) and Aubert (1994, 46-69, 100-113). Their interest and understanding of economic organisation is best evidenced in the painstaking research conducted by Rathbone (2002, 166) regarding the sophisticated private accounts listed in the Heroninos archive in Egypt. Apart from the existence of economic rationalism, this interest of the elites reveals the structured organisation and centralisation of production and exchange. Moreover, the estates attached to the elites were the means to facilitate the operation of such staple or wealth finance (Brumfiel and Earle 1993, 6).

Based on the theoretical framework it is possible to infer that the elites manipulated these exchanges, and used the trade goods acquired through inter-regional exchange to build social and political hierarchies (section 4.3.3). The intention behind this action was to "increase their ability to control the production and mobilisation of local resources" (Hirth 1996, 219). The desire of the nobles for wealth promoted gift exchange, i.e. reciprocity, in order to establish obligations and build alliances to secure
their control over the exchanges, and obtain more valuables (Brumfiel and Earle *ibid.*, 8). Apart from the elites, however, the clients and agents under the elite’s control also aimed at making profit and accumulating wealth; a situation that led to competition and subsequent changes in the social structure (Hopkins 1983a, xii; Haselgrove 1987, 106, 110, 112). The privileges and exemptions in taxation granted to private shippers involved in the transportation of supplies to Rome, reinforced social stratification and contributed to socio-political centralisation. Moreover, the power of the rulers of the Roman provinces was reinforced by their authority to collect the taxation imposed by Rome (section 8.0.3). In such circumstances, where subsistence or wealth goods were collected for the paramount rulers, the provincial administrators and the elites also benefited as they kept a fraction of the taxes and therefore profited from the empire (Brumfiel and Earle 1993, 6; Hopkins 2002, 205).

The “logic of accumulation”, the existence of “commodified wealth, land, exchange, and labour”, and the use of military force to maintain stability in pre-capitalist world systems (also see section 2.1) instead of the use of market forces, are further differences between pre-capitalist and capitalist societies (Chase-Dunn and Grimes 1995, 393, 394, 396). Fulford’s (1992, 295-300) analysis of the flow of goods and trade routes in the frontiers, verified that economy was driven by the prevailing political situation. Moreover, technological innovations were slow in comparison with modern technologies that have the ability to substitute human labour, and the size of firms’ production capacity, capital and monopoly have dramatically increased in current economies (Chase-Dunn and Grimes *ibid.*, 400, 401). These features, together with the concurrent existence of the mechanisms of reciprocity, redistribution, and market exchange, make it clear that the Roman economy is different from a market economy as defined in modern-capitalistic terms. However, the desire for private profit, the existence of a price-fixing market, and of market forces such as supply and demand, are suggestive of a developing market economy during the Roman period.

4.3.2. Production
The study of production is essential as it provides a better understanding of the traded products, from the place of origin to the distribution point (Earle 1982, 8; Torrence 1986). The information acquired through the study of production is decisive for a more
holistic understanding of the economic structures, the organisation and social circumstances that preceded the commercial activity. Facilitated by technological improvements, Roman industry was complex and involved a large range of products, such fine and coarse pottery, tiles, lamps, glass, textiles, metals, and other building materials (Greene 2000, 754). Despite their importance, this thesis is concerned with agricultural and pottery production, i.e. the two kinds of production associated with the amphorae (section 1). Concerning pottery production, investigation, albeit predominantly in the form of raising questions rather than providing answers due to the inherent limitations (section 7), focuses on the fundamental concepts developed for its study, namely the scale and modes of production (Ericson 1982, 129; Rice 1987, 180). The purpose is to provide a brief analysis of these theoretical perspectives and their application to Roman systems of production (sections 4.3.2.1 – 4.3.2.2).

Nevertheless, as amphora production is associated with agricultural output (mainly wine and olive oil), it is pertinent to first outline the basic theoretical viewpoints concerning the organisational aspects of agricultural production throughout the Roman period. Despite the difficulty in deducing issues of agricultural production based on available archaeological evidence, most theoretical achievements in the study of the Roman economy involve this facet of production. As with distribution, the character and changes of production systems throughout the Roman period must be considered within the socio-political, economic, and ideological conditions of the ‘world empire’. In section 7.5 an attempt is made to understand the character of agricultural production on Roman Cyprus through the analysis of local amphorae, despite the lack of precise knowledge concerning their contents.

4.3.2.1. Organisation and character of agricultural production in the Roman empire
Agricultural production, based on the Roman model of landscape organisation (cf. Whittaker 1998, 509), constituted the main source of subsistence and power (Garnsey 2000, 679). Thus, the understanding of its organisation, and the associated socio-economic aspects, are particularly vital for ‘reconstructing’ its character. At this stage it is important to note that productivity was affected by aspects such as agricultural technology, weather, seed quality, the supply of land, labour and issues concerning
property (Garnsey 2000, 706). The resources of the estates were organised and mobilised in the cities where the controlling elites were centred. Therefore, the modes of agricultural production were also affected by the institutional constraints placed upon the producers (Whittaker 1998, 509).

Throughout the Roman period the agricultural system underwent changes in order to intensify production (Rathbone 2000, 51). It is therefore important to distinguish between intensification and specialisation. The first is achieved “by increasing the frequency of cropping, the technological investment, or the labour input”, while specialisation concerns the cultivation of “a single crop or a small number of crops” (Rice 1987, 190). “Expansion and innovation” are the chief characteristics of agriculture during the early Roman period, primarily concerning the western Mediterranean (Garnsey 2000, 692, 693; section 7.1). The existing urbanisation of the eastern Mediterranean and the absence of a large army, which constituted stimulants for agricultural innovation, hindered innovation at a similar level at this part of the empire. However, exploitation of land and labour for the intensification of agricultural production must be considered as responses of market pressures. According to Lo Cascio (2000a, 77) “increased agricultural production not only fulfilled the demand of an increasing urban sector, but also fed an unprecedented flow of exports”.

For the utmost exploitation of agricultural land and the achievement of these qualities, changes primarily involved its taxation (section 7.1). Land was owned and controlled by aristocrats and competition for private wealth generated major social and economic consequences (Rathbone 2000, 51). This situation entailed the eventual replacement of small proprietors by tenants. Production consequently intensified as tenants were coerced to produce and sell more in order to pay their taxes and rents. Unlike the Ptolemaic empire (section 7.1), the state intervened indirectly primarily through its organisational scheme (Lo Cascio 2000a) (section 4.1). Imperial land, also cultivated by tenants, was controlled by imperial agents (section 8.0.3). According to literary accounts these agents exploited the peasants severely (Whittaker and Garnsey 1998, 284).

Large estates primarily consisted of small and medium units of land for successful crops. Maximum production was secured through specialisation and the operation of a range of organisational mechanisms concerning the management of
estates. Among them is the ‘slave mode of production’ (Lo Cascio 2000a, 77), where slaves constituted the main labour. Another case is the combination of slaves and tenants, sometimes brought in by the tenants who also acted as managers (Gamsey 2000, 702-3). According to Gamsey (ibid.), tenants and managers could be either of a high or a low social standing. The complexity of these managerial methods and the social position of the producers has been another subject of intense debate in the study of Roman economy (Gamsey ibid., 704). Rathbone (2002, 158-9) for example, based on Egyptian evidence, argues that slavery was not as prominent as hitherto believed. He therefore attributes the emphasis on the slavery mode of production on analogies drawn from earlier societies rather than on actual facts.

A great deal of the above information concerning the estate management comes from the Heroninos archive in Egypt (Rathbone 1991). Contrary to previous ideas concerning the decline of land during the middle Roman period, stressing demographic decrease and bad management among the probable factors (Whittaker and Gamsey 1998, 289), the archive reveals an unparalleled complexity in land management. It is portrayed in the sophisticated division between a number of central administrators and managers of production units (Rathbone 1991, 58-82). It also gives precise information about the permanent slave labour, the various forms in which it occurred, and the social status of slaves. Equally significant is the description of the employment of occasional working force, such as craftsmen, and the placement of tenants (Rathbone ibid., 88-183).

The main changes are noted towards the end of the 4th century, and characterise the late Roman period, with the development of rural production. Among the hypothetical factors underlying these changes are better management of land, technological improvement, new labour resources and possibly the cultivation of new land (Whittaker and Gamsey 1998, 278). Privatisation of land increased (Lo Cascio and Rathbone 2000, 4), while the ownership of land now provided even greater prestige to the rich landowners (Whittaker and Gamsey ibid., 283). Codes dating as early as the 4th century refer to the cultivation of ‘deserted lands’ through emphyteutic leases. These involved long-term renting of land, usually to the rich, who sublet it to poor tenants, known as coloni (Whittaker and Gamsey ibid.).

The status of the coloni represents a significant change in this period’s labour force (Rathbone 2002, 163). Although still free, they were tied to their landowners, and
they frequently replaced slaves; a situation promoted by the state through legislation (Whittaker and Garnsey *ibid.*, 287-288). Thus, this class is tightly associated with the expansion of rural settlements, as it comprised the main working force of the increasing estates. In addition to tenants, labour force also included slaves. Their continuing presence in production, according to Whittaker and Garnsey (*ibid.*, 294), is evidence against the arguments concerning the decline of slavery. Finally, the division of production units probably followed the model existing under the early empire. Organisation of estates was allocated to agents or managers (section 8.0.3), and units of land were thereafter distributed to tenants or slaves (Whittaker and Garnsey *ibid.*, 304).

The process of turning agricultural produce into wine and olive oil was largely similar to that of industrial production, in terms of complex establishments, management and labour organisation (Greene 2000, 743) (section 4.3.2.3). Complexity is attested by archaeological finds throughout the Mediterranean (Brun 2004). Moreover, complexity also characterised the establishments relating to *garum* and *fish-salting* production (Ben Lazreg *et al.* 1995). An example of such complexity is offered by establishments recently identified in Neapolis (Slim *et al.* 1999).

4.3.2.2. Theoretical perspectives of the scale of pottery production: their application to the Roman context.

Scale of production is defined as the “levels of labour and resources used and quantity of output” (Rice 1987, 180). In complex marketing systems, the operation of these modules is determined by a number of specialised economic structures, which regulate organisation of production and exportation. Such determinants are the economic sectors of supply and demand, demographic factors, specialisation, and the adoption of a comparatively advanced technology (Alden 1982, 85; Rice 1987, 180). All these characterise the production of Roman commodities, including pottery.

The levels of output also depend on whether production was occurring on a full-time or a part-time basis. Full-time production is a feature of broader regional economies where larger populations are involved (Rice 1987, 180). It also involves extensive labour mobilisation for the production of specialised utilitarian items in order to satisfy greater demands. On the other hand, part-time production mainly involves household production, for private consumption or exchange between households (cf. Earle 1977).
Chapter 4

The use of technology is more limited, the output is low, and production is more likely to occur on a seasonal basis (Rice 1987, 180-181). In fact, production in the Roman period occupied both full-time and part-time workers. However, quantity of production was critically affected by the tributary form of production, which is a basic facet of world systems (Chase-Dunn and Grimes 1995, 390). Consequently, both full- and part-time production must be seen as responses to the increasing demands imposed by taxation. In other words, labour mobilisation and intensified domestic production are included among the production strategies employed by the local authorities in order to meet the demands inflicted by the centre of the empire. Moreover, the rents that peasants were obliged to pay to the elites, also stimulated production, and they could become craft producers seasonally.

A further organisational distinction, affecting production levels in complex societies, is between independent and attached producers (Earle 1981, 230). Independent producers are associated with the demand imposed on them by the general population, whereas attached producers produce for the elites, who control them directly. However, such a distinction is relative, as in past societies generally producers were under the control of the central authority, and were not in reality independent (Renfrew 1975, 27; Earle 1981, 230; Brumfiel and Earle 1993, 2-5; Hirth 1996, 213). This situation resulted in the establishment of patron-client relationships, as specialists had to provide services to their patrons (Brumfiel and Earle ibid., 5). Exploitation of the producers by the elites triggered greater pressure on production as they mobilised larger quantities of goods for local and external markets in order to accumulate wealth (Haselgrove 1987, 107). It is unknown whether full-time attached specialists existed in the estates of the Roman provinces, supported by their masters as in the Aztec empire (Brumfiel 1987, 111), or whether craft specialists were also part-time cultivators.

Another aspect associated with the scale of production is the process of innovation (cf. Torrence and Van der Leeuw 1989), which concerns both technological changes and the invention of new ceramic forms. The examination of this process has provided useful information on the production of Roman ceramics (Fulford and Peacock 1984, 110). Innovation is related to "processes like population pressure and increased demand for ceramic vessels" (Arnold 1985, 220). Thus, within the 'world-empire' framework it is essential to consider this process as a result of increasing market
pressures generated by exploitation. For the Roman period, it has been argued that typological diversity and volume of craft production are linked, although the exact connections are not clearly defined (McCormick 2001, 54-58). McCormick (ibid., 58) stressed that the key to understanding innovation "may lie in how Roman potters organised their production". An idea stressed by this author is that the inability to accomplish economies of scale led to the increase of the number of individual potters (or small-scale pottery units), instead of enlarging the production units or the number of pots produced by individual potters (McCormick ibid., 58). However, although this may have been the case to an extent, the complex kiln structures and technology employed for pottery production (section 4.3.2.3) do not fully support this idea. In my view, World Systems Theory provides a more rational explanation, without 'entering' the debatable issue concerning the degree in which the Roman economy functioned according to economies of scale. The intense exploitation by the centre may have led to the increase of producers, in search of additional sources of revenue through the trading of their products. This situation ultimately gave rise to competition, facilitated innovation, and expanded production.

4.3.2.3. Theoretical perspectives of the modes of pottery production: their application to the Roman context

Modes of production are concerned with the methods employed in pottery manufacture, the individuals involved in production, and the organisation of production units (Rice 1987, 182). To start with the ways in which production was pursued, it is essential to distinguish between labour and capital intensity, and acknowledge the role played by technological investments. The latter can be understood through the empirical observation of the pots themselves, and the study of kiln sites. In addition, the identification of complex kiln structures, producing a variety of different vessels (Peacock 1982, 67-77), suggests the existence of labour-intensive modes of production, an advanced technology for mass production, division of tasks, and the existence of a sophisticated internal organisation of the production units.

Key to understanding the division of tasks as well as the status of the potters is the identification of their socio-economic position (Rice 1987, 182). The in-depth examination of this issue, according to Peacock (1982, 7), largely falls within the
formalist approach as it is related to the economic decisions made by the potters. Such decisions involve the potters' intention to produce for profit, or for obtaining everyday essentials through exchange. The modes of production discussed below are also related to economic decisions. Generally, potters belong to the low social strata (Peacock *ibid.*).

As Rice (*ibid.*) points out, further issues relevant to the potters' social standing concern the age, sex, as well as whether they were members of the same family.

Despite the difficulty of making such inferences, the evidence given by amphora stamps, and other inscriptions, occasionally provide useful information for the study of societal aspects of pottery manufacturing (section 7.0.3). Traditional skills and the fact that products were the result of the choices available to the producers are further key concepts in understanding production. In particular, "techniques are first and foremost social productions" (Lemonnier 1993, 3), as they are parts of social behaviour learned and used through tradition. Technological choices embed the concept of diversity, and refer to the selection of a particular method or methods (Lemonnier *ibid.*, 7). Other processes behind selection are social and economic constraints, and mental conceptions. A significant body of work developed from anthropology provides a useful tool for considering the possibilities that could influence choice.

For the investigation of the character of pottery production, archaeological investigation also focuses on ethnographic data. The best example is provided by Peacock's (1982) seminal study, aiming at the identification of the various organisational aspects of pottery workshops. The modes operating in the Roman world are summarised into household production, household industry, individual workshop industry, nucleated workshops, and workshops associated with estate, military, and official production. As noted above, economic decision is largely embedded in all modes of production (Peacock *ibid.*, 7).

Household production, mainly applied to the study of production in prehistoric societies, involves simple and infrequent domestic production for private consumption (Peacock *ibid.*, 8, 13). Household industry, however, involves regular domestic production for exchange or for profit through market trading, and is the first form of craft specialisation and trade (Peacock *ibid.*, 8, 17). As revealed by ethnographic evidence, these pots are not distributed outside their broader production area. Furthermore, they may be involved in varying ways of exportation, with the intention to
secure monopoly (Peacock *ibid.*, 18). Both kinds of production are mainly practised by women, although in the second mode men may also be involved. They engage simple technology with no or little capital investment in the case of household industry, and are practised on a part-time basis (Peacock *ibid.*, 8, 19, 20; Rice *ibid.*, 184).

On the other hand, individual workshop industries entail capital investment and production is mostly exercised by men. Although they provide the predominant source of subsistence, they are mainly concerned with part-time production (Peacock *ibid.*, 9). A critical difference in relation to household industries is the technology employed, and the variability in their size and design (Peacock *ibid.*, 28-31). The quantity of output, and certain economic determinants, such as the “quality of the clay, the abundance and type of fuel and the distance, density, and sophistication of the markets” (Peacock *ibid.*, 25) play a vital role in the development and operation of workshops. Moreover, they are part of simpler marketing systems and, as they are often isolated, they may avoid competition (Peacock *ibid.*, 9, 25, 31). Although exportation of their products predominantly concerns local markets (Peacock *ibid.*, 31), the exchange mechanisms operating during the Roman empire, largely directed by exploitation, resulted in the long-distance distribution of the amphorae (section 4.3.1).

On the contrary, nucleated workshops, which involve complex clusters of industrial workshops and are generally found in advanced economies, have the tendency to function on a full-time basis and involve larger-scale production (Peacock *ibid.*, 39, 43). Although both individual and nucleated workshops are characterised by division of labour and specialisation (Rice *ibid.*, 184), these features are more prominent in nucleated workshops which are also characterised by standardisation, and co-operation (Peacock *ibid.*, 9, 43).

Moreover, nucleated workshops are integrated into urban economies (Peacock 1981, 190, 191; 1982, 9), whether they are situated in urban or rural areas (Rice *ibid.*, 184). On this basis, Peacock (1982, 38, 103) has distinguished nucleated workshops into “urban nucleated industries” and “rural nucleated industries”. The former, which are more common, concern the grouping of workshops inside or usually at the outskirts of towns, along routes that facilitate distribution, and with easy access to clay and fuel (Peacock *ibid.*, 99). They are associated with greater demand, resulting in workshop structures of greater size and the production of a variety of wares (Peacock *ibid.*, 38, 99).
“Rural nucleated industries” are groupings of workshops developed in the countryside. They mainly specialise in one pottery type (Peacock *ibid.*, 103), but they are also involved in sophisticated market organisation for the distribution of the wares produced (Peacock *ibid.*, 106). Countryside industries, also characterised by variation, increased particularly in the late Roman period, possibly because of agricultural changes that occurred after the 3rd c. AD.

The mode of estate production, aiming at eliminating estate expenses and at making profit, occupies an important position in Roman production, although its significance may be exaggerated by ancient writers (e.g. Varro, *de r. r.*, i.22.1) (Peacock *ibid.*, 129). It mainly involved the production of building materials, because of the skills required for the production of other kinds of ceramics. Nevertheless, it is possible that amphorae were also part of estate production (Peacock *ibid.*, 10, 129), destined for trading the agricultural produce. Rural workshops described above may be associated with the development of rural estates, while household production may have also operated as part of estate economies (Peacock *ibid.*, 10, 103, 106). Important information on this mode may be conferred by the study of kiln locations and stamps. The first may give information concerning the territory occupied by an estate, whereas stamps found on ceramics and tiles may mention the owner of the producing estate. Despite this potential, it is still difficult to discern the exact status of the producers, i.e. whether they were employees or tenants paying rent.

The same kinds of ceramics were involved in military and other official production (Peacock *ibid.*, 11). Military production, however, for the supply of the army does not apply in the case of Cyprus, as the Roman army did not station on the island (section 3). Nevertheless, considering that the administrative elite seated in the capital of the island, the potential existence of mechanisms regulating official production should not be ruled out. All these forms of organisation were apparent in the Roman period, even though it is difficult to distinguish them in the archaeological record (section 4.4.2). However, they are not clear-cut and do not always ‘fit’ in all situations concerning Roman pottery production. As noted above, production, either independent or incorporated within estates (“attached”), was under the control of local authorities.
4.3.3. Consumption

Consumption is the process which underlies what is observed in the distribution patterns, and apart from reflecting physical needs or utilitarian purposes, it is also related to the economic, social and ideological implications embedded in exchange. The examination of consumption relating to the amphorae, however, is restricted by a number of limitations outlined in Chapter 9 (section 9.0.1). As a result, in this section I will briefly discuss the salient theoretical aspects of consumption, on which the examination of this economic process builds, based on the amphorae identified in Cyprus (chapter 9).

As previously noted (section 4.3.1.4), exchange was essential in the development of social hierarchies as it provided access to valuables (Hodder 1982, 204). As a result, the study of consumption has been used to distinguish elites from commoners and to identify economic and political reorganisation in past societies (Costin and Earle 1989). Costin and Earle (ibid., 691) have also argued that choices of consumption are determined by economic, social, and political criteria. Following Renfrew (2001, 14), it is necessary to consider consumption within the broader system in which it operated and examine it in relation to the associated implications of production and exchange.

Considering that Rome, and later Constantinople, were major consumption centres, it is possible to understand the social impact of this economic process in the Roman world. Within the World Systems framework, the consumption of products hauled by the provinces as taxes and other exotica from beyond the frontiers increased the social and political disparity between the centre and the peripheries. Even in the provinces the control of economic activities by the political elite gave them access to valuables and increased their status and power (see below). Products ‘consumed’ in the empire ranged from decorative and devoteive items (e.g. statues) to jewellery, textiles, fine and coarse pottery, utilitarian items, foodstuffs and spices. The major role of power and economic control in the higher social stratum of the Roman empire is also evidenced in the monumentality characterising its material culture.

Due to the social dynamics embedded in consumption, it must be considered in relation to non-material aspects, encompassed and transmitted in an exchange action. Central to this process is the social manipulation of the symbolic meaning, or social value, of the exchanged goods, which was overlooked by Wallerstein (Hodder ibid., 206, 207; Champion 1995, 8, 9). In particular, archaeological studies examining the meaning
of things focus on hermeneutics and ethnographic studies to identify the symbolic, contextual, and interpretative aspects (Shanks and Tilley 1992, 103-110). However, social meaning may also extend from economic value, which could be determined by demand in exchangeability (Simmel 1978, 73; Appadurai 1986, 4).

As the amphorae were containers of foodstuffs, their value must be considered in relation to the products they contained. Thus, their study is mostly associated with food consumption. Recent archaeological investigation, following anthropological studies, focuses on the role of food in the formation of social structures (Grant 2002, 17-22) through the examination of eating habits, preparation, consumption, and gender (Milner and Miracle 2002, 2). Moreover, differential access in food in past societies may reflect the possessors of economic control (Costin and Earle ibid., 696). It is believed that, due to its necessity in everyday life, food can act as “both sustenance and symbol” and impart status and power (Milner and Miracle ibid., 1-2). Research also concentrates on the role of feasting in the creation of social distinctions through food consumption (Mills 1999, 104). The symbolic dimensions of the distribution in feasts of valued products to the populace by the emperor or the elites, or the distribution of products through benefactions, were also immense (sections 4.3.1.1, 4.3.1.2). Through their consumption they aimed at reinforcing their control and establishing their power.

Despite our limited understanding of the values of Roman amphorae, it is accepted that certain wines and foodstuffs were considered luxuries (Champion ibid., 8, 9) and, therefore, acquired a symbolic meaning. The fact that in the Roman empire guests “were not always given the same food and wine, the poor guests being made to feel the gulf between themselves and their hosts” (Paoli 1963) shows the social dimensions of foodstuff, and subsequently, ‘amphora’ consumption. Olive oil was also valued as a foodstuff, as a perfume and for its use in rituals (Boardman 1976, 191-2) and for lighting purposes. Fish-based products on the other hand were also considered luxurious, depending on the kind of fish involved and their origins.

Symbolic and social aspects of traded agricultural products must be seen in relation to economic value, but they could have also been influenced by the ideology imparted from the centre of the empire (Renfrew 1975, 33; Schortman and Urban 1987, 68). The lack of written evidence concerning the value of individual amphora types hinders the study of the social dynamics of consumption (Pucci 1983, 110). Although
Duncan-Jones (1982) attempted to reconstruct the prices of certain foodstuffs, the difference between past and modern economic structures obscures a consistent understanding. Nevertheless, some of the factors affecting economic and social value are agricultural and amphora production costs, transportation costs, and taxes imposed on ships by the state (Nash 1987, 97).

As noted above, the study of consumption, as a marker of social identity, serves to understand the socio-political aspects of political economy (Costin and Earle *ibid.*). The possession and consumption of highly valued commodities could act "as a means of sustaining and legitimising new power structures" (Hedeager 1987, 131). Desire for exotic objects, associated with the desire for a different kind of knowledge, is decisive for achieving power and social status (Helms 1988, 67, 75; Renfrew 1993, 9). Thus, through their possession, and manipulation of the implanted ideas, recipients could secure their social position. As noted above, the symbolism implied by the consumption of high-valued products, provided the essential basis for legitimising the supremacy and control of the elites over the populace and resources. In addition, the trading of these products on a local basis "allowed the development of absolute differences of wealth between individuals" (Haselgrove 1987, 107; Hedeager *ibid.*). Another essential aspect is that the access of other social groups into the consumption of prestigious products could lead to competition and ultimately into changes of the social stratum.

As a result of these social implications, the examination of valued products in relation to the archaeological context in which they are found provides an index for assessing the social status of the consumers (cf. Costin and Earle *ibid.*, 694; Mathien 2001). A contextual approach is also employed in this thesis in order to form ideas about the value of the amphorae (section 9.2). Moreover, valued amphorae may perhaps be identified by the existence of imitations. Although within the world systems framework imitations could have been predominantly produced for marketing reasons (section 7.4.4), it is worth considering the social and ideological consequences of the consumption of these products by groups of a lower social status. The consumption of products transported in amphorae imitating imperial types can also be viewed within the process of Romanisation and the transmission of values by the centre. Finally, it will be interesting to examine whether the economic and political shifts of the middle and late Roman periods are reflected in the consumption trends.
Chapter 5. Methodology

5. Introduction

The lack of adequate published data necessitated the analysis of previously unstudied assemblages in order to address the objectives posed in this research (section 1.3). As already noted, the analysed assemblages derive from sites in the cities of Paphos, Amathus, and Kourion (section 3). Through the analysis of the assemblages from Paphos, the aim is to reveal economic patterns associated with the western part of the island. In the absence of available data from eastern Cyprus (section 1), the assemblages from the sites of Amathus, being the city closer to the east, will hopefully provide an insight into the economic character of this part of the island. Data from Kourion were included in the study at a final stage, not only to elucidate the city’s economy, but also, being situated in the middle of the other two cities, to clarify the western and eastern exchange networks revealed by Paphos and Amathus (sections 3). Thus, throughout the analysis the city of Paphos is analysed first, followed by the city of Amathus, and finally Kourion.

Based on the research model (section 1.3), data will be linked to the theory, through quantification, model-building, and statistical analysis. The methodological framework is, therefore, crucial for the accomplishment of the project, as it involves the selection of the methods of analysis. In this chapter I shall give an account of the research design, including the sampling, recording and quantification methods, explain the ways in which theory can be linked to the data through model-building, and describe the statistical techniques chosen for the analysis.

Data from published sites were intentionally not included in the analysis. In most publications the primary objective was to record the presence of amphora types and not their quantities (e.g. Hayes 1991), making the incorporation of these data impossible. Even in the cases where quantities are available, the different methods used for the analysis prevented me from including these data in the database, as this was designed according to the aims posed in the present research. Nevertheless, published data are taken into consideration in the interpretation and are particularly useful for the development of ideas concerning production and distribution.

Before the detailed examination of the methodology, it is important to note that a pilot study was conducted half-way through the research in order to test its
efficacy and to demonstrate its potential. Part of the data was quantified and the patterns were interpreted based on the theoretical framework (chapter 4). This vital step confirmed the validity of the database structure and the relevance of the variables analysed. It also provided an idea on the nature and variability of the studied sample (Orton 2000, 29). The effectiveness of model-building (section 5.2) in linking the theory to the data, and the appropriateness of the selected statistical techniques (section 5.2.1) were also examined by a number of models constructed in relation to distribution in the early Roman period.

5.1. The Research design
The research design for the collection and analysis of the data was constructed based on the aims of the study, in order to provide for the quality of the data and prevent bias. The research design includes the decisions made for the assemblages to be studied, the sampling method and size, and the methods used in the analysis of the material, including recording, quantification, and dating (Orton ibid., 10). Special emphasis is put on the limitations of this research, that apart from time constraints are also imposed by the nature of the amphorae or the state of archaeological research. An understanding of these limitations will substantiate the use of the following methods.

5.1.2. The sampling technique
The sampling strategy for the collection of the data involved the consideration of the sampling method, the sampling size, the representativeness of the sample, and the differences in the retrieval processes. Amongst the sampling techniques available for the investigation of archaeological data (see Orton 2000), cluster sampling technique was chosen as the most suitable. According to this technique, the population (i.e. the material from which the sample will be taken) is divided into primary units, which are subdivided into secondary units called clusters or elements (Orton ibid., 30-32). In order to obtain a sample from different contexts, the material from each stratified context formed a primary unit. The clusters were taken to be the trays of amphorae collected from each context. Thus, within each primary unit, 20% of the clusters were selected, because of time constraints, and sampled in their entirety. Sampling based on clusters is more efficient than choosing a sample from within the trays, due to the fragmentary nature of the amphorae and the existence of previously
unidentified types. The latter method could lead to disregarding unidentified types. By applying this technique I aimed to analyse data from all stratified contexts of the sites and achieve a representative sample from the entire assemblage in order to prevent imbalance.

5.1.3. The analysis of the material

5.1.3.1. Quantification and database construction

The analysis concentrates on the identification of known types, the classification of unknown types, their sourcing based on visual observation of typological traits and fabric characterisation (see below), and quantification. A relational database was designed in Microsoft Access; the flexibility provided by this program permits different kinds of analysis and deals with certain problems that may appear in the course of this process. Another objective was to manage all available information. Frequently, information recorded in the database was not used at present due to inherent limitations, but may be exploited in the future. In other words, the database was also designed to facilitate future research, and handle additional data for more detailed questions.

A fundamental aspect is that quantification is based on sherd count. As the nature of the amphorae prevents the use of more sophisticated measures, I decided to apply sherd count analysis at present. The suitability of this method has been demonstrated in the past (Tomber 1988). As Majchereck (2004) points out, the application of this tool allows one to draw valid comparisons with other assemblages also studied by sherd count. However, the final stages of analysis involved the estimation of the percentages of the sherd counts in order to compare the assemblages from each site.

Due to the fragmentary character of the material, analysis concentrated on diagnostic sherds, such as rims, necks, handles, spikes and bases. Body sherds that were diagnostic of the type were also recorded. In the recording process, an effort was made to distinguish those sherds deriving from the same pot, but at the final stages analysis was based solely on sherd counts. The total number of sherds analysed from all sites is 3616.

The nature of the amphorae prevents the use of more sophisticated measures for quantification. Such tools for the examination of quantities of ceramics are the
estimation of the weights and of the eves of types (Orton 2000, 52, 57). Unlike for other kinds of pottery, weights are problematic, as amphora types are of different sizes and the thickness (or thinness) of the walls between types may vary greatly. I nevertheless intentionally took measurements in terms of weight of the sherds of each type from the Amathus P.L. site. My aim is to test this information against sherd counts and possibly other techniques in the future in order to provide a more concrete methodology concerning amphora analysis. The use of eves is moreover impeded by the great variability of amphora shapes. It is for example difficult to predict the size and shape of the body based on the size of the rim, as an amphora with a narrow rim may have a large and globular body, while a vessel with a wide rim may have a slender body (Orton pers. comm.).

The relational database, aiming at an elaborate analysis, consists of six tables. The basis is the 'main table' where the main variables recorded for the analysis of each sherd are accumulated. These include the unique identification number attributed to each sherd or to sherds belonging to the same part of the vessel, the part of the vessel being recorded, the location, the fabric code, the quantity of the sherds (in case the same part of the vessel consists of more than one sherd), the 'ID number' of the pot (in case many parts of the same vessel are being recorded, in which case they all get the same 'pot ID' number), and comments. Additional information is recorded for the variables of types, fabrics and location. This is provided in distinct tables linked with the main table.

The aim in the 'type table' for example is to provide information concerning the date and contents associated with each sherd. Specifically, the date is divided into earliest, latest and general date in order to record the exact period of circulation of each type. At this stage of research it was only possible to conduct the analysis based on the general date (section 5.1.3.2). However, this design will be helpful in the future once more detailed and precise information becomes available from the stratigraphic layers of each site. Other variables recorded in this table include comments, the occurrence of each type in other sites throughout the Roman empire, and bibliographical references for each type. Although the last two variables are not used in any statistical way at present, the aim was again to incorporate all available information for future reference.

In the 'fabric table' my aim was to give more elaborate information concerning the region in which each fabric is assigned, the description of the fabric,
and the kiln site at which fabrics were produced, if known. The fabrics are represented by a code (section 5.1.3.5). Another significant variable included in this table is that of reliability. The introduction of this variable resulted from the lack of petrographic analyses to confirm the source of fabrics (section 5.1.3.5). Thus, sourcing was mainly based on similarities with fabrics that were in the past scientifically analysed by other researchers or were assigned to particular areas on the basis of distribution. The reliability scale ranges from ‘certain’ to ‘very probable’ and ‘probable’, depending on the degree of similarity with available descriptions of fabric analyses, and ‘uncertain’ when the source is merely speculative. The various reliability estimations for each type are further analysed in order to identify the overall reliability level of all imports from their respective region of origin (section 5.1.3.5). In the absence of petrographic analysis this measure aims at assessing the bias factor in order to be aware of the validity of the conclusions drawn in the analysis. The comments accompanying fabric-recording are also very useful in this kind of examination.

The ‘location table’ was designed for the collection of all information concerning the identification of the artefacts in the site. Linked with the ‘main table’ through a code assigned to each stratigraphic layer, this table also includes the name of the site, and any information recorded concerning the context, the trench, the ‘section-trench’ and other information. However, it was not feasible at present to analyse the data in relation to the stratigraphic sequence or to particular contexts of each site. The lack of publications and studies of the material from these excavations hindered the conduction of an analysis based on this information (section 3). In Cyprus and other eastern Mediterranean regions such as Pessinous (Monsieur and De Paepe 2002, 162) stratigraphic information, especially regarding the topsoils, is frequently further obscured by ploughing. An example of this problem is provided by the excavation at Maroni-Petrera where material was derived from “topsoil and ploughsoil contexts or immediate subsoil demolition contexts (often also ploughed)” (Manning et al. 2002, 41). Analysis was in the end based solely on the sites in which the amphorae were identified, without applying any information concerning the contexts. This information was nevertheless provisionally recorded for a detailed analysis in the future once more data will be available.

Other tables include those of ‘stamps’ and of ‘tituli picti’, where I tried to record this important epigraphic information, where encountered. In most occasions
however, it was not possible to interpret the information given by the latter sort of (painted) evidence, due to the complex nature of the script. In these cases the *tituli picti* is described as 'illegible', but the colour and the situation of the script on the pot, i.e. the two other variables, were still recorded. It is important to note that in the interim in the table for the stamps I also included the incised information (*sgraffiti*). Again, apart from the description, I also note the part of the pot on which it occurs. Certainly, this kind of information requires a specialist and extended study, which is outside of the scope of this research. For these reasons in the present analysis I could not focus on the information that may be potentially obtained through this evidence. Nevertheless, I hope that the information recorded may provide the basis for a database regarding literary evidence of amphorae identified in Cyprus.

Finally, the results of quantification analysis are presented in the form of graphs, including column-charts, and tables (chapters 6-9). As already noted, these are given in the form of percentages of the sherd counts, in order to compare the assemblages of the various sites. In the cases in which an assemblage comprises very few sherds, a 'health warning' is issued to show that it cannot be reliably compared to the other assemblages. In the tables, however, results include both sherd counts and percentages. The questions posed in the data analysis and the results obtained are described in detail in chapter 6.

### 5.1.3.2. Dating

For the dating of the amphorae I adopted the general chronological framework established by Panella (1986), and accepted by researchers, such as Empereur and Picon (1989, 224), based on the time span in which the various types were produced and circulated. According to this scheme, types are divided into Republican (2nd – 1st BC; although they begin in the 4th c. BC the scope of this study starts from the 2nd c. BC), early Roman (late 1st c. B.C. to the end of the 2nd or early 3rd c. A.D.), middle Roman (3rd - 4th c. A.D.), and late Roman (late 4th to the end of the 6th c. A.D.). Dating based on the broader circulation periods of the types is more reliable than the stratigraphic contexts in which the amphorae are found. The possibility of finding amphorae in secondary contexts due to the potential for re-use in periods other than the ones in which they circulated (section 9.0.1.3), makes the use of context dates unreliable for the investigation of trade.
Nevertheless, apart from these broader distinctions, in the database I have also incorporated the precise dates of circulation of the various types. For the newly identified types, despite the dearth of publications of the sites under study, such information was acquired through personal communication with the excavators. In addition, these new types were assigned to particular periods based on similarities with known types, or based on their identification in conjunction with types the chronology of which is known. This resulted in the creation of a catalogue with ‘possible types’, but it is a step forward for the identification of the types produced in the eastern Mediterranean throughout the Roman period. Confirmation or rejection of these identifications remains with future research.

5.1.3.3. Identification of types

The identification and dating were based predominantly on the information given in the corpus provided by Peacock and Williams (1986). This corpus was particularly useful for the identification of western types. To some extent identifications were also based on the typology provided by Sibella and Scalliano (1991). For the identification of eastern types I mainly focused on the types identified by Hayes (1991) in deposits from the ‘House of Dionysos’. Hayes’ typology and fabric descriptions provided the basis for the classification of further unknown local and eastern types. The work of Empereur and Picon (1989) in the eastern Mediterranean was also helpful for the identification of eastern types, even though it lacks fabric descriptions. Sparse research in the eastern Mediterranean, such as in Cilicia (Rauh and Slane 2000), North Sinai (Arthur and Oren 1998) and Lebanon (Saghieh 1996) provided further information on eastern types and their fabrics. In the final stages of this research the publication of the proceedings of the Danish School at Athens concerning the production and circulation of amphorae in the eastern Mediterranean (Eiring and Lund 2004) was most useful. The classifications I carried out on eastern types have been examined and confirmed by Prof. Hayes (University of Oxford) to whom I am grateful.

A detailed catalogue concerning the description and chronology of the various types, their contents and origin if known, and their distribution in Roman sites is given in Volume II of the thesis, in Appendix I. It is by no means my intention to provide a detailed catalogue, as this thesis does not aim at replacing a publication of this material. Thus, it was impossible to record morphological features
in great detail and to take measurements of the dimensions of the sherds, as the primary objective of the analysis was to quantify the data and provide broad patterns. Such a detailed analysis will be the scope of individual publications from each of these sites. However, this catalogue is accompanied by drawings or photographs of the types where available. Drawings are usually taken from other publications, as the constraints of this thesis discouraged the completion of original drawings from the sites under study.

An issue complicating amphora studies is that of nomenclature (section 2.1). To avoid confusion, in Appendix 3.1 I note the range of names assigned to each type. The abbreviations of the types used in the analysis are also noted (p. 15). Generally, I tried to use the names or the classification scheme used by most researchers. In many occasions I use the original terminology provided by Dressel, or the name of the researcher who first identified a particular type (e.g. ‘Williams I’). However, in the instances in which certain types were grouped together by Peacock and Williams (1986) based on morphological and other features, I used the typology provided by the latter researchers (e.g. ‘Class 35’).

5.1.3.4. The classification system of newly identified types

Newly identified types were mainly classified according to the site in which they were first identified, followed by a distinctive number. Moreover, a type was frequently considered as miscellaneous until more specimens were found in a particular city, which subsequently allocated its name to the type. This of course should not be interpreted as implying a source in that particular city. As a result, broader groups include the ‘Paphos’, the ‘Amathus’ and the ‘Kourion’ types. However, as the nomenclature was given in the course of the analysis, these identifications do not follow a chronological sequence. For example, ‘Amathus IV’ is presumably a late Roman amphora, whereas ‘Amathus V’ is an early Roman type. Similarly, ‘Kourion XII’ is a possible middle Roman amphora, whereas ‘Kourion XIII’ is early Roman. Also, it should not be taken that the type is exclusive to the city after which it is named, or even that this is the production centre.

The classification system was on occasions formed according to the variants of certain types. Thus, the LRA1 type for example, is further distinguished into LRA1b to LRA1i, based on variations in which it occurred, whereas the word ‘variant’ is occasionally assigned to an existing type to show a slight variation that
nevertheless could not form a distinct type with certainty. An example is again provided by the ‘LRA1 variant’ which varies from the prototype only to a small degree. Future research will show whether this is a distinctive variant or if it is a local version of the prototype, or if it was produced at a different date. Another division concerns variants falling within the broader group of Sub-Koan amphorae. Furthermore, where imitations were observed, the word ‘imitation’ follows the type, such as ‘Gauloise imitation’ and ‘Dr 2-4 imitation’.

Broader categories were sometimes formed, based on general morphological features, where more distinctive traits were not evident in order to form distinctive types (e.g. ‘MR cylindrical’). Another broad group was based on the contents relating to a particular shape (e.g. ‘Garum amphora I’). Analysis, moreover, revealed some specimens previously identified at the House of Dionysos (Hayes 1991), which were not distinguished into types. These are referred to as HD (i.e. House of Dionysos) followed by the inventory number initially assigned by Hayes. On occasions that a particular type could not be identified with certainty, the type is followed by a question mark. Finally, a broad group involves the ‘unknown’ types, concerning the miscellanea specimens that could not be assigned to a particular type.

5.1.3.5. Analysis of fabrics

A crucial aspect is the examination of fabrics, and particularly of the newly identified eastern types, for the determination of their provenance and for elucidating aspects of technology and production. As noted in section 2.1, the application of scientific techniques to ceramics, such as thin-section analysis and more elaborate chemical methods (e.g. Neutron Activation Analysis and more recently Inductively Coupled Plasma-Mass Spectometry) in association with geological studies make the identification of sources possible. Unfortunately, the variability of fabrics encountered in the present analysis, combined with the great range of types, as well as time constraints made the conduction of thin-section analysis impossible. Such an analysis should be conducted within the scope of a distinctive research specialising on this important and often poorly known (concerning eastern Mediterranean fabrics) subject. Another problem with thin-section analysis of Cypriot amphorae is the similarity of fabric sources across the island. Thus, even when a thin-section is available it is still very difficult to assign it to a particular area (cf. Rautman 2003). The problem of fabric homogeneity characterises the soils of the eastern
Mediterranean in general, and it is often difficult to identify the exact region. The lack of fabric references from this part of the Mediterranean, similar to those conducted by Tomber and Dore (1998), poses further restrictions.

Unlike the fabrics of western types, which have been sufficiently analysed (Peacock and Williams 1986), the fabrics of eastern types are almost unknown. Thus, an important task was the establishment of broad categories based on visual observation of the fabric traits of the various types (Orton et al. 1993, 135). Such an analysis is very significant, as an analogous categorisation and description of the eastern fabrics, is absent from the literature. Additionally, these primary classifications are useful for sorting the material for future petrographic analysis.

A code was assigned to each fabric, beginning with ‘F’ (for ‘Fabric’) and followed by a number which was attributed according to the colour of the fabric. The various fabrics of each colour category are distinguished in alphabetic order. Thus, F1s refer to yellowish and buff fabrics, F2s to fabrics with a light red/pinkish core fired buff or creamy in the surface, F3s to red-coloured fabrics, and F4s to pink-coloured or pinkish-buff fabrics (App. 3.2, table 1). F5s refer to red fabrics with an off-white or creamy slip on the outer surface, and F6s to orange fabrics. F7s and F8s refer to brown fabrics. The former group is sometimes characterised by a buff or grey exterior, while the latter is distinguished by mica inclusions and is identified on types associated with Egypt. F9s refer to fabrics with a brown or grey core and reddish-brown or greyish surfaces. As I noticed, these fabrics characterise vessels relating to Beirut. The same system was followed concerning the identification of fabrics for which thin-sections are available. To distinguish them however from the above newly identified categories, categorisation based on provenance was conducted in terms of F10, F20, etc. Thus, fabrics ranging from F10 to F20 are of an Aegean source, while F20s characterise N. African sources. F30s refer to Italian fabrics, F40s to Spanish and Portuguese (Iberian), F50s to Gaulish, F60s to Palestinian, and F70s to Istrian fabrics and, finally, F80s to Egyptian. F100s initially included fabrics that could not be associated with a particular source. However, in the course of the analysis, F103 and F103b were provisionally associated with sources in Sicily or the Aegean, based on comparisons with existing descriptions of these fabrics.

The scheme followed in the analysis was that developed by Peacock in 1977. According to this basis, I recorded the hardness of each fabric, followed by the colour as featured in the Munsell Soil Colour Chart. The inclusions were recorded in
terms of their density (ranging from abundant to moderate and sparse), size, shape and type, if known. The provenance of known, mainly western, types was usually identified from detailed descriptions of fabric thin-sections available in the literature. Eastern fabrics, which were frequently newly identified, were mainly distinguished on the basis of similarities of their traits observed visually, with published descriptions; such studies often refer to source areas identified mainly on the basis of distribution.

As noted above (section 5.1.3.1), in the absence of more precise petrographic information, a measure was introduced aiming at minimising the error factor by recognising the degree of reliability. Thus, in order to estimate the reliability level of all types assigned to each source based on their fabric, the primary reliability levels estimated for each fabric were analysed further in order to calculate the final reliability level for each region of origin. The methodology followed, implied the introduction of a 'weight' measure for the preliminary reliability levels, ranging from 0-3 (0: those identified as 'uncertain', 1: those identified as 'probable', 2: the 'very probable' ones; 3: the 'certain'). This 'weight' was thereafter multiplied by the number of sherd counts identified in each reliability level. In the final step, the results of all calculations were added together. If the end result was larger than 2.5 the identification of the source is considered to be very reliable. If it ranges between 1.5 - 2.4 it is considered to be reliable, if it is between 0.5 - 1.4 it is fairly reliable, and if it is below 0.5 it is unreliable. This formula is better represented in App. 2.1.

It is also important not to exclude the possibility that a number of fabric categories may in fact belong to the same fabric. Superficial differences observed visually, such as differences in colour, may be the result of diverse conditions in the firing process. These issues can only be addressed with petrographic analysis, but as already noted, this classification may be the matrix for such a study.

5.2. Model-building

The quantification of the data aims at the identification of the general patterns and volume of distribution, production and consumption. The interpretation of these patterns based on the theoretical framework provides a means of linking theory and data for the examination of issues mainly of production and consumption. Due to the variability and complexity characterising the patterns, as well as the underlying economic and non-economic processes, distribution patterns cannot be investigated
based solely on the quantified data. To achieve this, the data must be linked to the theory through models and the application of statistical techniques.

Models are defined as partial representations of reality (Voorrips 1987, 63), and express ideas or hypotheses deriving from our knowledge of this reality about an archaeological situation. Their simplified nature permits us to deal with the complexity of the reality. A major component enabling the models to mediate between the theory and the data is the bridging argument, which expresses the expectations concerning the behaviour of the data in the statistical analysis. By linking the theory to the data through this process, the scope of understanding the processes underlying the patterns increases. Thus, model-building provides a means to address the problem of equifinality underlying the data, i.e. the creation of similar forms in the archaeological record by different spatial processes (Hodder and Orton 1976, 138, 145).

Following the above, the models in this study will be built on the observations made from the quantified data, the ideas developed within the theoretical framework, and our knowledge on amphora distribution concerning other Mediterranean areas. The conclusions and deductions achieved after the application of the statistical techniques will be fed back into the theoretical framework. The intention is to start from simple models and gradually advance into more complex ideas, where the data do not correspond to the initial model. This approach will help to prevent me from overlooking simple processes in favour of more complex ones.

5.2.1. Statistical techniques
As the models in this research are concerned with distribution patterns and mechanisms of trade, I decided to use bivariate statistical techniques for the examination of the quantity of the amphorae in relation to distance. These are regression and correlation, and they are concerned with the identification of a relationship between two variables. They will be used either in a ‘confirmatory’ way to test ideas about distribution patterns, or in an ‘exploratory’ way to suggest further ideas (Orton 1980, 15).

Regression is the technique concerned with identifying and describing the existence and nature of a relationship between an independent and dependent variable. Specifically, the independent variable is used “to estimate (or predict) the values of a dependent variable” (Shennan 1997, 131-132). As the variables analysed
here are the quantity of the various amphora types and distance, quantity is the dependent variable (y axis), and distance (x axis), which affects the quantity, the independent. In trade studies in general, regression is used to trace the fall-off pattern in the proportions of artefacts identified in a number of sites in relation to distance from the production centre (Renfrew 1977, 72-85; Shennan 1997, 127-128).

Quantity is estimated in percentages of types in each studied assemblage, and distance in approximate kilometres calculated in straight-line. The origin, where the axis x crosses the axis y, is taken to be Paphos, Amathus, or Kourion, accordingly. Furthermore, it is not the individual types that are plotted on the scattergram, but the sum of the types based on their origins, for the identification of broad trading trends. It is also important to note that any 'striking' differences in the distances between certain areas and Paphos or Amathus, respectively, are the result of their estimation from different points. For example, distance between Cilicia and Paphos was estimated from the west coast which is closer, and for Amathus from the coast close to Syria. Distance between Cilicia and Kourion was moreover calculated from the west, as this was the smaller distance. Interestingly, analysis suggested that these products were mainly imported to Kourion from the east of the island instead, i.e. the longest route that was not calculated in the analysis. The calculation of more precise distances is obscured by the lack of studies referring to major points of distribution in the eastern regions.

The examination of larger-scale changes in the types' quantities across sites in the Mediterranean is difficult, as the published data are not analysed and presented in a consistent way. Consequently, for the investigation of Mediterranean distribution patterns, regression is mainly applied in a modified way based on the material from Cyprus. The implication is to look at the quantities of the various types reaching each city in relation to the distance from their place of origin (based on data obtained from all sites for each city), and compare the various relationships, for each period. The underlying assumption is that the further the place of origin of a type, the smaller the quantity should be reaching the island (Renfrew 1977, 72). This approach is important as it permits the observation of the general trends of the distribution patterns (Shennan 1997, 133) and gives an insight into the level of interaction between the exporting and importing place. Nevertheless, despite these advantages, this technique does not enable the examination of the redistributive mechanism of exchange, i.e. the distribution of amphorae from areas other than their origins.
For the examination of this issue it is necessary to explore the relationship between the amphorae produced in different areas, by applying correlation, and in particular **rank correlation**. Correlation is used to define "the strength of the relationship between two variables" (Shennan 1997, 139). Here, the variables are taken to be the types based on their origin, the relationship between which is the object of investigation. The decision to use rank correlation arises from the nature of the data, and the problem that the results of correlation are affected by sample size. Due to the collection of the data from sites of a different size, the quantity of data from the sites is uneven. This makes it impossible to assume that the sample mean has a normal distribution, and is, therefore, essential to use a non-parametric technique to look at the order of the data.

Rank correlation, which is such a technique, consists of a variety of methods used for the analysis of data presented in a rank-order. Thus, each rank represents the quantity of the types from individual regions from each site. Coefficients include Spearman’s *rho* and Kendall’s *tau_b* and *c* (Fletcher and Lock, 1991; Shennan 1997, 145). Due the uneven character of the ranks the method that is used is Kendall’s *tau_b*, which can deal with large numbers in the same rank (known as ‘ties’) (Shennan 1997, 145). However, this problem could not always be overcome, and as a result, many data after a preliminary filtering, could not form part of the final analysis. An exact (or complete) positive relationship exists when the value of the coefficient is 1, an exact negative relationship when it is -1, and no correlation when it is 0. Moreover, I considered the values above 0.7 as evidence for a strong relationship, and those below as evidence for a weak relationship. Weak relationships are generally ignored in the discussion as they cannot be relied upon to reveal a pattern.
Chapter 6. The amphorae from the sites under study

6. Introduction
This chapter is the core of this thesis as it presents and discusses the patterns that resulted from the analysis. The first task is to present the types identified on each site from each period, and their quantities. Such an approach enables the examination of the most common and possibly popular and demanded types. For the purposes of this thesis, however, the main interest is in their origins, based on the fabrics in which they occur. In other words, the main objective is to identify the level of imports from various regions in the empire and the types which represent them, as well as the types probably relating to local production, and their quantities. Most importantly, these patterns will form the basis for the building of models for the examination of distribution in the periods under study (chapter 8), which is the project's chief objective. Additionally, these results will enable a primary understanding of production, consumption, and their changes throughout the Roman period (see chapters 7 and 9). Although the focus of this research is diachronic study of Roman economic aspects, analysis begins with the discussion of Republican amphorae. Their circulation occurred within the Hellenistic period, i.e. before the conquest of Cyprus by the Romans, but their distribution signifies the first links with the Roman empire. In addition, some may have been distributed in the early Roman period (section 6.1).

To facilitate the observation of all patterns, the outcomes of the analysis are presented in tables as sherd counts and percentages, and in graphs as percentages. A general issue considered is that of the reliability of the identifications (section 5.1.3). Only the broader patterns, as well as the unique and striking observations, are discussed in the text. As noted in the introduction (section 1.2), the descriptions of the types mentioned in the analysis, their contents, production centres and distribution are given in Appendix 3.1 to which the reader should refer as necessary. The abbreviations used for the types in the tables and graphs are explained in the list of Abbreviations. Moreover, a description of the fabrics is provided in Appendix 3.2. To conclude this introductory section, I should underline again, that this chapter does not engage a west-to-east or an east-to-west order of presentation. Rather, in each period, the sites from the city of Paphos are analysed
first, followed by the sites of Amathus, and finally Kourion. This ‘unusual’ order, with Kourion being the last city to be analysed, corresponds to the sequence followed in the analysis of the data. The main reason however is to elucidate further the western and eastern exchange networks revealed by Paphos and Amathus respectively (section 5).

6.1. Hellenistic period (Republican amphorae)

In Cyprus and the rest of the eastern Mediterranean the Roman Republican period, for its greater part, corresponds to the Hellenistic period. Republican amphorae were predominantly distributed across the western Mediterranean (cf. Desbat 1998), but reached the eastern regions as well (Lund 2000a) (App. 3.1.1.1 – 3.1.1.7). As noted in section 6, an adequate study on Roman amphorae should not overlook the Republican amphorae. Their identification is particularly important, as it reveals contacts between the two parts of the Mediterranean before the Roman conquest of eastern Mediterranean regions. As already noted (section 3), Cyprus was annexed in 58 BC, i.e. the period in which most of these types gradually ceased to be produced (App. 3.1.1.1-3.1.1.7).

The types traditionally assigned to this period are the Greco-Italic, the Brindisi amphora, the Dressel 1A, Dressel 1B, Dressel 1C, Dressel 1, and Peacock and Williams’ (1986) Class 8. These types principally contained wine, but some of them occasionally transported other products, such as garum. Most types continued into the imperial period and occasionally their production sites later produced imperial types. Thus, as in essence they are the first Roman amphorae, in Appendix 3.1 they are included in the section of the early Roman amphorae. In the analysis however they are examined separately, as their distribution could have occurred in the 2nd and 1st c. BC, i.e. the peak of their circulation. The lack of stratified contexts from the sites under study prevents at present the examination of this issue. Although of a smaller-scale, they mark the first multi-regional production as they were frequently produced across the western provinces (Keay 1992, 356); a ‘trend’ that was to continue and expand under the imperial period.

Concerning Cyprus, it is difficult to talk about ‘republican assemblages’, due to the generally low number of such western Mediterranean imports. The only exception is perhaps the city of Amathus (section 6.1.2). The vast majority of amphorae on the island were Hellenistic Aegean imports – predominantly the
stamped Rhodian Hellenistic amphorae (Barker 2004, 76-77) — indicating that Cyprus was mainly involved in trading activities operating in the eastern rather than the western Mediterranean basin. These data are, nevertheless, precluded from the analysis, as the Hellenistic material is abundant, and this thesis confines itself explicitly to Roman amphorae. As a result, in the analysis of Republican types I have not examined the amount of eastern amphorae versus that of western and local amphorae present on the sites under study.

In recent years there is a tendency to revise the republican typology (e.g. Loughton 2003). Particularly, a belief has developed that sees the variations hitherto attributed to the basic types (based on fabric and the morphology of the rims, shoulders, and bases) as separated individual types (Loughton 2003, 180). However, the production of certain types in a range of workshops would result in the development of variations. Such variations are for example noted by Desbat and Dangréaux (1997, 84) in the production of the Dressel 1 at Lyon. As these issues are still under discussion, I have decided to follow the traditional typological division. Fervent debate concerns further issues, such as the end of republican productions and the reasons for this change. For example, while some researchers have attributed the end of the production of the Dressel IB to the introduction of barrels for the transportation of Italian wine (Desbat and Dangréaux 1997, 89; Desbat 1998, 34), others have argued that it is the end of drinking activities engaged in competitive feastings that was decisive (Loughton 2003, 182). According to this viewpoint, socio-political changes engendered different conditions for consumption.

Moreover, Republican amphorae were produced and circulated in different centuries of the Republican period. Some of the Greco-Italic amphorae, for example, were distributed before the Dressel 1As, and the latter before the Dressel 1Bs. However, as already noted, the lack of stratigraphic data from the sites and the debatable information obtained from on-going research on these types discourage such a detailed chronological analysis. Rather, they are all considered as types circulating within the broader Republican period.
6.1.1. Paphos

6.1.1.1. House of Orpheus

Compared to the Hellenistic material (based on rough visual estimation) present on site and to the material belonging to the early and middle Roman periods (sections 6.2.1.1, 6.3.1.1), republican amphorae are relatively scarce (App. 3.3.1.1, fig. 1, table 1). Their identification ranges from reliable to very reliable (App. 3.3.1.1, table 3). Although the majority of republican types are Italian (60%) with Dressel 1A being the most common import, it is not possible to stress that they are as frequent as in the Aegean and Asia Minor (Peacock and Williams 1986, 82, 87, 90, 92; Abadie-Reynal 1992, 363). Italian amphorae are followed by Istrian (20%) (Class 8) and Spanish (13%) (Dressel 1) productions (App. 3.3.1.1, fig. 2, tables 2, 4). In particular, the Spanish Dressel 1 amphora is present in two distinct fabrics (F42 and F49), perhaps manifesting their production in more than one centres. Both of these types could have also been distributed in the early Roman period, as their production ceased at the end of the 1st c. AD. An interesting observation concerns a Dressel 1 specimen, the fabric of which resembles local fabrics. To date, it is known that this type was produced in Italy and Gaul (Hesnard et al. 1989, 21-65). Future petrographic analysis may potentially be more informative of such production in eastern Mediterranean provinces.

6.1.1.2. Theatre

As at the previous site, the majority of the material found at the Theatre dating to these centuries concerns Hellenistic types (cf. Barker 2004). The only Republican type identified is the Greco-Italic, confirming Hayes's (1991, 212) identification that Italian products were imported as early as the 4th c. BC (App. 3.3.1.2, fig. 1, table 1). However, the broader focus of this study did not permit the exact identification of these variants in order to provide a more precise dating (App. 3.1.1.1). The fabric variability of these specimens demonstrates diversity in provenance. To date it is known that the type was produced in the Aegean, Sicily, south Italy or Spain. Based on fabric observation the majority of the examples identified on this site seem to derive from Aegean sources (50%) (App. 3.3.1.2, table 4). In particular, F10, the fabric in which the Hellenistic Rhodian amphorae usually appear, is the most common fabric, while a single example was produced in F2h. Other examples were
produced either in Sicily or the Aegean (App. 3.3.1.2, table 4). Remarkably, analysis suggests the existence of more eastern Mediterranean production centres. Specifically, in one case the fabric largely resembles that of the Cilician or Syrian region. Again, such potential production may be elucidated by petrographic analysis. At present, all origins are identified as reliable App. 3.3.1.2, table 3).

6.1.1.3. Customs House

Only a single republican type is identified at this site, concerning a Dressel 1 originating from Spain. As it is the only type identified it corresponds to 100% of the total amount of republican types (App. 3.3.1.3, fig. 1, 2, tables 1, 2). To prevent the reader from being misled by its graphical representation, a ‘health warning’ is issued. In any case, the identification is very reliable as this Dressel 1B imitation was predominantly manufactured in Spain (App. 3.3.1.3. table 3). Visual examination of the fabric (App. 3.3.1.3, table 4) is in agreement with the description of the Spanish fabric given by Peacock and Williams (1986, 94).

6.1.2. Amathus

6.1.2.1. Amathus Agora

The quantity of the republican types identified at Amathus is larger than that from Paphos and Kourion (section 6; app. 3.3.1.4, fig. 1, table 1). The most frequent import is the Spanish Dressel 1 amphora, the identification of which is very reliable (App. 3.3.1.4, table 3). The fabrics in which the type appears are the same as those observed at the House of Orpheus (section 6.1.1.1), perhaps reflecting its widespread production (3.1.1.5). Specimens in F42 surpass all other imports to a considerable extent. Very reliable is also the identification of Italian productions which follow, represented by all types attributed to the Republican period. Among them, the most common is the Brindisi amphora. The Greco-Italic examples were produced in Sicily or the Aegean. Class 8 from the Adriatic coast is also fairly well represented, while its identification is reliable.
6.1.2.2. Amathus Palaea Lemesos

As at the Agora, a great range of Republican types is found at the site of Amathus Palaea Lemesos (App. 3.3.1.5, fig. 1, table 1). In particular, Greco-Italic, Dressel 1A and Class 8 amphorae are more abundant than in the Agora, but from what can be observed visually the latter two types may have also derived from Cilicia. Specifically, a Class 8 amphora appears in F3b and two Greco-Italics in F3bii and F5g respectively (App. 3.3.1.5, table 4). Another note-worthy observation is the Class 8 amphora in local fabric (F2d). This evidence (although the identification of the Cypriot example is only fairly reliable) supports the idea concerning the imitation of republican amphorae in the Hellenistic world (section 6.1.1.1). It also reveals that imitation, although of small-scale, concerned the majority of Republican types.

Overall, Italian imports represented by all types are the most frequent (App. 3.3.1.5, fig. 2, table 2). As at the House of Orpheus, the most abundant is the Dressel 1A amphora, which also appears in F30 and F32. Again, the Greco-Italic amphora is of a Sicilian or an Aegean source. They are followed by the Istrian Class 8 and the Spanish Dressel 1 amphorae. In one case Dressel 1 is present in Gaulish fabric (F50). Apart from being produced in Spain, this type was also manufactured in Gaul, at Lyon, Saint-Just, and Ardèche (Desbat and Dangréaux 1997, 84). The fairly limited distribution of such Gaulish imitations mainly to the north (Desbat and Dangréaux 1997, 85, 91), makes their identification (marking as very reliable) at this eastern region very important. A final remark concerns the amount of Cilician imports. Even though Cilician republican types are more abundant than the Spanish imports, it is not possible to draw comparisons as the former must be probably seen as a minor segment of more extensive imports of Hellenistic amphorae to Amathus from Cilicia.

6.1.3. Kourion

Surprisingly, only two republican types are identified at the city of Kourion. They are the Brindisi (F31) and the Dressel 1A (F32) amphorae, both produced in Italy (App. 3.3.1.6, fig. 1, 2, tables 1, 2, 4). As two sherds are not sufficient to comprise a republican assemblage, a ‘health warning’ is issued for reading the graphs and tables. Unlike the republican types, Hellenistic amphorae from the Aegean, not included in this thesis for reasons outlined above (section 6.1), are abundant. It is worth noting that Kourion is the only known production centre in Cyprus of a Hellenistic type known as ‘Kouriaka’ (Calvet 1986; Meyza 2004).
6.2. Early Roman period

The wide range of new types from across the empire introduced with the imperial period (App. 3.3.2.1 - 3.3.2.6, fig. 1) documents a great change in the distribution, production and consumption of the cities under study. Most importantly, it is revealed that Cyprus was now actively involved in Pan-Mediterranean exchange networks (App. 3.3.2.1 - 3.3.2.6, fig. 2), and that trade was thriving. This change must be considered in relation to the annexation of Cyprus into a Roman province in 58 BC (section 3). As noted in the previous section (6.1), some of the types analysed in relation to the republican period are likely to have been distributed in the 1st c. AD.

In the following discussion it will become apparent that from the 1st to the 2nd c. AD imitations are widespread. A plethora of variations are created evidencing a significant increase in production (section 7.2.1). As a result, an extensive and expanding typology is developed in regard with this period. The analysis shows that a range of types was imitated, but imitation principally involved the Dressel 2-4 type. Developed from the Hellenistic Koan type, it became the most famous and widespread amphora in the early empire (App. 3.1.1.27). Its production mainly associated with the satisfaction of Italian markets (Peacock and Williams 1986, 106; Keay 1992, 356), succeeded that of the Dressel 1 amphorae but it was soon produced throughout the empire. Known variants were produced in the western Mediterranean in areas such as Fréjus (Laubenheimer 1991, 250) and Lyon (Desbat and Dangréaux 1997, 85).

As revealed in the present analysis, variants from Cyprus and the eastern Mediterranean were also numerous. Unfortunately, due to the fragmentary nature of the material it was not possible to provide full descriptions of these variants. Sub-Koan types have been generally distinguished according to distinctive features, such as the handles (App. 3.1.2.5). However, it is very likely that these involve further types, which cannot be currently defined due to these limitations. Hopefully, these broader groups will form a basis for the recognition of more precise classifications in future research. General imitations of this type, unable to be attributed to a certain variant, are included within the broader ‘Dressel 2-4 imitation’ category. For a better description of the typology, known types are discussed in Appendix 3.1.1, whereas newly identified types in Appendix 3.1.2. Those of a possible early Roman date are discussed in Appendix 3.1.3.
6.2.1. Paphos

6.2.1.1. House of Orpheus

The many early Roman types from the House of Orpheus are the best indication of the change occurred in Paphos' position in commercial networks following Roman rule (App. 3.3.2.1, table 2, fig. 1). The most common type is the Dressel 2-4, but among the frequent types are also the Gauloise 4, some of the types identified by Hayes (Hayes VI and X) and the 'Pinched-handle' amphora. In fact, data from this site show strong commercial links with the western Mediterranean, and therefore represent the dense exchange networks between the western and eastern Mediterranean. In particular, the amphorae deriving from the western Mediterranean (48.8%) are almost double the eastern (25.7%) and the local (25.5%) amphorae (App. 3.3.2.1, table 1).

To start with the western products, the best represented imports come from Italy (17.7%), attesting the popularity of Italian wine in this part of the empire (App. 3.3.2.1, table 3). As noted above, it is possible that Dressel 1 amphorae, examined in relation to the preceding period, were also part of 1st c. AD imports. The most prominent Italian import is the Dressel 2-4 (15.4%) (App. 3.3.2.1, table 5). Despite Paphos' vicinity to eastern production centres, the majority of the Dressel 2-4s identified at this villa seems to be of Italian origin. Even though this type has been found in several eastern Mediterranean regions (App. 3.1.1.27), such a large quantity is not frequently encountered. Exceptional cases rather concern major commercial centres, such as Alexandria and Antioch, although there are no sufficient quantified data. Possibly, the underlying reason is the elite context of the site (section 8.2.5).

The identification still remains to be confirmed through petrographic analysis, but the distinctive fabric of the Campanian plateau provides a very reliable visual identification (App. 3.3.2.1, table 4). Additional sherds (1.5%) belonging either to this type or to the MRCA type are provisionally assigned to the early Roman assemblage. This attribution is based on pure speculation engendered from Dressel 2-4's frequency, which makes it more plausible for these sherds to belong to this type instead to the more rare and short-lived MRCA. Another type of Italian manufacture, but rather infrequent, is the Agora K114 (0.6%), also containing wine. A very interesting identification is that of the Dressel 21-22, associated with the transport of fruit (App. 3.1.1.17). The fact that this type is predominantly distributed in the
western Mediterranean highlights the special relationships between the inhabitants of this villa and the centre of the empire.

Following the Italian are the Gaulish imports (16%), represented by the types Dressel 16, Gauloise 1, Gauloise 4, Gauloise 5, unidentified ‘Gauloises’, and a probable Dressel 28. The Dressel 16 amphora is most likely a Gaulish imitation of the Spanish fish amphorae. Such imitations have been recorded by Desbat and Dangréaux (1997, 73). The primary product carried in the rest of the types was wine although fish products could be transported in Dressel 28 on occasions (App. 3.1.1.23). Gauloise 4 type (Widemann and Naciri 1989; Laubenheimer 2003), which is fairly well distributed in the empire, is the best represented Gaulish type in this site (10.9%) (App. 3.3.2.1, table 2, fig. 1). The distribution of the remaining ‘Gauloises’ types predominantly around the western empire (cf. Riley 1979) makes their identification here very significant. Their fabric diversity (App. 3.3.2.1, table 5) reflects the diversity of production centres throughout Gaul, some of which were “conveniently located for river transport” (Laubenheimer 2003, 33). Of the ‘Gauloises’ types, only Gauloise 5 appears in three different fabrics, but the examples in F50, i.e. the usual fabric in which the rest of the Gauloise types also occur, are slightly more frequent (0.4%) than those in F52 and F54 (0.2% each).

Apart from the examples of Dressel 2-4 and Dressel 20 (transporting wine and olive oil respectively) the rest of the imported Spanish amphorae carried fish-based products (Martin-Kilcher 2003, 69; App. 3.3.2.1, table 5). As a type, Dressel 2-4 was exported in a larger quantity (3.2%), but overall the fish amphorae, represented by the Beltrán and Class 16 types, are more abundant (4.9%). The most common type is the Beltrán III (1.7%), followed by Beltrán IIB (1.3%) and IIA (1.1%). The fabrics of these types are diverse, mainly reflecting the existence of different production centres for the various types, based on their contents. For example, olive oil amphorae were mainly produced in the Baetican region, whereas many fish amphorae in Lusitania (Martin-Kilcher 2003, 73, 76). However, not all fish-containing amphorae have the same fabric (e.g. Beltrán III, IVA, and Class 16 are different from the rest) possibly evidencing that fish products were exported from multiple areas of the Iberian peninsula. One particular fish amphora (Beltrán IVB) derived from Portugal.

Less common are the North African products, originating specifically from Carthage (0.4%) and Tripolitania (3%). In Carthaginian fabric is the Maňá C type,
produced in various North African regions, as early as the republican period (App. 3.1.1.33). In Tripolitanian fabric are the Tripolitanian types I, II, and III, as well as an unknown type classified as ‘N. African’ (App. 3.1.2.1; 3.3.2.1, table 5). In fact the new type also appears in F25, also attributed to Tripolitania (App. 3.2, table 1). The Tripolitanian amphorae on the other hand were distributed until the 4th c. AD (e.g. Tripolitanian III), but since the biggest part of their production and distribution occurred in the early empire, they are studied within the early Roman assemblages. They were predominantly olive oil containers, and their production was frequently under imperial control (Reynolds 1995, 42-3). Finally, some of the newly identified types (Paphos I, III), as well as type Pompeii V, are of a fabric considered as western by Hayes (1991, 89-90). Until more information is available it is only possible to assign the general ‘western Mediterranean’ origin to these specimens.

From the eastern Mediterranean, amphorae were imported predominantly from the broader area of Asia Minor (Caria, Cilicia), Lebanon, Crete, other Aegean islands, Egypt and Syria (App. 3.3.2.1, table 3, fig. 2). The best documented products (Hayes VI) appearing in a distinctive fine red-brown micaceous fabric (F3n), according to Hayes (1991, 90) derive from western Asia Minor (6.5%). The area is presumably that of Caria, but as Hayes (ibid.) does not mention the exact location, it is only considered as reliable (App. 3.3.2.1, tables 4, 5). Unlike Caria, Cilicia seems to have been the source of a number of types (5%). They primarily include the known ‘Pinched-handle’ amphorae (1.7%) in F3r, Hayes’ type V in both F5g, which is more common (1.1%), and F3b, and the Pamphylian type (0.8%) in F3j. The rest of the types in Cilician fabrics are newly identified, and are present in smaller quantities. They mainly include variants of the Dressel 2-4 amphorae, revealing the prominence of this type. Specifically, the types included in this category are Dressel 2-4 imitations appearing in a single fabric (F3b), the Sub-Koan IIB (F3j), and Paphos VI (F7c) types (App. 3.3.2.1, fig. 1, table 5).

Additional examples of Dressel 2-4 amphorae have been assigned to the general Asia Minor region, as it was not possible at present to point out a more precise source for their fabric (F30b). Additional examples of the ‘Pinched-handle’ amphora in F2b may belong to Cilicia or Syria (‘Cilicia/Syria’). This inference was based on fabric similarity with the ‘Pseudo-Cos en cloche’ and Pompeii V amphorae, which were also found on the site, and were sourced by Empereur and Picon (1986, 231-240) to this broader area. The fabric variability concerning Cilician imports
reflects the great range of production centres in the exporting region, recently pinpointed by on-going surveys (Rauh and Slane 2000; Rauh 2004).

Of a fair significance are also the Hayes II amphorae imported from Lebanon (3.4%). This type represents a particular stage in the evolution of a long-lived amphora type from Beirut (Reynolds 1997-8, 60-1). It is also found at the House of Dionysos in Paphos (Hayes 1991, 91) and in Amathus (Empereur 1987, 44). Hayes IV, the Roman version of the ‘Rhodian’ amphora, and Dressel 2-4 variants (Dr. 2-4 imitations and Sub-Koan IV) comprise the amphorae traded from the Aegean (App. 3.3.2.1, table 5). The first two types are the most abundant (1.7% and 0.6% respectively). Differences in their fabrics indicate the existence of multiple production centres throughout the Aegean. Of specific Aegean origin is the Cretan 1 amphora imported from Crete (1.1%). Considering the closeness with the Aegean as well as the widespread distribution of Aegean amphorae as far as Britain (cf. Williams 2003) in the west and Pannonia in the north (cf. Bezeczky 1994), their rather moderate quantity (3%) at this Paphian site is surprising. The sparse imports from Egypt (0.4%) are also unusual; they are represented solely by isolated examples of Hayes V and Dressel 2-4 amphorae (cf. Empereur 1986), unlike the great volume of the latter type in Italian centres (Tomber and Williams 2000, 46). Yet, Egyptian productions of this date have also been traded to the western provinces (Tomlin 1992, 307-8; Tomber and Williams ibid.). Taking into account the small distance between Paphos and Egypt, this trivial presence also merits further consideration (section 8.2.5). Finally, another example of a Sub-Koan IV was probably imported from Syria (App. 3.3.2.1, table 5). The identification of all eastern sources is reliable except from that of Egypt, which is fairly reliable (App. 3.3.2.1, table 4). Unfortunately, the origin of two examples of Hayes VII in an eastern fabric (F3s) is unknown.

It has been noted above that the proportion of local amphorae (26%) is almost the same as that of the eastern amphorae. Unfortunately, at this stage it is only possible to make inferences about the region of manufacture (section 7.2.1). The best represented type is Hayes X. It appears in three fabrics, with F1e (5.1%) and F2d (4.6%) being the most common (App. 3.2., table 1; 3.3.2.1, table 5). The next most frequent local amphorae are Dressel 2-4 imitations, also appearing in three different fabrics. Again, the majority were produced in F1e, the soft yellow-buff fabric (4%), while specimens in F3c and F5a are rare. Most of the examples of the local ‘Pinched-
handle' amphora (2.5%) are of the F1e fabric. The same type also appears in F2a, also attributed to local sources (App. 3.2, table 1). In fact, this is one of the few early Roman amphorae the production of which has long been connected to Cyprus (Hayes 1977; 1991). Even though a kiln site has not yet been identified on the island, researchers such as Lund (2000b, 565) support this viewpoint and have nonetheless argued for the existence of more than one workshop. Other local amphorae involve some of the types identified by Hayes (1991) as local, such as Hayes I and Hayes X. Hayes II, IV and VIII, however, were not previously encountered in Cypriot fabrics (Hayes 1991, 92-94). In particular, Hayes (1991, 94) attributed his type IV to an Aegean source, a fabric in which it is also encountered at the present site, and type VIII to a probable Cilician origin. The two fragments of Hayes II in local fabrics (F2d, F5b) are very significant as they signify for the first time the local imitation of the Lebanese type, which was not uncommon in Cyprus. Paphos I, II, VII, VIII, IX, and X, are previously unidentified types (App. 3.1.2), but are generally found in small quantities.

6.2.1.2. Theatre

The significance of the material from the Theatre lies in its association with economic aspects relating to a non-elite context (section 3.1.1.2). Analysis again revealed a great range of types at this part of the city (App. 3.3.2.2, fig. 1), although not to the extent of the previous site. The majority involve a newly identified, presumably local, type (Paphos Theatre 1YY) and Dressel 2-4 imitations, which are far more abundant than the original Dressel 2-4. Rather common is also the 'Pinched-handle' amphora. It is, however, striking to observe that contrary to the previous site, the majority of the amphorae are local (60%), while among the imports the eastern are more common (32%). The western amphorae, the identification of which is very reliable (apart from a Tunisian amphora which is fairly reliable), account for a mere 8% (App. 3.3.2.2, tables 1, 4). The best represented western products are N. African, especially from Tripolitania (4.3%) (App. 3.3.2.2, fig. 2, table 3), which is another marked difference in relation to the House of Orpheus. These include the Tripolitanian I amphora, occurring in two fabrics (F22, F25), and a Mañá C example in F22. However, the majority of the sherds in Tripolitanian fabrics are of undetermined types and are therefore listed as 'N. African' (App. 3.3.2.2, table 5). The amphora of Tunisian fabric possibly contained garum.
The rest of the western amphorae are restricted to sparse Italian, Gaulish and Spanish imports (App. 3.3.2.2, fig. 2). Unlike the pattern observed before, Italian types traded in Dressel 2-4s (F30, F33) and Gaulish types are found in a similar quantity. Concerning the latter region, only two examples of Gauloise 3 could be specified with certainty. Furthermore, as attested by the Beltrán IIA and IIB types, Spanish fish products were consumed in very small numbers. Consumption relating to the context of the Theatre may be the underlying reason for such a quantity (section 9.1.2.2).

The most common imports from this site come from Cilicia (13.3%). Wine was probably the primary product transported in Dressel 2-4 imitations, occurring in a wide range of fabrics (F7c, F3j, F5g, F3r, F3i, F3b), as well as in the ‘Pinched-handle’ amphora, occurring in the same fabric as at the site above (F3r). Additionally, wine was probably transported in the Sub-Koan II amphorae, also observed in two fabrics (F3j, F5g), and in a probable Knidian (‘Knidian?’) amphora in F3bii. As noted in section 6.2.1.1, the variety of fabrics reflects the existence of several workshops in Cilicia, particularly producing Sub-Koan amphorae (Rauh 2004, 331). Fish-based products were presumably carried in ‘Garum amphora I’, also apparent in two distinct fabrics (App. 3.3.2.2, table 5). The latter three types are newly identified types. Another new type is the Unknown IV, also of unknown contents. Although identifications are still to be confirmed by petrographic analysis, Cilician sourcing is reliable as on visual grounds Cilician fabrics are rather distinctive (App. 3.3.2.2, table 4). As above (section 6.2.1.1), the ‘Pseudo-Cos en cloche’, the ‘Rhodian’ and Sub-Koan II amphorae appear in F2b, which may come from Cilicia or Syria. The identification of the ‘Rhodian’ amphora adds to the evidence that the Roman type was produced in areas other than Rhodes, but, most importantly it shows that these areas were not restricted to the mainland opposite Rhodes as asserted by Empereur and Tuna (1989) and Empereur and Picon (1986, 115; 1989, 224). However, only one specimen (Sub-Koan IIB) came from Caria, reading as reliable.

The Aegean amphorae are better represented than at the previous site, but their identification is simply fairly reliable. As with the Cilician, the most popular Aegean amphorae seem to be the Dressel 2-4 imitations. A considerable degree of fabric variability is also observed in this area, as the type occurs in four fabrics (App. 3.3.2.2, table 5). A range of other Sub-Koan amphorae (Sub-Koan II, IIB, IV) were
also traded from the Aegean, as well as Hayes’ type IV, and a single specimen of the Aegean ‘Rhodian’ type. The miscellaneous type ‘Unknown II’, classified as a probable early Roman amphora, is also of Aegean fabric. Another ‘Unknown II’ type as well as a Dr. 2-4 imitation were imported either from the Aegean or the Black Sea (F10).

An additional remarkable difference to the previous site is the substantial presence of Egyptian Dressel 2-4 amphorae and Dressel 2-4 imitations (6.7%). Each group occurs in three different fabrics, the most frequent being F8aiv (App. 3.3.2.2, table 5). Such diversity reflects the development of a series of workshops in the Nile delta (Empereur and Picon 1992, 148; Empereur 1993). Dressel 2-4 imitations, the Pamphylian, and the Sub-Koan II types also appear in a fabric which resembles that of Syria. Although their number is larger than at the previous site (1.6%), sourcing is unreliable (App. 3.3.2.2, tables 4, 5). The Lebanese Hayes II type, although reliable, is only represented by a single specimen.

Local production growth is better reflected in this site, by the range, quantity, and fabric variability of types attributed to local sources (App. 3.3.2.2, table 5). The highest percentage involves the Paphos Theatre 1YY type and Dressel 2-4 imitations. The latter group appears in eleven different fabrics. An insight into which of these fabrics are local to Paphos and which were imported intra-regionally will be attempted in sections 7.2.1 and 8.2.4.2.ii. Interestingly, much less seem to share the F1e fabric, which at the House of Orpheus was encountered frequently (section 6.2.1.1). On the contrary, the most common are in F3c, which at the villa only comprised 1.1%. Imitations in F5a are also more abundant. Other fabrics involve F2a, F1a, F1b, F1i, F3a, F3w, F4g, and F5f. The next most common local type is the ‘Pinched-handle’ amphora (3.6%). In this case the majority are in F1e, followed by specimens in F2a. Although very sparse, it occurs in two more fabrics, F1b and F3c. Examples from this site suggest that the type possibly imitating the Hellenistic Knidian amphora, noted above in Cilician fabric, was probably also manufactured in Cyprus. These fragments, also appearing in three different fabrics, are fairly well represented (2%). Sub-Koan II and Sub-Koan IV amphorae are also found in local fabrics. The fabric differences possibly reveal that these two types were not produced in the same workshops. Very interesting are the sparse examples of imperial ‘Rhodian’ amphorae in local fabrics (F3c, F4g, F5b), which have not been noted before. Thus, they manifest that this type was also produced in areas other than those
close to Rhodes, and suggest a continuation of the Hellenistic tradition of imitation of this type (cf. Marangou-Lerat 1995).

Further unusual occurrences are the sparse fragments of the ‘Pseudo-Cos en cloche’ type and a probable variant of this type in fabrics that look Cypriot. It therefore seems that a number of ‘popular’ eastern types were imitated throughout the eastern Mediterranean basin. The newly identified types Paphos IV, Paphos VIII, and Unknown IV are found in fabrics sharing the same colour but visually different traits. Other rare newly identified types include the Sub-Koan VI (F11), Kourion IV (F3c), ‘Garum amphora I’ (F2d), and Paphos XI (F1a). The identification of the Cypriot amphorae is reliable (App. 3.3.2.2, table 4).

6.2.1.3. Customs House
The Customs House had very little early Roman material, as it is predominantly a late Roman site (section 3.1.1.3, App. 3.3.2.3, fig. 1, table 2). Still, it provides additional information concerning the early Roman amphorae in Paphos. As at the House of Orpheus, the western amphorae are better represented (56%) than the eastern amphorae (37%), whereas there are very few local types (7%) (App. 3.3.2.3, table 1). If this site was also part of the early Roman wall, exchange activities could have operated, and possibly western products arriving at the port of Paphos were redistributed to other regions. This is of course a mere assumption. As these types do not comprise a sufficient assemblage, it is more possible that the types are simply not representative. Due to these complexities, the early Roman material from this site has not been incorporated in distribution analysis (section 8.2.1).

The types and their origins are noted for future reference. The majority of western types derive from Spain (21%) (Dressel 20, Beltran III), followed by Italian Dressel 2-4 amphorae (14%) (App. 3.3.2.3, tables 3, 5, fig. 2). The Gaulish (Gauloise I), Portuguese (Beltrán IVB) and Tunisian (N. African garum amphora) amphorae appear in similar quantities (7%). The majority of the eastern amphorae were produced in Cilicia, a pattern also encountered at the Theatre. They are attested by examples of Sub-Koan VI and Pamphylian types, all in F3j. These are followed by the Garum amphora I in Aegean ware and a Pompeii V from Cilicia or Syria (7% each). Local products are restricted to a single example of the Sub-Koan IV amphora in F3c. Finally, the identification of all western origins is very reliable, apart from
that of Tunisia (reliable), whereas the identification of eastern and local origins is reliable. Only the Aegean specimen is fairly reliable (App. 3.3.2.3, table 4).

6.2.2. Amathus

6.2.2.1. Amathus Agora

This site is very important as it enables a direct insight into the products that were traded in the market place, at least in this part of the island (section 3.1.2.1). The identification of amphorae in this context raises interesting issues concerning trading procedures and tactics. Given that these items were exchanged, a sensible enquiry concerns their identification on site. Although these issues cannot be examined at present, it is suffice to note that as ceramic containers they were likely to break, or that exchange possibly also involved their contents and not the entire amphora (section 9.1.2.2.i). In any case, patterns show that a great range of types was brought in the Amathusian Agora for trading (App. 3.3.2.4, fig. 1, table 2). In terms of the typology the most famous types were the Dressel 2-4, Gauloise 4, the Pamphylian, and the 'Rhodian', while other types were regularly imported. The majority were western (50.6%), but eastern products are also well represented (36.6%). Interestingly, local amphorae are comparatively under-represented (13%) (App. 3.3.2.4, table 1).

To start with the western types the greater part comes from Spain (18%) (App. 3.3.2.4, fig. 2, table 3). These are predominantly fish amphorae (Beltran I, IIA, IIB, IVA). Among them the most common type is the Beltrán IVA (4.1%), followed by Beltran IIA (3.5%). Olive oil (Dressel 20) and wine (Dressel 2-4) were also imported from the Iberian peninsula, in considerable amounts (4.1% and 3.5% respectively) (App. 3.3.2.4, table 5). Gaulish wine amphorae are the second best-represented (11%), although fewer vessels were imported here in comparison to the House of Orpheus (section 6.2.1.i). For the most part these products were transported in Gauloise 4 amphorae (8.2%) in the usual F50 fabric. Other types include Gauloise 1 and a probable Dressel 28 in F51 (App. 3.3.2.4, table 5). The identification of the latter type is not unusual as types inspired by Dressel 28 are known in Gaul (cf. Desbat 2003, 47). Italian amphorae, limited to the Dressel 2-4, also reached this south coastal site, but in a lower quantity (5.8%). Fish products from Portugal were also imported to the Agora in Beltran IVB amphorae. A type similar to ‘H.D. 5067’
identified by Hayes (1991, 89) is also present. The fabric seems to be of western Mediterranean sources, but the exact location is unknown.

Comparatively more N. African amphorae were imported to this Agora than to the sites studied from Paphos. In particular, all Tripolitanian types are present, with Tripolitanian I being the most common (3.5%). Tripolitanian II appears in two fabrics. Carthaginian vessels are mainly represented by Mañá C and a ‘N. African’ example in F24 (App. 3.3.2.4, table 5). The identification of all western imports is very reliable, apart from the Carthaginian types which are reliable (App. 3.3.2.4, table 4).

The most common eastern imports come from Cilicia and the Aegean (App. 3.3.2.4, fig. 2, table 3). The most frequent Cilician import involves the Pamphylian amphora (6.4%), while examples of probable Pamphylian amphorae (‘Pamphylian?’) are found in a different fabric (F3i) (App. 3.3.2.4, table 5). Possibly, this indicates the production of types inspired by the Pamphylian type in the broader area of Cilicia. Other types include the Sub-Koan VI and Hayes V. As with the sites analysed above, the identification of a range of fabrics suggests a widespread production in the region. Examples of the Pompeii V and Pseudo-Cos en cloche types from Cilicia or Syria were also imported. An example of a ‘Rhodian’ amphora is found in the fabric (F2b) identified at the Theatre in Paphos (section 6.2.1.2), providing more evidence for its production in the broader area of south-east Asia Minor. From the Aegean, imports were predominantly of ‘Rhodian’ amphorae (5.3%), while Hayes IV was not uncommon. The different fabric of the latter (F3i) possibly suggests alternative sources. Another specimen of Aegean provenance concerns the Pseudo-Koan amphora.

Eastern products are also attested from Beirut (Hayes II) (5%), Crete (ERA1 and Cretan 2), and Syria, although amphorae from the last two sources are uncommon. The lack of petrographic analyses and references on Syrian fabrics is possibly the reason for such a low quantity. However, an unusual type imitating the ‘Gauloise’ amphorae (‘Gauloise imitation I’) is likely to have been imported from Syria. Its identification, based on similarities with the fabrics of known types assigned to Syria (e.g. the Carrot amphora), is of particular interest considering that such imitations have been previously noted in this part of the Mediterranean (cf. Hayes 1983). Other examples in probable Syrian fabric are of Hayes IX. In Carian fabric come only two examples of Hayes VI and Pamphylian amphorae. This is the
first Pamphylian specimen noted in this study in F3n fabric. Egyptian imports are solely evidenced by a single example of Hayes V (F81). The identification of eastern amphorae is generally reliable. Only the identification of Syrian and Cretan amphorae is very reliable, while that of the Egyptian type is fairly reliable (App. 3.3.2.4, table 4).

As noted above, Cypriot products are unexpectedly infrequent (13%). Nevertheless, their identification is reliable (App. 3.3.2.4, table 4). The most common local type is the ‘Pinched-handle’ amphora (4.7%), appearing in F1e and F2a, also noted in Paphos (section 6.2.1). Another fairly frequent local type is Hayes VIII in a range of fabrics (F1e, F1a, F4b, F1e). The few examples of the Pseudo-Koan type (1.8%) are unusual, as this type has not been previously recorded in Cypriot fabric. Other local products include Dressel 2-4 imitations in F1e (1.2%) and Hayes I (1.2%) in F2c. Very interesting findings are a local version of the ‘Rhodian’ amphora (F1a) and an example of the Cretan 2 amphora in F3f, a fabric which largely resembles that of the local plateau. Mainland Greece is considered as another production area of Cretan 2 amphorae (Hayes 1983, 143), but, to my knowledge, no other areas, and certainly not Cyprus, have been proposed as alternative production centres. However, until petrographic analysis is conducted, the possibility that this identification is based on mere resemblance of the fabrics should not be neglected.

6.2.2.2. Amathus Palaea Lemesos
This site is very significant as it provides information concerning the economic activities of an ordinary housing complex (section 3.1.2.2). As such, it can be used for the study of similarities and differences in economic behaviour with the Agora. The most common are the Dressel 2-4 imitations (30%), while the Pamphylian (15%) and Hayes VIII (9%) types are also found in substantial amounts (App. 3.3.2.5, fig. 1, table 2). The first observation of the broader origins is striking. In contrast to the Agora, the majority of the amphorae are from eastern Mediterranean regions (46.8%), while the local amphorae are approximately of the same proportion (42%). This is remarkable, as in the Agora (section 6.2.2.1) local amphorae were almost absent. Western products only comprise 9.2% of the total early Roman assemblage (App. 3.3.2.5, table 1). The interpretation of these differences is mainly attempted in section 9.1.2.2.
The best represented amphorae are Cilician (24%), with the majority being Pamphylian (9.4%) (App. 3.3.2.5, tables 3, 5, fig. 2). Thus far, this is the only site at which this type appears in three different fabrics (F3j, F3i, F3h), possibly reflecting the existence of several workshops in the region (cf. Rauh 2004). The most common fabric is F3j, also identified in relation to the examples from the previous sites. Only one example appears in F3h. If this fabric is not the same as F3i (App. 3.2, table 1), it possibly demonstrates the existence of another restricted production. A possibility is that all three fabrics come from the area of Anemurium in Cilicia (see Williams 1977 for a late Roman deposit), which is not included in Rauh’s (2004) survey. Two sherds considered as possible Pamphylian amphorae ('Pamphylian?') (0.8%) are also in F3j and F3i fabrics. The second most common Cilician amphorae are the Dressel 2-4 imitations (App. 3.3.2.5, table 5). Most of these imitations are in F5g (2.2%) but the quantity of F3b and F3bii is not negligible (1.1%). Dressel 2-4 imitations in F3j and F3i are few (0.7% and 0.4%). In case these fabrics originate from the area of Anemurium, this perhaps shows a trivial production of such variants in the region. Interestingly, data from this site have revealed some examples (5.5%) similar to the 'usual' Dressel 2-4 amphorae in F5g and F3b. Indeed, the broader area of Asia Minor and the Aegean are recently considered as additional areas for the production of Dressel 2-4 (Empereur and Picon 1989, 225-229).

Of probable Cilician origin is Amathus II, which is a newly identified type (App. 3.1.3.5). Unfortunately, the only part identified hitherto is the handle which is attached to the rim. Possibly this feature signifies that this type was inspired by the Spanish fish amphorae. It is encountered in F3j and F3i fabrics, and the handle occasionally resembles that of the Pamphylian amphora, which occurs in similar fabrics. Possibly, this is evidence of the manufacture of these two types in the same workshops, but this is a mere speculation. Another Cilician amphora in F3j, perhaps also associated with the transportation of fish-based products, is the 'Garum amphora I' (1.1%).

The best represented types within the range of the 'Sub-Koan' series are probably Cilician. Specifically, Sub-Koan IV (1.1%) appears in F7c and F5g, Sub-Koan III in F5g and F5kii, Sub-Koan II in F5kii (0.4%) and Sub-Koan IIB in F5g (0.4%). The recurrence of F5g in these examples possibly reflects the production of a variety of Sub-Koan amphorae at Bickiçi where this fabric possibly originates (App. 3.2, table 1) (Rauh 2004, 331). Further examples of Koan tradition are two fragments
of Hayes VIII. This is the first occurrence of this type in Cilician fabric, as the examples noted above (sections 6.2.1.1, 6.2.2.1) and those described by Hayes (1991, 93-4) are in local fabric. The Cilician ‘Pinched-handle’ amphora only appears once, as opposed to the relatively large number in Paphos (sections 6.2.1.1, 6.2.1.2). Moreover, an example of the type illustrated by Hayes (1991) as “no. 12 fig. XXXVIII” is found in F3j, i.e. the fabric provisionally associated above with Anemurium. Isolated examples of the newly identified types classified in the interim as ‘Unknown III’ and ‘Unknown IV’ also occur in fabrics that look Cilician. Additional types belong to the broader ‘Cilicia/Syria’ region (6%). The majority of these types are ‘Pseudo-Cos en cloche’, followed by Dressel 2-4 imitations. One example of a Pseudo-Koan amphora and one of a Sub-Koan III are also in the same fabric (F2b). The identification of imports from Cilicia and Cilicia/Syria is reliable (App. 3.3.2.5, table 4).

The second most common imports are the Aegean, although they are less in quantity than those from the Agora and the sites from Paphos (App. 3.3.2.5, table 3, fig. 2). The primary amphorae imported from the Aegean are Dressel 2-4 imitations (1.8%) and ‘Rhodian’ (1.5%), all of which appear in F10 and F3m (App. 3.3.2.5, table 5). The great majority of the remaining types are inspired by the Koan amphora. In particular, there are a few examples of Sub-Koan I (F3l) and Sub-Koan VII (F3m), and isolated examples of Sub-Koan II, Sub-Koan III, and Pseudo-Koan (all in F10). Equally infrequent are the ‘Amathus V’, which is considered as a probable early Roman type (App. 3.1.3.6), Hayes IV, and the Pamphylian amphorae. To my knowledge, the latter type has not been previously encountered in Aegean fabric. Moreover, Dressel 2-4 imitations and a ‘Pinched-handle’ amphora example in F4d are either from the Aegean or the Black Sea. The identification of the above sources is reliable, despite that the exact region is unknown (App. 3.3.2.5, table 4). There is a minor possibility that two sherds of a Dressel 2-4 imitation may be from the Black Sea, but this identification is not reliable.

Syrian types, the identification of which is reliable, are better represented than at the Agora. Interestingly, most of the specimens in what I believe to be Syrian fabrics (F3k, F3d) (App. 3.2, table 1, section 6.2.2.1) seem to be Pamphylian. Personally, I am not aware of any Pamphylian amphorae produced in Syria. Amathus II also appears in Syrian fabric, providing support to the idea that these types were related and perhaps produced in the same workshops (section 6.2.2.1). Dressel 2-4
imitations are also found in Syrian fabric (F3k). Additional Syrian imports are Hayes’ no. 12 type in fig. XXXVIII (F3k) and ‘Garum amphora I’ (F3d). As already noted above, these types were also found in Cilician fabrics. A single Pamphylian sherd appears in a fabric that cannot be firmly assigned to Syria or Palestine (F5k) (App. 3.3.2.5, table 5). In brief, it appears that a number of types produced in Cilicia were also produced in the neighbouring Syria.

To a lesser amount, fragments largely resembling the Pamphylian amphorae are found in Egyptian fabric (F81b, F82). They are scarce, but the occurrence of such fragments in a range of eastern fabrics suggests that current information on this type needs to be revised. The unique example of an Egyptian Dressel 2-4 is unusual, considering that it has not been found in the Agora, and it was rare in Paphos. Even though these imports are exceptional, their identification is very reliable (App. 3.3.2.5, table 4). The fabric of a Sub-Koan III (F3q) is suggestive of a Lebanese origin, while the usual Lebanese Hayes II type is absent. This assignment is reliable.

Very remarkable is the presence of some types inspired by western prototypes in fabrics that look eastern (‘East. Med.’). Unfortunately, they cannot be assigned to a specific area based solely on visual observation. These are types primarily imitating the ‘Gauloise’ series. Even though an imitation has also been recorded above (section 6.2.2.1) current knowledge on such imitations is still limited. In particular, these are ‘Gauloise imitation I’ (F100) and ‘Gauloise 3’ (F102). Another interesting imitation is that of Beltrán III (F3s). The rest of the fragments in an undefined fabric (F3u) belong to Dressel 2-4 imitations.

As noted above, western amphorae found in this site are restricted (9.2%). As at the Agora (section 6.2.2.1), however, Spanish amphorae are still the main western products imported (6%), represented by fish amphorae (Beltrán IIA, IIB, IVA), olive oil (Dressel 20) and, to a lesser degree, wine amphorae (Dressel 2-4) (App. 3.3.2.5, tables 3, 5, fig. 2). As at the previous sites, there is a considerable fabric diversity reflecting the existence of several Iberian workshops (cf. Mayet 2001; Martin-Kilcher 2003). In contrast, Italian and Gaulish amphorae are almost absent (0.4% each). The former are represented by a single Dr. 2-4 example, while the latter by a type similar to Gauloise 4 (‘Gaul.4?’). Variations of the Gauloise 4 were indeed produced within Gaul, as manifested by Laubenheimer’s form 3 (2003, 32, 36). The Tripolitanian I and II types are more frequent (2%), while the only Tunisian amphora
present is Mañá C. The identification of all western imports is very reliable (App. 3.3.2.5, table 4).

The Cypriot types constitute the greatest part of the assemblage, the majority being Dressel 2-4 imitations. The fabric in which they mostly occur is F1e, also prevailing at the House of Orpheus (section 6.2.1.1). Almost at the same levels is the F1a fabric, while fabrics F2c (1.9%), F1b and F2a (1.5%) are also fairly common. The less frequent fabrics can be observed at table 5 (App. 3.3.2.5). The second most common local type is Hayes VIII, encountered above in Cilician fabric. It appears in several fabrics, the most frequent being F2a. Amongst the rather common Sub-Koan series the most popular is Sub-Koan III, occurring in five fabrics, the most frequent being F1a and F2a. Sub-Koan I, II, IIB, IIIB, IV, V, VI, and VII, also appear in several fabrics.

The amount of the 'Pinched-handle' amphora in Cypriot fabrics is not insignificant. The majority are in F2a, while an example occurs in F1e (App. 3.3.2.5, table 5). Ideas on their production and exchange are put forward in sections 7.2.1, 7.2.2, and 8.2.4.2.ii. Pamphylian sherds in what seem to be local fabrics are sparse (F3xi, F3c, F1a), but these fragments constitute the first evidence possibly pointing to local production. Pseudo-Koan amphorae manufactured locally are also present, in four different fabrics, including F3a identified at the Agora (section 6.2.2.1). Furthermore, the local fabrics of ‘Pseudo-Cos en cloche’ sherds (F2a, F3c) are different from those observed at the Paphos Theatre (section 6.2.1.2). Paphos II and Paphos IV appear in the same fabric (F3c), whereas a local ‘Rhodian’ amphora shares the same fabric (F4g) as an example from the Theatre. The existence of Cretan 2 imitations on Cyprus is perhaps confirmed by the identification of another example at this site, in a different fabric (F1a). The small number of these imitations shows that their production was rather marginal. Other isolated examples of what seem to be local types belong to types Hayes X and Unknown II.

6.2.3. Kourion

Typology from Kourion is extensive (App. 3.3.2.6, fig. 1, table 2) with the majority of types deriving from local sources (App. 3.3.2.6, table 1). The amount of eastern vessels is also considerable (38.8%), but the amount of western products is low (9.1%), and similar to that from the site of Amathus P.L. (section 6.2.1.2). The best
represented among the eastern products are the Cilician amphorae, comprising the same percentage as the site above (24%) (App. 3.3.2.6, fig. 2, table 3).

They are predominantly represented by Dressel 2-4 imitations in four different fabrics, but mainly in F5g (6.8%) (App. 3.3.2.6, table 5). The ‘Pinched-handle’ amphora from this region is also rather frequent, also appearing in four different fabrics. It is very possible that this type was redistributed from Paphos, where it is found in F3r (sections 6.2.1.1, 6.2.1.2, 8.2.4.2.i). The Pamphylian amphora follows in F3b and mainly in F3j (sections 6.2.2.1, 6.2.2.2). However, the resemblance between the two fabrics (App. 3.2, table 1) must not be overlooked, as petrographic analysis may reveal that these two descriptions actually concern the same fabric. Another type appearing in three different fabrics is the Sub-Koan IV, also present at Amathus P.L. in a similar percentage (section 6.2.2.2). The Amathus II type (section 6.2.2.2) is also present in similar fabrics, but in slightly smaller quantity. Moreover, the presence of scarce fragments of a Cilician version of the ‘Rhodian’ amphora manifests the existence of additional production centres for this type in Asia Minor, apart from Cnidos (Appendix 3.1.1.8). A fragment of the ‘Pseudo-Cos en cloche’ amphora appears to be of Cilician origin (F3b). Finally, isolated sherds identified as Cilician belong to the Unknown II type, to a possible Pamphylian type (‘Pamphylian?’) and to the ‘Garum amphora I’. The attribution of a Cilician origin to the above types is reliable (App. 3.3.2.6, table 4).

Two ‘Pseudo-Cos en cloche’ fragments as well as one Sub-Koan IIB were produced in the broader Cilicia/Syria region. Type Hayes VI, provisionally attributed to Caria (section 6.2.1.1), comprises 0.9%. The Aegean types are the second most common eastern Mediterranean imports, but their quantity is much less than that of Cilician imports (9%) (App. 3.3.2.6, fig. 2, table 3). The ‘Pinched-handle’ amphora appears in a fabric that can be attributed to Aegean sources with more certainty, while the rest of the Aegean types have also been encountered at the previous sites (App. 3.3.2.6, table 5). Issues concerning the distribution of Aegean and Cilician imports are analysed in section 8.2.3.

The percentages of Egyptian and Syrian types are small (2% each). Egyptian imports, the identification of which is very reliable (App. 3.3.2.6, table 4), consist of Dressel 2-4 amphorae occurring in two fabrics, and an example of a ‘Garum amphora I’, identified in this fabric for the first time (App. 3.3.2.6, table 5). Syrian amphorae on the other hand, are mainly represented by Dressel 2-4 imitations and
the Amathus II type. Less frequent are the Pamphylian and the probable Pamphylian ('Pamphylian?') types, and the Unknown IV. The identification of Syrian imports is reliable.

Although only a very small percentage (9.1%) belongs to the western types, products are still present from all the regions noted in relation to the previous sites (App. 3.3.2.6, fig. 2, table 3). As at Amathus, the best represented western amphorae are Spanish, mainly transporting fish products (Beltrán IIA and IIB), olive oil (Dressel 20) and, to a lesser extent, wine (Dressel 2-4) (App. 3.3.2.6, table 5). Again, the differences in their fabrics reflect the diversity of Spanish production centres (section 6.2.2.1). Unlike Amathus, however, the Italian Dressel 2-4 amphorae follow the Spanish, and only one fragment of an undefined ‘Gauloise’ amphora shows the existence of Gaulish imports. This evidence perhaps suggests that Kourion imported products from both cities, but mainly from Amathus (section 8.2.3). Unfortunately, it has not been possible to assign a specific source to the two fragments of Dressel 2-4 imitations in F7e attributed to the western Mediterranean (‘West. Med.’).

Tripolitanian amphorae are common among the N. African amphorae, and are more abundant than the Spanish (5%) (App. 3.3.2.6, fig. 2, table 3). They are represented by fragments of Tripolitanian III and ‘N. African garum amphora’, appearing in two different fabrics (App. 3.3.2.6, table 5). Another very interesting finding is an example of an Amathus II amphora in Tripolitanian fabric (F25). Other specimens in fabrics attributed to Tripolitania are of unidentified types, and therefore provisionally designated as ‘N. African’. Another unidentified ‘N. African’ type presents a Tunisian fabric (F21). Finally, another sherd of a ‘N. African garum amphora’ is identified in F27i, but it has not been possible to determine the specific region of manufacture. Apart from the sherds noted above characterised broadly as western Mediterranean, the identification of all western and N. African types is very reliable (App. 3.3.2.6, table 4).

The abundance of seemingly local types suggests that Kourion was a great production centre (App. 3.3.2.6, table 5). These data strengthen the attribution of the production of the so-called ‘Kouriaka’ amphorae, i.e. the main Hellenistic type associated with Cyprus, to Kourion (see Meyza 2004). Present data suggest that this tradition continued and expanded in the early Roman period (section 7.2.1). The Kourion I (App. 3.1.2.29) and Dressel 2-4 imitations are the predominant types in fabrics attributed to Cypriot geological sources. The former, the volume of which
slightly surpasses the Dressel 2-4 imitations (14.6%), is only encountered in a single fabric that seems to originate from Kourion, whereas thirteen different fabrics correspond to the imitations. Which of these fabrics are local to Kourion and which are from other sources on the island is an issue that will be investigated in the next chapter (section 7.2.1). In the interim it can be noted that the majority of the imitations are in F1i and F3c fabrics that are more likely to be from the city’s hinterland.

Many types belonging to the Sub-Koan series are also in local fabrics. The Sub-Koan VI type comprises the highest percentage, occurring in four different fabrics (App. 3.3.2.6, table 5). The majority of this type’s fragments are in F3xi, followed by F3c. Based on the quantity and recurrence of these fabrics it is most likely that their source should be allocated to Kourion (section 7.2.1). Other types apparent from this series are the Sub-Koan IIB, III, IIB, and VII. Some also occur in F3xi and F3c, reinforcing their attribution to this region. Their smaller number possibly points to smaller-scale production. Possibly, the F5f fabric appearing on the Sub-Koan II and IIB, as well as on the Dressel 2-4 imitations should also be considered as local.

Sherds of the Pamphylian type follow in amount the Sub-Koan VI amphorae. They occur in five fabrics (among them F1i, F3c, and F3xi), but their production must have also been of a limited scale. Another sherd, possibly belonging to this type (‘Pamphylian?’), appears in F1m. In F3c and F3xi are also fragments of the Unknown IV amphora. The examples of the ‘Pinched-handle’ amphora in F1e and F2a suggest that they were perhaps imported from Paphos where these fabrics were most frequent (section 6.2.1). Kourion IV in F3c, F3xii, and F5f, however, should probably be considered local to Kourion, based on the rate of recurrence of these fabrics. Type ‘H.D. 5083’ in F3xii must have been of limited local manufacture, whereas the fragment in F2a was possibly also imported from Paphos. Another type appearing in three fabrics is Hayes VIII. It rests to be investigated whether it was mainly imported or locally produced. Isolated examples of Kourion XIII (F3xii), Kourion XIV (F3c), Pseudo-Koan (F3xi), and Pseudo-Cos en cloche (F5o) possibly indicate a limited local production. The identification of the last two types in fabrics that seem to be local supports the idea that imitation of well-known types was widespread and not restricted to western Mediterranean types (sections 6.2.1.2, 6.2.2.1, 6.2.2.2). In many cases, nevertheless, such imitations only involved a small-scale production.
6.3. Middle Roman period

Data from the following two centuries (early 3rd – late 4th c. AD) reveal a major shift in the character of trade, reflected in the change of the assemblages and of the exchange contacts attested by the types. In particular, the change of the patterns discussed in the previous section suggests the operation of alternative maritime networks (section 8.3). These are manifested in the disappearance of the majority of the early Roman amphorae and the emergence of new, and more limited, types (App. 3.3.3.1-3.3.3.6, fig. 1, table 2). Previous studies have generally focused on the description of typological changes and, to an extent, to the change in patterns, but as Lund (1992, 193) pointed out, the general tendency is their inclusion within a 'dark period'. What studies tend to overlook is the establishment of an adequate explanation involving the reasons that may have led to these changes. It is very interesting to observe that many researchers in the past, especially historians, have outlined the change in the economic and political sectors of the Roman empire (Whittaker and Garnsey 1998, 285-7). But, generally, concerning studies on Roman amphorae, there has been no attempt to synthesise this information in order to explain the vast economic changes reflected in material culture. An endeavour to tackle these issues will be attempted in the subsequent chapters, based on the viewpoints discussed in the theoretical framework (chapter 4).

In this chapter only the typological issues will be discussed and the general patterns as observed after quantification. Many amphorae dating to this period are unidentified and, to date, it is generally believed that very few amphorae belong to this period. It is only recently that excavations are being conducted in a more systematic way, especially in the eastern Mediterranean, that it has become possible to date certain types into these centuries, as well as to identify additional middle Roman types. Nevertheless, despite these advances, the typology of the middle Roman amphorae is still restricted relative to that of the early Roman period. Facilitated by clear middle Roman contexts (e.g. at Kourion and the Theatre in Paphos), the present study has proved very fruitful and has made a significant contribution to the understanding of middle Roman types, at least at this part of the empire. Yet, as new types are identified based solely on their similarity to known middle Roman types (App. 3.1.4), I decided that it would be more appropriate in the interim to consider them as ‘probable middle Roman types’, until further evidence is available (App. 3.1.5). It is also equally possible that some of the ‘unknown types’
may in fact belong to this period (App. 3.1.8). Still, this 'catalogue' is highly valuable, as it will provide comparable data for future reference to other researchers, and will gradually contribute to the establishment of a more complete typology.

6.3.1. Paphos

6.3.1.1. The House of Orpheus

Unfortunately, this villa probably did not survive to the end of the middle Roman period, but rather to the middle of the 3rd c. AD (section 3.1.1.1). Consequently, these data are restricted to the beginning of this period. As a result, no amphorae appear to be clearly local, whereas almost the entire assemblage is formed by western Mediterranean types, apart from a single sherd (3%) that is eastern Mediterranean (App. 3.3.3.1, table 1). As already noted (section 6.2.1.1) some of the early Roman types were produced until the early 3rd c. AD. Thus, it is very probable that some of the local amphorae presented in relation to the early Roman period were produced into this period. Unfortunately, the lack of stratified contexts prevents such a distinction at present, but future work will provide more specific information on the date of circulation.

Nevertheless, it is still possible to discern this period's typological changes and the change in trading contacts (App. 3.3.3.1, tables 2, 3; fig. 1, 2). As stands for the preceding period, the best represented imports are the Italian amphorae, and in particular, the MRCab (47%) and MRCA (29%) types, both in F30 (App. 3.3.3.1, table 5) (Panella 2001, 180). Other clearly western imports are the Almagro 50 amphorae, which were produced either in Spain or Portugal. Until petrographic analysis is conducted it is not possible to distinguish the exact origins. In other words, the extensive range of early Spanish fish-amphorae ceases, and only a single type was still imported from that area. Another interesting observation is the lack of contacts with Gaul, although Gauloise 4 could have been imported to the 3rd century AD, i.e. the period in which its production ceased (Peacock and Williams 1986, 143). In contrast, contacts are maintained with N. Africa. They are predominantly reflected in the Africana I type from Carthage (12%) as well as the MRA1 type ('Middle Roman Amphora 1') in F23, which seems to be N. African, but of an undefined source. In addition, Tripolitanian amphorae examined as part of the early Roman assemblage were perhaps imported into this period (section 6.2.1.1). Their
production continued to the 3rd-4th c. AD (Peacock and Williams 1986, 167, 170), but the lack of stratigraphic data at this stage discourages such inferences. It is nevertheless important to take this possibility into consideration.

The single eastern type is the Carrot amphora. It is hitherto believed that it originates in Syria, but a production centre has recently been also assigned to Sinope (cf. Erten et al. 2004). Petrographic analysis on examples from Cyprus, however, has revealed that imports of this type probably derived from Syria (Rautman 2003, 174). The fabric traits of the specimens identified at the present thesis match the description given for Syrian productions. Even though contacts with the western areas generally declined, the absence of eastern imports reinforces the special connections that the inhabitants of this villa shared with the west. Especially, the persistence of Italian amphorae in this period reinforces the idea developed out of the early Roman data, that the unusual amount of Italian vessels must have been the result of special relationships between the inhabitants of this villa and the centre of the empire (section 8.2.5).

6.3.1.2. Theatre

The abandonment of the Theatre in the late fourth century (Green et al. 2004, 22) ensures the existence of definite middle Roman contexts on this site. Thus, data from this site constitute a better example of the types circulated in this period at Paphos, as well as of the exchange networks in which the city was involved (App. 3.3.3.2, table 2, fig. 1). It can be observed that the economic connections with the eastern Mediterranean continued, but the contacts with the western Mediterranean (even though these were comparatively restricted on this site during the early period) almost entirely collapsed (App. 3.3.3.2, table 1). In particular, the only western imports are in fact N. African, represented by scarce fragments in F22, attributed to the Tripolitanian region (App. 3.3.3.2, tables 3, 5, fig. 2). These are very interesting finds as they involve the Almagro 50 and a type that is likely to be that of S. Lorenzo 7, which, to my knowledge, have not been encountered in this fabric before.

Although exchanges still mainly involved the eastern basin, as in the preceding period, it is important to note that links were not maintained with all the areas observed during the first two centuries (section 6.2.1.2). Additionally, the degree of commercial relationships in most instances differed in this period. The best example is provided by the abundance of Syrian amphorae, represented by the Carrot amphora
in F3k (35%) (App. 3.3.3.2, tables 3, 5, fig. 2). Instead, in the early Roman period the majority of eastern amphorae were of Cilician origin, but of a smaller percentage (21%) (section 6.2.1.2). Moreover, Syrian products were very sparse and unreliable in the preceding period, whereas their identification for the middle Roman period is very reliable (App. 3.3.3.2, table 4). Certainly, this difference in the percentages is the result of the much smaller range of the middle Roman amphorae, but it still demonstrates the sudden growth of Syrian imports, and even the economic expansion of that region. Unlike the early period, the Cilician imports (13%) are almost of the same quantity as the Aegean (10%) (App. 3.3.3.2, table 3, fig. 2), which, disregarding the slight drop, were essentially imported in the same amount in both periods. However, it has to be noted that the identification of the fabrics attributed to the Aegean in this period is unreliable (App. 3.3.3.2, table 4). The former are represented by some examples of the probable S. Lorenzo 7 type and a Hollow Foot fragment, all in F3i (App. 3.3.3.2, table 5). The Aegean imports are manifested in the Carrot fragments in F2i, a fabric that is possibly Aegean, and type Kourion XI. Even though it is not certain whether these fabrics derive from the Aegean (App. 3.2, table 1), it is still interesting to notice that the Carrot amphora was indeed manufactured in alternative fabrics, thus implying that it was probably manufactured in areas other than Syria or Sinope (section 6.3.1.1).

Moreover, Palestinian imports, represented by the Zemer 53 sherd, constitute a novelty in commercial activities. None of the early Roman types could be associated with this region at this stage of research, but this could be the result of the inherent limitations and the lack of petrographic analysis. It has to be noted that some of the late Roman Palestinian amphorae were in fact produced and distributed in the middle Roman period, if not in the early (cf. Majcherek 1995).

The local productions (the ones that could be associated with this period) are significantly less than those of the preceding two centuries. Type Dressel 30 (App. 3.1.4.9), believed to have been produced predominantly in Algeria (Peacock and Williams 1986, 171), appears in the F3a and F3c fabrics, encountered in the early period, and associated with local sources. The probable S. Lorenzo 7 type is also identified in this site in F1a and F2a, showing that this type must have also been produced on Cyprus. Isolated examples associated with this period are the Unknown XIII and Kourion II types, in fabrics previously related to Kourion (F3xi and F1j; section 6.2.3) and the Unknown XIV in F5a. Another important identification
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concerns the probable MRA1c type. This type is associated with this period based on its great similarity to the MRA1a and b types, revealing that there could also be a third, hitherto unknown, variant. Such an idea is reinforced by Tomber's (2004) identification of MRA1 variants in the Museum of London. Further middle Roman types and their significance in the identification of exchange networks of this period will be presented in relation to the material from the sites of the other cities.

6.3.1.3. Customs House

Unlike the early Roman period, the site at the Customs House gives a more representative assemblage for this period (App. 3.3.3.3, table 2, fig. 1). As the early types identified in this site did not form a sufficient assemblage, it is not possible to draw comparisons and identify changes between the two periods. However, the main observation that comes across is in step with that from the sites presented above, in that the majority of the material is eastern (App. 3.3.3.3, table 1). The best represented imports are Palestinian, and it remains to be investigated why there are more Palestinian imports at this site rather than at the Theatre. A special role acquired by the city's walls in intra-regional exchange may potentially be an underlying reason (section 9.1.3.1.iii). The second best represented amphora is the Williams II type in F5h (13%), but contrary to the Palestinian examples that are very reliable, the attribution of this fabric to the Aegean is unreliable (App. 3.3.3.3, table 4).

Cilician imports, however, are less than those identified at the Theatre, and are mainly recognised by the Hollow Foot amphora in F3i. As this type is usually assigned to the Aegean (App. 3.1.4.2), its identification in a fabric that is likely Cilician is very important. This identification is reliable, as it still remains to be confirmed through petrographic analysis. Even though only a single sherd was found of a MRA13, it still suffices to show that contacts with Crete are very reliable, as opposed to the Aegean imports. Very reliable are also the connections with Syria, even though these are still manifested by a single sherd of a Carrot amphora. Again, this is unusual considering their significant quantity at the site of the Theatre, and is another issue that requires further consideration (section 9.1.3.1.iii).

Unlike the Theatre, there are more western imports at this site (25%). These, however, are solely represented by N. African and Italian imports (App. 3.3.3.3, tables 1, 5). The N. African imports are represented by types MRA1a and MRA1b,
but as the exact source of F23 in which these fragments occur is unknown, their attribution to N. Africa is considered to be fairly reliable (App. 3.3.3.3, table 4). However, the Italian imports represented by the MRCA type, even though they are of a small number they are very reliable. Finally, local amphorae are restricted to types Williams I and III in F3o and F3p, respectively (13%).

6.3.2. Amathus

6.3.2.1. Amathus Agora

Certain changes can be observed at the Agora during this period, the most direct being the abrupt decrease in the range of types (App. 3.3.3.4, table 2, fig. 1). Moreover, the majority of the types derive from eastern Mediterranean regions (62%) (App. 3.3.3.4, table 1) marking a significant shift from the products being traded on the site in the early Roman period, which were mainly western (section 6.2.2.1). Undoubtedly, this change should not be immediately taken as an indicator of a change in contacts, as the western products of the preceding period could have been involved in redistributive processes.

The strongest contacts now appear to be shared with Crete and Syria, roughly to the same degree (16% and 15% respectively). Cretan imports are identified by the MRA13 type, and present the highest level of reliability (App. 3.3.3.4, table 4). The almost complete absence of Cretan products in Paphos, however, which is closer to Crete (apart from the example from the Customs House), raises questions concerning their distribution to Amathus, but this is an issue that will be addressed in chapter 8 (sections 8.3.1, 8.3.2). Syrian products on the other hand, involve the Carrot amphora, encountered above. Their identification is also very reliable. The Palestinian amphorae, also attested by the Zemer 53, are the third best-represented imports (11%), an identification that is also very reliable. Another great difference is the much smaller amount of Cilician products (4%), which in the preceding period constituted the primary imports. As at the previous two Paphian sites, they are manifested by the Hollow Foot amphora in F3i, therefore reinforcing the manufacture of this type in this region (App. 3.3.3.4, table 5). Ideas concerning this change in the volume of Cilician imports at this site are put forward in section 8.3.2. The Aegean imports represented by Williams II in F5h appear in the same quantity as the Cilician products, but their identification is unreliable.
The western products comprise half the amount of the eastern (31%), including N. African products (App. 3.3.3.4, table 1). Yet, the best represented western imports are either from Spain or Portugal (16%, i.e. the same amount as the best-represented eastern imports), reinforcing the significance of products from this broader region during the first two centuries on this site (section 6.2.2.1). The majority of these fragments belong to the Almagro 51 type (11%) in F40 and some to the Almagro 50 (5%) in F43. A precise association with one of these regions can only be achieved after petrographic analysis. Nevertheless, their association with these two regions is at present reliable. The rest of the contacts with the west appear to have died out, apart from connections with N. Africa. These are attested by the MRA1a and b variants in F23, but, as noted before (section 6.3.1.3), it has not been possible at present to associate this fabric with a specific source. As a result, their identification can only be considered as fairly reliable. The Algerian imports, however, represented by the Dressel 30 amphora, are very reliable and relatively abundant (12%) (App. 3.3.3.4, tables 3, 4). Another isolated example, conceived of as very reliable involves the Africana II type from Tunisia.

The only apparent similarity with the early period is the low proportion of local amphorae (7%). These are solely represented by types Williams I and II in F3o and F3p respectively, as well as Dressel 30 in F3i. The identification of the latter type strengthens the idea put forward in section 6.3.1.2 concerning a local manufacture. The fabric variation possibly suggests its production at another centre. Possibly, the underlying reason for the rarity of local types is to be found in the role of the site as an agora, mainly engaged in the market exchange of imported or more popular local products.

6.3.2.2. Amathus Palaea Lemesos

As with the above sites, the types dating to this period are also generally found in small quantities (App. 3.3.3.5, fig. 1, table 2). These signify changes at this site as well, but possibly not as dramatic as in the Agora. In particular, the quantity of western products (8%) albeit low is not significantly reduced in comparison to the early Roman period. On the contrary, that of the eastern imports has increased considerably (68%), whereas the volume of the local types has also decreased in relation to the preceding period (26%) (App. 3.3.3.5, table 1).
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To start with the eastern products that are the most plentiful, unlike at the Agora the majority derive from the neighbouring Palestine (31%) (App. 3.3.3.5, fig. 2, table 3). As before, they are represented by the Zemer 53 amphorae. In this site however there is also one example in an alternative fabric, F60b, apart from F60 (App. 3.3.3.5, table 5). Still, their identification is very reliable (App. 3.3.3.5, table 4). The Syrian Carrot amphora (also very reliable) follows, but in almost half the proportion of the Palestinian imports (14%). However, contacts with this area could in fact be of more or less the same level as with Palestine, as fragments of the MRA2 type in F2b, also constituting 14%, derived either from Cilicia or Syria (App. 3.3.3.5, fig. 2, table 5). The definite Cilician productions are, nevertheless, of small amount (5%), attested by examples of the ‘MR Pinched-handle’ amphora in F3j and F3r, as well as an example of a Kourion X type. From the Aegean only a single Hollow Foot amphora was recorded in F10, i.e. in the fabric that it is usually found, whereas a fragment of a possible S. Lorenzo 7 type was found in F81b, attributed to Egypt. The identification of all these eastern sources is reliable (App. 3.3.3.5, table 4).

Western products are again restricted to the same sources as in the Agora, but generally in smaller percentages. In particular, the Spanish/Portuguese imports involve the Almagro 50 and 51 types, and the Tunisian imports the Africana II type (3% each) (App. 3.3.3.5, tables 3, 5). In fact, the amount of the latter is greater than at the Agora (section 6.3.2.1). As with the previous examples of the MRA1b type in F23, the fragment found on this site could not be assigned to a more specific source. It is consequently attributed to the broader N. African region.

The local products, which are less common than in the early period, are significantly more than those found at the Agora. Sherds of the Dressel 30 type comprise the majority of local types and provide the best support for the ideas stressed above concerning its local production (sections 6.3.1.2, 6.3.2.1). Here they occur in a variety of fabrics attributed to local sources. Predominantly, examples occur in F11 and F3c (6% each), but examples are also found in four other fabrics (App. 3.3.3.5, table 5). It is important to stress the possibility that this local version may not be identical to Dressel 30, as so far it can only be identified by its bulbous toe. Its similarity, nevertheless, and this correlation have been kindly confirmed by Dr. Hayes (pers. comm.). A few examples involved the ‘MR Pinched-handle’ amphora in two different local fabrics (F1a and F1b). This identification shows that the production of this type in Cyprus goes down to the middle Roman period, but
that it probably became more limited. Other local productions involve isolated examples of Kourion XI in F3xii, of a probable S. Lorenzo 7 in F1m, and the Unknown XIII type in F1a. The fabrics in which the last two types occur are different to those encountered above (section 6.3.1.2) showing that production, although limited, was fairly widespread.

6.3.3. Kourion

As noted earlier (section 6.3) the site of Kourion is very valuable for the study of the middle Roman period in particular, as the site was destroyed by an earthquake in 365 AD. As a result, there are clear contexts dating to this period, but the fact that these remain unstudied makes the identification of types belonging to this period difficult. Instead, they add up to the endless catalogue of miscellanea amphorae. Thus, my efforts to fill this gap were predominantly based on similarities of certain unknown specimens to already known types attributed to this period, or on their conjunction with middle Roman types. Even though many types are considered as 'probable' middle Roman (App. 3.1.5), it became possible to associate more types with this period (App. 3.3.3.6, fig. 1, table 2), showing the potential for expansion of this period's typology.

Despite the progress in the establishment of a middle Roman typology, the patterns still show that the regions represented for their trading links have dropped in number. As observed in the previous sites, they are mainly confined to the eastern Mediterranean basin. Here also the majority of the amphorae are of eastern sources, whereas only a trivial 3% corresponds to western amphorae. This pattern may be an indicator of the operation of redistributive mechanisms for the import of western products to this city (section 8.3.3). On the contrary, local amphorae have not dropped dramatically from the early period and are fairly abundant (40%) (App. 3.3.3.6, table 1).

The best represented products are the Syrian Carrot amphorae, reinforcing the strong links between the south part of the island and Syria already manifested in the sites analysed above. The identification of this type is very remarkable as several fabrics are observed (F3k, F5j, F1q). Nevertheless, at least visually, these fabrics portray the same traits (App. 3.2, table 1). The main fabric is F3k, also shared by the examples encountered thus far in other sites; F5j was less common, while F1q was very rare. The possibility of a variation of the same fabric due to firing processes
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should certainly not be dismissed. The next best-represented region is Cilicia (13%) (App. 3.3.3.6, fig. 2, table 3). Unlike in the previous sites, many types appear in Cilician fabric. Kourion XII is the most common type in a fabric attributed to Cilician sources (F5g), whereas the presence of the Hollow Foot in F3i reinforces the idea of its production in Cilicia (section 6.3.1.2). Fragments of the 'MR Pinched-handle' amphora were also found in two fabrics (F3i, F3j) revealing that the manufacture of this type continued to these centuries. Other fragments involve the 'MR cylindrical' type, a term provisionally attributed to sherds belonging to cylindrical amphorae (App. 3.1.5.3). They are fairly common in this period (Opaït 2004, 301-303), but their exact morphology cannot be established due to their fragmentary nature. Additional isolated examples involve the 'MR carrot-shaped' amphorae (App. 3.1.5.4), the Unknown XVI and the Dressel 30 amphora. The identification of the last specimen in particular is very significant as it supports the suggestion that the Dressel 30, or a similar type inspired by this type, was also manufactured in areas other than Algeria (sections 6.3.1.2, 6.3.2.1, 6.3.2.2). A fragment of a type similar to Williams' type I (1987) ('Williams I?') also appears in Cilician fabric.

In almost the same quantity are the Aegean imports (12%), but they are fairly reliable while the Cilician are reliable (App. 3.3.3.6, fig. 2, tables 3, 4). Rather abundant are the 'MR carrot-shaped fragments' in F3i, while the remaining types are each represented by a single sherd. Among them the most interesting find is that of a Carrot amphora in F2ai, which I believe derives from an Aegean source. Thus, it provides supporting evidence to the assertion made above (section 6.3.1.2), also based on the identification of fragments in a probable Aegean fabric, that there must be other areas of production for this type apart from the known ones. Of equal importance is the identification of a fragment attributed to the Dressel 30 type in F10, which in its turn suggests that this type may have also been produced in the Aegean and strengthens the above assertion concerning a widespread production. The rest of the types provisionally termed Unknown XII, Unknown XIII and Unknown XIV (App. 3.1.8.9, 3.1.8.10, 3.1.8.11) are miscellanea but possibly associated with this assemblage. They are in fabrics that appear to be from the Aegean (App. 3.3.3.6, table 5). Remarkably, despite the proximity with Palestine, Palestinian amphorae are not well represented (2%). These feeble trading contacts however may be the result of the lack of stratified contexts; it is possible that a proportion of the Palestinian
amphorae studied as part of the late Roman assemblage (section 6.4.3) was in fact imported in the middle Roman period.

Western imports are very sparse and involve isolated examples. In particular, a single Almagro 51 type derives from the Spanish or Portuguese region, while the rest were manufactured in N. Africa (App. 3.3.3.6, table 5). A Dressel 30 sherd appears to be of an Algerian origin, i.e. from the source originally assigned to this type, and an Africana II sherd from Tripolitania. Another Dressel 30 fragment is of a fabric assigned to N. Africa, as its features did not resemble those of the Algerian fabric described by Peacock and Williams (1986, 172). An alternative Algerian source however should not be ruled out, as well as its production in other N. African regions.

The local amphorae perhaps imparted the most interesting information from this site. The large typology (40%) identified as local has revealed that this site continued to be vital in Cypriot production (App. 3.3.3.6, table 1). In fact this site yielded more types likely to be local than any other site. The majority belong to the newly identified flat-based Kourion II type, also identified at the Theatre in Paphos. On this site, however, it occurs in eight fabrics, predominantly F1p and F3xi. The rest of the fabrics are probably less common as they include isolated examples (App. 3.3.3.6, table 5). The handles conventionally included within the Unknown XIII type are common in this site. As discussed in Appendix 3.1.8.10 these handles, possibly belonging to diverse types, may date to the middle Roman period. Another common type is the possible MRA5 (‘MRA5?’) in four fabrics, possibly also indicating a small-scale production, as they mostly involve isolated examples. Fairly frequent are also the new Kourion V, VII, VIII and X types, discovered in similar quantities. Whereas the latter two types only appear in F3c, the first two occur in a few different fabrics (Kourion VII is also found in F3c). Kourion VI and XI types are additional newly identified types possibly belonging to this period. The latter type, albeit rather infrequent, appears in F1i and F3c. In similar amount is the probable S. Lorenzo 7 amphora, identified in F3c and in F1o. This is the third site in which this type is identified in local fabrics, attesting to its production on the island. The repetition of the same fabric(s) in these new types provides further evidence for local production. Single sherds in fabrics believed to be local are identified as Kourion III and Kourion XV, ‘Williams I?’ , ‘MR carrot-shaped’, and ‘MR cylindrical’ (App. 3.3.3.6, table 5). Despite the profound changes, these data generally suggest continuation in
production and distribution. These aspects will be investigated in more detail in chapters 7 and 8.

6.4. Late Roman period

The different types from those existing in the preceding periods and their distribution manifest another change in the nature of trade and exchange in the course of the late empire (late 4th - mid 7th c. AD) (sections 8.4, 8.4.5). The increase in the range and quantity of types circulating indicates an expansion of economic activities (App. 3.3.4.1-3.3.4.6, fig. 1). Moreover, the quantity of local types manifests that production on the island boomed in this period. In spite of economic intensity, however, the patterns did not deflect from the regionalisation characterising the preceding period. In a few words, the amphorae show that trade acquired a completely different character from that of the preceding periods.

The majority of the types identified as eastern in past amphora studies belong to the late Roman period. Partly this is due to the concentration and development of the late empire in the eastern Mediterranean basin. Apart from the existing typology (App.3.1.6), many newly identified types in the present study probably belong to this period (App. 3.1.7). Their identification and dating however relates to a major problem of the late Roman typology, concerning the end of these productions. It is traditionally believed that after the mid 7th c. AD, when the Arabs invaded the island marking the end of the late Roman period, economic activities ceased (Gabrieli et al., forthcoming). According to these viewpoints, the centuries following this period were 'dark' and the island is characterised by general abandonment and decline. These ideas however are largely engendered by the lack of published stratified contextual data and the lack of means to date post 7th century contexts. Only a few studies (Hayes 2003; Rautman 2003, Gabrieli et al., forthcoming) argue for economic continuation. Current evidence is inadequate to determine with certainty whether new types or variants of existing late Roman types (e.g. LRA1 variants) should be considered as late Roman or as early Byzantine. Growing evidence suggests that the production of many of these 'problematic' types began in the late 6th or early 7th c. AD (Hayes 1980, 377). Future studies will elucidate whether they should be studied within a late Roman or an early Byzantine context. This issue can only be addressed once more data are systematically investigated. Until more
information is available to provide an exact date, in the present thesis these types are examined as part of the late Roman assemblage.

6.4.1. Paphos

6.4.1.1. House of Orpheus
The House of Orpheus is predominantly an early Roman site (section 3.1.1.1). Very few fragments could be associated with the middle Roman period (section 6.3.1.1), while the late Roman period is absent. A few exceptional sherds belonging to these centuries are probably intrusive. As a result, the estimated percentages are not suitable for comparative purposes. Type LRA3b occurred in the fabric attributed to the region of Caria (F3n) (App. 3.2, table 1; App. 3.3.4.1, table 5), and a Class 35 fragment in F22 is associated with Tripolitania. Of local fabric is a LRA1 sherd, which constitutes the most common type in this period, and will be discussed in more detail in the following sections. The above examples however do not form an assemblage, and their presentation is purely informative.

6.4.1.2. Theatre
Data from the Theatre reflect the emergence of a wide range of types during this period, almost comparable to that of the early Roman period (App. 3.3.4.2, fig. 1, table 2). Additionally, the large quantity of eastern types is indicative of the concentration of exchange activities around the eastern Mediterranean. In particular, the eastern types sum up to 46.7%, whereas the western to a mere 3.5%, manifesting that imports from the other half of the Mediterranean declined even further. The local products appear to be more plentiful than in the preceding periods (49.8%) (App. 3.3.4.2, table 1).

The most common imports are the Palestinian forming 21.1% of the studied assemblage. Their identification is very reliable (App. 3.3.4.2, fig. 2, tables 3, 4). The primary type encountered is the 'Palestinian'. Even though only two fabrics are normally associated with this bag-shaped amphora (orange and grey wares) (App. 3.1.6.11) there is a considerable variation in the fabrics noted at this site (App. 3.3.4.2, table 5). Still, F61 corresponding to the usual orange ware (App. 3.2., table 1) seems to be the common ware. The other fabrics were less frequently used, or are indicative of small-scale production. Additionally, a specimen of a Palestinian
amphora in F5k was produced either in Palestine or Syria. This identification is in accordance with the discovery of additional manufacturing areas outside Palestine, possibly imitating this type (Bonifay and Villedieu 1989, 31). Another exceptional fragment of a bag-shaped amphora, provisionally identified as ‘Palestinian b’, is part of a debate concerning the dates of its production and circulation (App. 3.1.6.12). The second most common Palestinian amphora is the LRA4. Even though this type is commonly described in one fabric (F62), two slightly different fabrics are noted (App. 3.3.4.2, table 5). The possibility that they could have been variations of the same fabric resulting from differing firing conditions should not be overlooked. The observation that Palestinian products have replaced the Syrian imports that thrived in the preceding period is very interesting. Possibly through time Palestinian products, such as white wine (Peacock and Williams 1986, 191), won over the market, acquired a reputation and secured their place in both regional and inter-regional trade.

A significant change occurred in the trade of Egyptian products. As opposed to assertions that Egyptian wine was consumed throughout the Mediterranean in limited quantities (Kingsley and Decker 2001, 4), Egyptian amphorae are the second most common imports (App. 3.3.4.2, fig. 2, table 3). The best traded type is Egloff 177, which appears in five different fabrics. Some could be variations of the same fabric, but some could possibly reflect wide-scale production of this type along the Nile (App. 3.3.4.2, table 5). Egloff 172 is less common, occurring in the F82 fabric usually associated with these two types, but also in F81c, which could be similar to some of the fabrics encountered for Egloff 177 (App. 3.2, table 1). Interestingly, a LRA1 fragment occurs in the distinctive brown micaceous ware (F81d). To my knowledge Egypt is not considered as a production centre for this type.

The most common Aegean amphora is the Globular 1, in two fabrics. Another fragment had to be assigned the general ‘Globular’ term as it was not possible to identify the exact variant (App. 3.1.6.15). Generally, amphorae of this form appeared at the end of the 6th or the early 7th c. AD and are the predominant vessels believed to have continued down to the 8th century. In other words, they are at the core of the debate concerning the operation of economic activities in the subsequent ‘dark’ centuries (see section 6.4). Globular amphorae are believed to have developed from the LRA2 type (Hayes 1992, 71), which is also frequent at this site. As it is attributed to the Aegean or the Black Sea, it is difficult to distinguish the
exact source without petrographic analysis. Only the fabric of one example largely resembles a fabric attributed to the Aegean (F2ai). Another example of a probable Aegean source is a LRA1 sherd (F3m).

Amphorae imported from the Aegean or the Black Sea, identified as reliable, overall comprise 4.9% of the total assemblage. Other sherds associated with these areas, based on fabric similarity with LRA2 (F4d), belong to Globular amphorae. A fragment of LRA1 in this fabric suggests that this type was also produced in the wider Aegean region. It appears that a newly identified type, provisionally termed Unknown IX, should also be assigned to this region.

An interesting change occurring in the late Roman period is the even greater drop in Cilician imports, represented by a meagre 3.5% (App. 3.3.4.2, fig. 2, table 3). Imports from this region mainly include the LRA1 type, which has previously been identified in Cilician fabrics on the island (Rautman 2003, 170) (App. 3.3.4.2, table 5). Another LRA1 fragment is assigned to the broader Cilicia/Syria region. Interestingly, LRA2 is also identified in fabrics associated with Cilicia, even though to my knowledge Cilicia is not one of the production centres suggested for this type. A very unusual finding involves a sherd belonging to the Palestinian type, which is in a fabric that I have associated with Cilicia (F5kii). This identification perhaps reinforces the existence of workshops for this type outside of Palestine. Thus far Cilicia has not been proposed as such a centre, which makes this identification interesting. Moreover, it seems that towards the end of this period the Globular 1 amphora was also manufactured in Cilicia. Finally, a single specimen of a LRA1 variant, provisionally called LRA1e, was possibly produced in Asia Minor later in the period (section 6.4). Unfortunately, the identification of the origin is uncertain, and consequently, not reliable (App. 3.3.4.2, table 4).

Both variants of LRA3 (LRA3a and LRA3b) are present, in the fabric attributed to Caria, i.e. the western part of Asia Minor. An important identification involves the type provisionally termed ‘LRA3?’ in F3nii and F3n, suggesting Cilicia and Caria as sources respectively (App. 3.3.4.2, table 5). This new type is predominantly identified by its slender, hollow, conical base, ending in a ‘pinched’ point. Both its fabric and shape largely resemble the LRA3 type, but this is a type that I have no acquaintance of. However, the possibility that it comprises a third variant of LRA3 is very intriguing. Hayes’s (1992, 63) proposal concerning the existence of a LRA3 variant provides support to such an idea. The identification of
this type in the fabric used for the production of the LRA3a and LRA3b (F3n) perhaps supports such a connection between these types. These types show that although Cilician imports decreased in relation to the preceding periods, products from Asia Minor were still imported to the island.

The Beirut 8 amphorae from Lebanon comprise a small percentage (App. 3.3.4.2, fig. 1, table 2). A detailed account for the development and distribution of this type is given by Reynolds (1997-8, 59-63). Possibly, the two fabrics in which this type appears are indicative of the existence of diverse workshops. Another fragment manufactured either in Lebanon or Palestine (F7g) belongs to the Globular amphora (App. 3.3.4.2, table 5).

Western imports are solely restricted to N. African products (App. 3.3.4.2, fig. 2, table 3). It therefore becomes apparent that the change in patterns that occurred in the middle Roman period continued in this period, and that regionalisation became even more established. However, even though the Pan-Mediterranean character does not characterise trade in this period, it is possible that some of the late Roman western amphorae remain unknown. The primary type imported from the N. African coast is the Spatheion, identified in variations of the same fabric. Another type is probably a Spatheion variant, which occurs in similar fabrics (App. 3.3.4.2, table 5). Unfortunately, the exact source of these fabrics cannot be determined, and are therefore assigned to the broader N. African region. From Carthage, Tripolitania and Tunisia, however, derive amphorae belonging to the broader Class 35 class (Peacock and Williams 1986). The fact that the present study did not focus on the detailed typological recording of the sherds for the reasons outlined elsewhere (section 5.1.3.3) prevented the exact identification of the types assigned to Class 35.

The analysed data revealed that local production also boomed in this period. Unlike in the early Roman period, when production involved the manufacture of a range of different types, the typology of local production is significantly restricted. The main type produced locally is the LRA1, a kiln site of which has been excavated at Paphos (cf. Demesticha and Michaelides 2001). Yet, the abundance of fabrics in which this type occurs (App. 3.3.4.2, table 5; Williams 2005a) as well as the discovery of probable wasters in other sites, including the Theatre, reveals that there were more workshops. The scale of these workshops remains to be examined based on quantification (section 7.4.1). A number of these pots could have been imported to Paphos from other Cypriot cities. To date, Amathus, Kourion and Zygi are among
the places suggested as LRA1 production centres (App. 3.1.6.2). Which of them are likely to have been imported from other cities, is an issue that will be investigated in section 8.4.4.2. However, the majority of the fragments identified at this site belong to the F3a fabric, corresponding to the fabric produced at the excavated kiln site. Moreover, the existence of several variants of the LRA1 (LRA1b, LRA1eii, LRA1f, LRA1h, LRA1g) in local fabrics shows the dominance of this type during this period (App. 3.3.4.2, table 5). Variants have also been identified by Hayes (ref-1980, 377). Seemingly, towards the end of the period the Globular amphorae, and certainly Globular type 1, were also manufactured on the island. A local production of this type is also documented by Hayes (1980, 379), and Rautman et al. (1999, 380, 383-5) assign a possible source in central Cyprus based on petrographic analysis. Although not to the extent and volume of the LRA1 production, this general type is also found in a number of fabrics. Thus, as I have stated elsewhere (Gabrieli et al., forthcoming) these examples may be considered as indicators of a continuing economy on the island during the following two centuries (7th-8th c. AD). Such an assertion is based on the identification of this type in other regions and in contexts dating to that period (Van Doominck 1989, 248; Hayes 1992, 71; Arthur and Oren 1998, 207).

6.4.1.3. Customs House

Interestingly, the patterns resulting from the quantification of the late Roman material from the Customs House are very similar to those from the Theatre, even though these are more limited (App. 3.3.4.3, fig. 1, table 2). Again, eastern Mediterranean products are more abundant (48%), than the western Mediterranean (8%). The quantity of western imports is slightly greater than that from the Theatre, but still, products from this region reduced significantly in relation to the previous periods (App. 3.3.4.3, table 1). Contacts with the west are also restricted to N. African regions. Generally, this site does not present the extensive commercial links observed at the previous site, most likely due to its different character (section 3.1.1.3). Nevertheless, it still provides a valuable insight into the period’s exchange networks. Furthermore, the proportion of local products appears to be very similar to that from the Theatre (43%).

The main types identified are from Palestine (27%), reflecting the importance of their contents (App. 3.3.4.3, fig. 2, table 3). The most common is the bag-shaped
Palestinian amphora occurring in the usual orange ware (F61), while LRA4 is also fairly frequent (App. 3.3.4.3, table 5). Products from Caria (8%) are more common than at the Theatre, as they follow the Palestinian in quantity. They are again represented by both versions of LRA3 in F3n. Nevertheless, none of the types could be associated with Cilicia. The Egyptian amphorae on the other hand, only represented by Egloff 177, possess the third place in the assemblage of imported eastern commodities (6%) (App. 3.3.4.3, fig. 2, table 3). Again, these specimens appear in the usual fabric listed for this type (F82). The fabric of LRA2 sherds (F4d), found in similar amount as in the Theatre (4%; section 6.4.1.2), is the one associated with the Aegean or the Black Sea (App. 3.3.4.3, table 5). Despite the ambiguity, it is the only type that can safely be associated with this broad region. The only type in a probable Aegean fabric is Agora M273.

As for the N. African amphorae, representing the only contacts shared with the western Mediterranean, they mainly involve types of the broader Class 35. At present it was possible to associate the majority of them with Carthage (5%), but two examples were found in Tunisian fabric, and one in Tripolitanian (App. 3.3.4.3, table 5).

Local products predominantly include the LRA1, but at this site it only appears in two fabrics, the F3a which is linked with Paphos (section 6.4.1.2), and F1a, which probably came from Amathus (section 7.4.1). Type Amathus IV, mainly encountered in Amathus (section 6.4.2), is identified in a local fabric (F3f). According to Hayes (pers. comm.), it is possible that this type was also inspired by either the LRA1 or LRA2 amphorae, and was probably produced around the end of this period. It is therefore possible that it also resumed to the next centuries. Finally, a single example appears of the Globular I amphora in F1a, reinforcing the idea of local production.

6. 4. 2. Amathus

6.4.2.1. Amathus Agora
A very significant change is observed in this period’s data at the Agora in Amathus; for the first time local products surpass those imported. In particular, local products form 64% of the total assemblage and eastern products 30.3% (App. 3.3.4.4, table 1). Another change involves the abrupt drop in western products, which constitute a mere 6%, and solely involve N. African products, as also noted in the sites above.
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Once more the Palestinian white wine, presumably transported in the Palestinian amphora, was the most demanded commodity (App. 3.3.4.4, fig. 1, table 2). These examples also appear in the more frequent orange fabric (F61). Further Palestinian commodities were carried in the LRA4. An interesting finding is the LRA13, appearing in a fabric (F6a) that largely resembles the Palestinian (App. 3.2, table 1; App. 3.3.4.4, table 5). This fabric was generally found on amphorae associated with this region (section 6.4.2.2). Although Cyprus has been suggested as a probable origin (Demesticha 2005), no specimens have been identified in probable local fabric in the present study; the similarity of this specimen with the Palestinian fabric merely expands the possibilities concerning the type’s origin.

The next most common imports are the LRA3a and b types from Caria (5%), but their volume is much smaller than that of the Palestinian. Products from Cilicia are generally not frequent, comprising only 2% of the total assemblage. They are represented by the LRA1 in three different fabrics, unlike at the Paphos Theatre where it only occurred in a single fabric (section 6.4.1.2). A widespread production of LRA1s in this part of southeast Asia Minor is therefore suggested.

Stronger relationships are now indicated with Egypt, which possesses the third place among the imports. Specifically, Egyptian products are slightly more abundant (3%) than the Cilician. They include both the Egloff 177 and 172 types, but the former is slightly more frequent (App. 3.3.4.4, table 5). Following the Egyptian imports, at the same amount as the Cilician LRA1s, are the LRA2s from the Aegean/Black Sea region, and the Beirut 8 amphora from Lebanon. It is very interesting to notice that the latter type is more common at this site than in Paphos (section 6.4.1). Finally, only one sherd could be associated with the Aegean Globular 1 amphora.

Tripolitania and Tunisia are the N. African regions represented in the data. They are associated with the Class 35 amphorae (App. 3.3.4.4, table 5). Some fragments of the Spatheion amphora, nevertheless, are in F27i, i.e. the fabric that could not be associated with a particular area (App. 3.2, table 1). Consequently, they are assigned to the broader N. African region.

As noted above, the local amphorae have never before been as well-represented in the Agora. However, a striking observation is that these products only involve certain types, which may be considered as a similarity with the earlier periods. The predominant type is the LRA1, appearing in five different fabrics. Unlike at Paphos,
however, the most common fabric is F1a, which largely resembles the fabric of the wasters from Amathus (Empereur 1985, 989) and the fabric assigned by Rautman (2003, 170) to south central Cyprus. Thus, their large quantity at this site probably supports this assertion (section 7.4.1). The second most common fabric is F3a, associated above with Paphos (section 6.4.1.2). It is, however, equally possible that a source of the same clay existed at Amathus. F2c appears in fewer fragments, while F5b and F2a are sparse (App. 3.3.4.4, table 5), possibly indicating the existence of smaller production units. The more slender version of LRA1, the so-called LRA1b (App. 3.1.6.2), is found in smaller numbers. The Amathus IV type is mainly found in F3f. Based on its distribution it is very possible that it was produced in the environs of this city (section 7.4.1). Finally, the Globular 1 amphora occurs in F1a, manifesting a smaller or more ephemeral production, but nevertheless, probably local.

6.4.2.2. Amathus Palaea Lemesos

The main pattern reflected in the data from this site also suggests the firm regionalisation of commercial activities during the late Roman period. The broader inferences drawn from the analysis are very similar to those from the Agora as to the abundance of local products (62%), the percentage occupied by the eastern amphorae (34%) and the rarity of western products (4%) (App. 3.3.4.5, table 1). Western products were scarce on this site from the beginning of the Roman period (sections 6.2.2.2, 6.3.2.2), but it is still possible to observe a marked decrease between the 5th and 7th c. AD. Despite these similarities with the Agora, in many cases the degree of contact with the eastern regions varies.

However, this is not the case with Palestinian products which comprise the greatest percentage on this site as well (15%). Once more, the predominant type is the ‘Palestinian’ amphora, occurring in four different fabrics, the usual F61 being the most common (App. 3.3.4.5, table 5). F63 has also been identified at the Theatre in Paphos (section 6.4.1.2), but F64a and b have not been encountered before. These isolated examples may indicate smaller production centres or variation in fabric caused by the fire process. As before, LRA4 is the second imported amphora from Palestine, but no fabric variation is observed. Moreover, an example is found of the Agora M334 amphora, which is attributed to this region by Reynolds (1997-8, 61) and is frequently found in Lebanon. The identification of another LRA13 example
assigned to Palestine is very significant as it supports the attribution of this type to Palestine (section 6.4.2.1). Specifically, it shares the same fabric as Agora M334. The identification of Palestinian types is very reliable (App. 3.3.4.5, table 4).

A difference between this site and the Agora is the rather significant quantity of Aegean amphorae. They possess the second place among the imported products (7%), and their identification is reliable (App. 3.3.4.5, tables 3, 4, fig. 2). Globular amphorae constitute the main type distributed from the Aegean. In particular, the majority of these vessels belong to the Globular 1 type, while a few examples belong to the Globular 2 variant. The fabric diversity between the two variants possibly suggests the operation of different workshops specialising in each type (App. 3.3.4.4, table 5). It is moreover significant to highlight that, as this type was a late development, the distribution of Aegean imports occurred late in this period. Nevertheless, the few examples of LRA1s in Aegean fabric could have been imported earlier. A small number of vessels was also imported from the Aegean/Black Sea region (F4d), represented by the LRA2 and LRA1.

Egyptian amphorae were imported in the same quantity as the Aegean (App. 3.3.4.5, fig. 2, table 3). The main Egyptian type is the Egloff 177, occurring in two of the fabrics identified at the Theatre (including the usual F82 fabric), and also in F8ai, not previously recorded. However, it was difficult to associate some additional fragments with this type with certainty, and are therefore recorded as ‘Egloff 177?’.. These are found in fabrics similar to the above (App. 3.3.4.5, table 5). It is most likely that the differences in the attribution and size actually concern a late development of the Egloff 177, possibly continuing into the next period (Arthur and Oren 1998, 207). Another type of a late date in Egyptian fabric (F80) is Globular 1. Moreover, the identification of more examples of LRA1s in Egyptian fabric strengthens the viewpoint previously put forward concerning manufacture in Egypt (section 6.4.1.2). This fabric is different to the one identified at the Agora, probably indicating the existence of alternative workshops in Egypt. Taking into account the small number of Egyptian LRA1s, it is possible to suggest that their production was limited and that the main types produced in this neighbouring region were the Egloff 177 and 172. Furthermore, two fragments of Spatheion amphorae occur in F8aii and F82, providing invaluable evidence for the production of this type in Egypt.

LRA1s were also imported from Cilicia, and they occur in two of the fabrics identified at the Agora (App. 3.3.4.5, table 5; section 6.4.2.1). Another example of
LRA1 is in F2b, i.e. the fabric that either derives from Cilicia or Syria. However, more Cilician amphorae are present at this site, such as the type that could either belong to Class 35 or to an unidentified eastern type ('Cl. 35 or eastern?'). The difficulty in the distinction between such products has recently been outlined by other researchers (cf. Rauh 2004), which have identified eastern imitations of N. African products. Moreover, a LRA1 variant is present (LRA1eii), as well as a Globular 2 sherd, both of which probably belong to the end of the period, if not extending to the next (section 6.4). Apart from Cilicia, the LRA3a type was also imported from western Asia Minor (Caria), but in very small numbers.

In the same percentage as the Cilician amphorae came products from the broader Syria/Palestine region, represented by F5k (App. 3.2, table 1). The majority belong to the bag-shaped Palestinian amphora. Fragments of this type, however, bear a white slip and present some differences. For example, the looped handles are grooved. This could signify a production that commenced toward the end of this period, or a variant produced in another region. Syria is considered as a probable source due to the occurrence of the same fabric on the 'N. Syrian?' type, recorded and assigned to Syria by Arthur and Oren (1998). In particular, this is the other type from this region identified on this site (App. 3.3.4.5, table 5). However, the nomenclature is provisional, conducted by myself, as the above researchers have not identified it as a type. Some LRA1 examples, nevertheless, clearly derive from Syria, as they appear in the F3k fabric, shared by the middle Roman Carrot amphora. Syria was among the regions initially proposed as possible sources for LRA1 (Empereur and Picon 1989, 237).

Products from the N. African coast were mainly transported in Class 35 amphorae. As above (section 6.4.2.1), these were predominantly manufactured in Tunisia and Tripolitania. Examples in the unsourced F27i fabric are also identified in this site. Apart from the Class 35 fragments, a number of Spatheion specimens also occur in this fabric (as well as in F27ii), and are therefore attributed the general 'N. African' origin (App. 3.3.4.5, table 5).

The overwhelming amount of local products predominantly concerns the LRA1 type. As at the Theatre in Paphos, the great range of fabrics (App. 3.3.4.5, table 5) reflects the extension of production and the 'monopoly' that this type nearly played in local production and distribution. As at the Agora, the most common fabric in which the type is encountered is F1a, for which an Amathusian origin is suggested.
(section 6.4.2.1). Thus, this identification constitutes additional evidence towards this conclusion. LRA1s in F3a are also abundant, possibly demonstrating strong commercial links with Paphos (section 8.4.4.2). F2a, F1i and F3c are also fairly common. It rests upon distributional analysis to identify whether these fabrics are local to Amathus, or whether they were imported from another Cypriot area. Interestingly, some of the fabrics (e.g. F2g, F5d, F1j, F5c etc.) appear in very sparse or even in single examples, indicating a diversity resulting from firing processes, or the existence of very small production units (sections 7.4.1, 7.4.2).

Some of these sherds could safely be associated with the LRA1b variant (App. 3.3.4.5, table 5). They appear in fewer fabrics, but still in fabrics encountered in relation to the LRA1. Similarly, the majority involve the F1a. A very interesting finding involves type LRA1bb. This variant closely resembles the LRA1b, but with some marked differences on the body and base (App. 3.1.7.1.ii). Personally, I have not encountered such LRA1b variant in publications. It is possible that it was produced at a secondary workshop, or that it represents a late production of the LRA1b. Other LRA1 variants are also identified in a series of local fabrics, namely, the ‘LRA1 variant’, LRA1c, LRA1d, and LRA1e. Again, the identification of the variants which were produced in Amathus and the ones that were intra-regionally traded relies on further analysis (sections 7.4.1, 8.4.4.2).

A late date for these products would not seem unlikely, as the Globular amphorae are also frequent on this site. Among them the most frequent is Globular 1. It appears in six fabrics, all of which were also used in the manufacture of the LRA1s (App. 3.3.4.5, table 5). Globular 2 amphora appears in three fabrics. An example appears in F4b, also used for Globular 1. It is, therefore, possible that some of the workshops produced both types. Additional probable local amphorae of a presumable late date (late 6th – early 7th c. AD) are the Amathus III and Amathus IV types. The former type is very likely to be of restricted manufacture, as this is the only example identified in the present study. Very interesting findings involve the Agora M334 and the ‘N. Syrian’ types, which are both encountered in F4b, attributed to local geological sources (App. 3.2, table 1). It therefore seems that the early Roman trend of multi-regional production or imitation continues to the late period.
6.4.3. Kourion

At Kourion, too, the volume of local products is almost twice as large (60%) as that of the eastern amphorae which comprise 34% (App. 3.3.4.6, table 1). Western products on the other hand (limited to N. African products) only form 6% of the total assemblage, therefore revealing the high level of regionalisation. The identification of the origins of all amphorae is either very reliable or reliable, apart from the Aegean types which are fairly reliable (App. 3.3.4.6, table 4). As at Amathus the majority of eastern imports are Palestinian (App. 3.3.4.6, fig. 2, table 3) reflecting direct contacts with Palestine. Nevertheless, it is very interesting to observe that, contrary to the sites described above, the main type exported from Palestine to the city of Kourion is the LRA4 (App. 3.3.4.6, table 5; section 9.1.4.3). It is also very interesting to observe that it appears in the fabrics noted in relation to the Paphos Theatre. The bag-shaped Palestinian amphora, which follows in quantity, occurs in the usual orange ware (F61). Apart from these common types, the Agora M334 was also imported to this city, but rather rarely as the single example attests. This specimen appears in the same fabric as the Palestinian amphora.

The second best-represented imports derived from Egypt (App. 3.3.4.6, fig. 2, table 3), therefore signifying another similarity with Amathus. In this site, however, only the standard Egloff 177 and Egloff 172 are found, whereas in Amathus a number of different types appeared in Egyptian fabric (section 6.4.2). With a single exception of an Egloff 177 (in F81b), both types occur in the usual F82 fabric. In other words, the fabric diversity observed in Amathus is lacking from this site.

Cilician imports are also rather frequent (4%), but the larger number of Globular amphorae probably implies that these products were brought in the city rather late (App. 3.3.4.6, table 5). The majority occur in three different fabrics, but only a few fragments could securely be distinguished into the Globular 1 and Globular 2 variants. The types that could have been imported in the main part of the late Roman period are the LRA1 and the Spatheion, but they are rare. The identification of the Spatheion amphora (or a type that looks like Spatheion) in Cilician fabric is potentially very significant, as to date this area has not been proposed as a source. It must of course be confirmed by petrographic analysis. Another LRA1 specimen in F2b was manufactured in Cilicia or Syria. Other data from the broader Asia Minor area involve the LRA3a, produced in Caria. Again
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compared to Amathus these productions are less, indicating a fall-off trend of the A. Minor products (section 8.4.3).

Aegean products primarily involve the LRA1 in F3m and F10, but isolated examples are also found of the LRA2, and Globular 1 types. Moreover, a single fragment of a Palestinian amphora appears in F5h, which is likely to be Aegean. This is the third time in this study that the Palestinian amphora is encountered in a fabric relating to another area (sections 6.4.1.2, 6.4.2.2), providing additional evidence concerning its manufacture outside Palestine.

Commercial contacts were also shared with Lebanon as shown by the Beirut 8 amphora. It is identified in two varieties, probably of the same fabric (App. 3.3.4.6, table 5). Based on the data that can be identified as Syrian, links with Syria appear to have faded out in this city as well. The only sherd that could be associated with the Syrian fabric (F3k) is the newly identified Unknown XV type, of a probable late Roman date. Furthermore, two fragments of the Palestinian amphora in F5k could come from either Syria or Palestine.

As with the sites above, N. African imports come from Tripolitanian and Tunisian sources. Tripolitanian products are more abundant and at the same quantity as at the Agora. They primarily involve Class 35 amphorae in both fabrics identified as Tripolitanian, as well as one example of a Spatheion. Tunisian amphorae also belong to Class 35, but in a smaller number (1%). More Spatheion fragments were identified but in F27i, which at present can only be associated with the broader N. African region.

As with the sites described above, the majority of local products involved the LRA1. The great extent of its production is reflected in the twenty fabrics in which it appears, the most common being F3c (section 6.2.3; App. 3.3.4.6, table 5). F5d and F1m are also fairly common, while some fabrics appear isolated. A surprising observation concerns the small percentages of products in F3a and F1a (suggested as deriving from Paphos and Amathus respectively) (sections 6.4.1.2, 6.4.2.1). This issue merits more investigation, which will be attempted in section 8.4.4.2. Fewer vessels were associated with the LRA1b version, occurring in four fabrics, the majority being in F1a. Another variant, of which only two fragments are identified, is the LRA1i, suggesting a small local production, possibly of a late date.

The main type dating to the end of this period, i.e. the Globular, is also present at Kourion. This type was identified in five fabrics. The majority of the fragments are
in F1m, while the rest of the fabrics involve single sherds. Only one example could be attributed to the Globular 1 variety with certainty, also in F1m. The Amathus IV type is relatively infrequent. It appears in two fabrics, which probably also manifest a production at Kourion (App. 3.3.4.6, table 5). Finally, two unparalleled types of a probable late Roman date are identified as local. The first type is Kourion IX in F3c suggesting a local source. The second involves a rough production of the Palestinian amphora in F1e. The fabric together with its irregular form (part of the rim turns inside therefore resembling a waster) implies the production of this type in Cyprus and supports the idea of its production outside Palestine.
Chapter 7. Production in Roman Cyprus as evidenced by the amphorae

7. Introduction: limitations and possibilities

It is difficult to envisage an economic study which precludes the important aspect of production. First in the economic chain, production is indispensable for distribution and exchange to operate (section 4.3.2). Its very importance is indicative of the depth required in its study, in order to grasp its character and the associated socio-economic implications. Production and growth, and their association with the political powers, are in the heart of the study of the Roman economy (see Lo Cascio and Rathbone 2000). A highly debatable issue relating to this theme is the social role played by producers and landowners from the beginning to the fall of the Roman empire. Thus, although the main objective posed in the thesis is the examination of distribution, it is imperative to attempt an analysis of aspects of production as reflected by the amphorae. Nevertheless, as already underlined (section 4.3.2), research concerning amphora production is still immature. Although a series of limitations outlined in this introductory section make its study at this stage preliminary and highly speculative, it is, I believe, pertinent to put forward ideas and propose ways to address this complex issue in the future.

In Cyprus, the study of Roman production has occupied a secondary role. While a Cypriot origin has previously been assigned to some amphorae, fine wares and tiles (Hayes 1991, 1980; Lund 2000b, Rautman 2003), no attempt has been made to synthesise this information and understand the character of production. Studies with such a focus have hitherto involved the western Mediterranean, revealing a high level of complexity (Peacock 1982). Indeed, such a complex picture is demonstrated in the identification and quantity of amphora types believed to be of local origin (chapter 6) on grounds discussed elsewhere (section 5.1.3.3). Subsequently, one has to face the complexity of production, as well as the limitations posed by the lack of (adequate) petrographic analysis and the problems involving sourcing, even when such information is available (section 5.1.3.4). Furthermore, the lack of previously established typologies and of ample evidence from kiln sites imposes additional limitations.
The study of the social and economic connotations associated with production requires the identification of production centres and technological processes through the examination of the composition of pottery fabrics and distributional analysis (Skibo 1999, 1-2). In the absence of petrographic analysis, the objective is to combine the identifications achieved in this thesis with the available evidence concerning amphora production. Principally, the underlying intention is to offer a framework and alternative methodological tools with which to confront the above limitations. As noted in section 4.3.2, this framework is offered by the models of scale and modes of production (sections 4.3.2.2, 4.3.2.3), adopted in the archaeological study of production from ethnography, but building upon world systems theory. Ethnographic evidence, which has played a pertinent role in the study of Roman production (cf. Peacock 1982), will to an extent be used in this study too.

Concerning the methodological spectrum, my aim is to demonstrate the importance of the application of distribution analysis of fabrics believed to be local for their sourcing. By no means, is my intention to downplay the importance of petrographic analysis. However, bearing in mind the problems involved in sourcing the material, even when such scientific analyses are available, I hope to offer a supplementary tool to pinpoint production centres. In short, I consider the identification and distribution of types and their fabrics, as a first, and necessary, step for the accomplishment of petrographic analysis in the future. At this point it should be noted that the reference to fabric codes in the text does not follow an alphabetical order, as these codes were given in the process of identification of all assemblages. In the early Roman period for example, F3xi may follow F3a and F3b, while F3c may refer to the late Roman material.

Despite the promising background for the beginning of a fruitful analysis of production, there are further problems involving the archaeological investigation of some models. Even when sourcing becomes feasible by petrographic or distributional means, it is not always possible to identify the exact number of production centres based solely on ceramic material (Orton et al. 1993, 135; section 7.0.1). This aspect poses further restrictions, and shows that analysis at this stage can only be preliminary and confined within broader assumptions. The way forward is to undertake more research, concerning both the excavation of production centres and ceramic analysis, within a solid theoretical and methodological framework.
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The ways forward suggested above show that these limitations should not give the impression of a 'grey' situation surrounding the study of production. As already noted (sections 1, 4.3.2), the study of amphorae is very important for their dual role: as containers of foodstuffs they offer an insight into both pottery and agricultural production. This very nature of amphorae marks a central difference in the organisation of their production from that of other kinds of pottery, as they were not distributed in their own right. Thus, the study of the scale and modes of production in Cyprus will provide a starting point for a future synthesis of these aspects concerning the eastern part of the Roman empire. Although petrographic analysis and the identification of production sites are constantly gaining ground (Empereur 1986; Rauh 2004), this region lacks such interpretative studies. Significant evidence, mainly literary, comes from Egypt (Rathbone 1991), but again, it has not been adequately combined with archaeological data to 'reconstruct' organisation.

Apart from the limitations and possibilities in the study of production, this introductory section also includes basic remarks on the scale and modes of amphora production. I also find it essential to highlight the role of amphora stamps and the so-called tituli picti, i.e. the painted inscriptions, in understanding organisational aspects of production. Discussion thereafter will focus on the analysis of the scale and modes of amphora production based on the data from each period. The Republican period cannot be part of this discussion, as it corresponds to the Hellenistic period on the island. However, some observations are put forward in relation to the early Roman period. Following this initial 'diachronic' examination is a review of the character of the identified modes of production, as well as of other related aspects, such as the impact of technological choices, and the character of agriculture as inferred from the amphorae and the available literature on Roman agricultural production.

7.0.1. Scale of amphora production

The examination of the scale of production, based on the identification and size of amphora production units (Rice 1987, 181), is difficult at present due to the limitations noted above (section 7). Nevertheless, the examination of the typological and fabric range of amphorae from each city permits us to make assumptions based on ideas developed by Orton et al. (1993, 135). To summarise the restraints entailed in this procedure, each type could indicate a production centre, or types sharing the
same fabric could represent one or a series of workshops, using the same clay source. However, different fabrics may also represent a single workshop using different sources of clay at the same time. Furthermore, even though the formation of broad fabric groups based on visual observation is significant, for it creates the basis for future scientific analysis, it is likely that many categories belong to the same groups. Additionally, as noted elsewhere (section 5.1.3.3), it is likely that clay sources sharing the same traits and inclusions existed in various areas of the island, making the identification of the exact source difficult. Another significant aspect worth taking into account is that the output of amphora workshops probably also depended on the agricultural yields and surplus (sections 4.3.2, 4.3.2.1).

7.0.2. Modes of amphora production

Our understanding on the modes of pottery production principally draws on ethnographic evidence (section 4.3.2.3). In the light of some sporadic literary evidence this body of evidence supplements information obtained from archaeological remains associated with such production, including kilns and ceramics, as it offers a framework for their interpretation. The main modes related to Roman pottery production are household production and industry, individual and nucleated workshops, estate production, and military and official production (section 4.3.2.3). Different socio-economic conditions apply to each mode, and one should not simply fit Roman production into one of these categories. Although some traits are universal, there are differences within the ethnographic evidence. Also, one should take special consideration of the different context in which ethnographic and, in this case, Roman data were formed. These aspects are highlighted in section 4.3.2.3.

In the present chapter, however, it must be underlined that not all of these modes apply to amphora production. For example, household production is mainly related to hand-made pots. In addition, the associated socio-economic background is different from that of other kinds of pottery. As the amphorae were not sold in their own right, but were containers of agricultural produce, the state could be associated with their production to secure their circulation as taxes. Another pertinent issue is that modes may vary in each province. For example, it is difficult to envisage the operation of the mode of military production, as there is no evidence for the maintenance of Roman army on the island. In this chapter I shall examine which of
these modes are reflected in the patterning of the various amphora types attributed to local sources on the basis of the adopted methodology (section 7).

7.0.3. The pertinent role of amphora stamps and of *tituli picti* in the study of production

Stamps and *tituli picti* are highly informative on aspects of production, as they give an insight into its organisation. Unlike the Hellenistic period, where amphora stamps referred to the producing cities and functioned as advertising means, in the Roman period they acquired different uses. The wide interpretative spectrum available in literature reveals this varied role. One such explanation is that they referred to the landowners of the estates. An example is offered by the Dressel 20 amphorae (Tyers 1996, 90). Even though this amphora was controlled by the state, as it was part of the taxation for Rome and the army, these marks associates them with their estates, possibly for more effective control, or even for their promotion in the market. In other cases, such as in Tunisia, stamps referred to the colonial status of the cities where they were produced, and could possibly signify the products these cities exported as taxation (Reynolds, 1995, 40-48; 1997-8, 49). According to Reynolds's (1997-8, 50) suggestions concerning the early imperial versions of the Beirut amphora, to an extent this could have also occurred in the eastern Mediterranean as well. Apart from giving an insight into circulated taxes in kind and the degree of state control of production, they also enable us to make inferences concerning their association with workshops. In other instances, they record the capacity of an amphora, or even the contents, as well as the date of collection (Grace 1979; Reynolds 1995, 47).

Although such material was recorded in the present thesis, it is currently insufficient for drawing inferences. As manifested by the existing work (e.g. Hassall and Tomlin 1982, 1994), it is a field of particular specialisation requiring systematic recording and analysis. The recent departure from the descriptive sphere for the engagement of quantitative approaches best demonstrates the degree of analysis such a study may acquire. Thus, this information can be instructive once more data are available.
7.1. Early Roman period

The unparalleled range and volume of early Roman amphora types identified in this research (section 6.2), provisionally assigned to local sources, enhance the impression given by types identified in previous research (Hayes 1991; Lund 2000b) concerning the expansion of production. Such an expansion is striking when considering that the only amphorae hitherto associated with Cypriot production in the Hellenistic period are the ‘Kouriaka’ (Meyza 2004). Future research may certainly reveal more Hellenistic productions, but it is not the scope of this research to investigate the differences between the two periods. This is precisely the reason why investigation in the current thesis cannot focus on the confined production of imitations of Republican amphorae on the island (sections 6.1.1.1, 6.1.2.2). Although such imitations manifest primary interactions with the western Mediterranean (section 8.1), production in the 2nd and 1st centuries B.C. must be viewed within the Hellenistic period. At present it is suffice to say that production under the Ptolemies was largely controlled by the state directly, while taxes and rents derived from free tenants (Rathbone 2000, 46-51).

Intensification of production during the early Roman period is anticipated, considering the great boom in trade and exchange activities, as well as the central role played by Cyprus, and especially its capital Paphos, with its annexation into a Roman province (section 8.2.5). Cypriot wine is praised (Calvet 1986, 509), while the identification of presses dating from the Hellenistic to the Byzantine periods reflects the complexity in the production of olive oil (Hadjisavvas 1992). The causes of the increase in production and market exchange have been the subject of intense research (Lo Cascio 2000a, 78; section 4.1). The relationship between the two, however, can be located in the money obtained through selling produce in the market to pay taxes, rents and loans (Hopkins 2002, 216). Indeed, as will become evident in the following chapter, expansion in market exchange is in pace with the expansion in production and the monetisation of the economy during the early empire across the Mediterranean.

According to the theoretical framework (section 4.2), such an expansion in production must be considered in relation to the wider socio-economic context of the empire, and the “working of the empire as a single political entity” (Lo Cascio 2000a, 78). The peaceful conditions within the Mediterranean and the common coinage circulating throughout the provinces, as well as the fixed rates, encouraged
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exchanges and promoted production (section 8.2.5). Further factors underlying growth is the increase of population and of the per capita output, and the productivity of land and labour (4.3.2.1).

The haul of taxes from the empire also increased the production output as many taxes were paid in kind (sections 4.1, 4.2). Hence, the redistribution mechanism influenced the production of certain goods. Equally vital in the promotion of production and market exchange were the innovations in the system of taxing agricultural land (Lo Cascio 2000a, 83; section 7.1.1.b). The degree of imperial control of production, as is often the case in such redistributive systems (Matthews 2003, 144) is another major theme in the study of Roman economy (Lo Cascio 2000a, 81). Although, contrary to Finley’s ideas (Lo Cascio and Rathbone 2000, 1), the state did not intervene in production to the extent in which the Ptolemaic state did, the operation and increase of production were secured through a sophisticated political organisation (Lo Cascio 2000a, 78).

The study of production in early Roman Cyprus must be therefore viewed in conjunction with these aspects characterising the broader system, but without downplaying the significance of the diversity of regional economies (Lo Cascio ibid.). The importance of production on the island during this period is revealed by studies on fine pottery, involving mainly the Cypriot Sigillata (Hayes 1967, 1977; Meyza 1995). Intensive exploitation, resulting in high levels of production, was widespread in other activities, such as the procurement of metals, wood, the preparation of natural medicaments etc (cf. Michaelides 1996). The regular hard conditions are attested by ancient writers (Michaelides, ibid.). The diversity in production, the varying levels of supply and demand affecting each kind of production, and the methods engaged, constitute this economic activity highly sophisticated. Concerning the amphora production, sophistication and complexity are mirrored in the agency of potters, agents and middlemen, the application of technological innovations, and the great deal of social implications embedded. This very complexity prevents the conduction of an analysis in its full extent, as the study of production has to date been overlooked (section 7). But as already underlined, the aim is to convey this complexity, put forward ideas generated by the data and create the ground for future research.
7.1.1. The scale of amphora production as suggested by the data

To sum up the aspects highlighted in the above section (7.1) by using Lo Cascio's (2000a, 79) words, behind growth reflected in the diversity of amphora types is “the nexus between urbanisation, shift towards the market and monetisation, and specialisation in production”. In many cases distribution analysis of the fabrics and the types in which they occur was proven highly informative of the potential sources. It is therefore revealed that expansion characterises all cities under study. Its extent is better understood if one considers that in most cases a substantial number of productions from each city was distributed to other cities (section 8.2.4.2.ii), not to mention the segment distributed abroad.

To start with Paphos, which is the island's capital under the early empire, analysis suggests the existence of centres producing Dressel 2-4 imitations and other Sub-Koan amphorae in the F1e fabric (App. 4, table 1). Furthermore, the same fabric appears in association with the newly identified ‘Paphos Theatre 1YY’ type. The main fabric used for this type however was F3a also identified primarily in Paphos (App. 4, table 2); a closer visual examination of its traits reveal similarities with F1e, possibly suggesting a similar source (App. 3.2, table 1). This type also appears in the F5b fabric, the inclusions of which resemble these of F3a. Thus, it is possible that these categories involve the same fabric, with colour differences resulting from firing conditions. Apart from these fabrics, the concentration of types in F4b in Paphos also points to a source near the capital. By eye, the inclusions of this fabric are very similar to the F1a fabric assigned to Amathus (see below). However, if the two groups are the same fabric with the differences resulting from varying firing conditions, F4b should have also been found in Amathus. On this ground it seems that the two fabrics do not share the same source and must be regarded as deviating categories. The types produced in this fabric are mainly the Hayes VIII type, but also Hayes X and more rarely Pseudo-Cos en cloche (App. 4, table 2).

The fabrics presumably originating from Amathus are the F1a, F2a, and F2c. In particular, the prevalence of the F1a fabric in Amathus is striking (App. 4, table 1). The description is similar to that given by Empereur (1985, 989) and Rautman (2003, 170). The types manufactured in this fabric are predominantly Dressel 2-4 imitations, and less frequently Hayes VIII and Sub-Koan III (App. 4, table 3). Occasionally other Sub-Koan variants were produced as well as isolated imitations of ‘Rhodian’, Cretan 2, Pamphylian and Pseudo-Koan amphorae. Types in the F2a
fabric include the Hayes VIII amphora, the 'pinched-handle' amphora, Dressel 2-4 imitations and Sub-Koan variants. The low frequency of F2c on the other hand suggests either a small production or similarity with another fabric. A propos, its traits look similar to the F2a fabric. Likewise, it was utilised for the manufacture of Dressel 2-4 imitations and Hayes VIII amphorae. However, Hayes I type, which does not occur in F2a, appears in F2c in both Paphos and Amathus, while Paphos VII type is only apparent in Paphos. Until laboratory analysis is available, it is not possible to state with certainty whether this fabric derives from the same clay source as F2a.

Unlike the above cities Kourion is associated with more fabric groups indicating a unique expansion in the scale of production. Such an expansion is also evident in the percentage occupied by the local amphorae within the entire assemblage analysed from this city. However, such a growth is not unanticipated. The single amphora type identified thus far as a Cypriot production from the Hellenistic period, the so-called Kouriaka (section 7.1), is assigned to Kourion (Meyza 2004). Suggestive of a nearby source are the F1i, F3c, F3xi, F3xii, F5f, and F5o fabrics (App. 4, table 1). The F1i fabric was mainly used for the production of Dressel 2-4 imitations, and rarely of types such as Hayes VIII and the Pamphylian (App. 4, table 4). The types produced in the F3c fabric were also the Dressel 2-4 imitations and various Sub-Koan amphorae (IIB, III, VI). Other sparse specimens involve the Unknown IV, the Pamphylian, and the newly identified Kourion IV and XIV types (App. 4, table 4).

Despite the importance of these fabrics in Kourion, the most popular fabric used in the region is the F3xi (App. 4, table 1). In particular, I have observed that this fabric is similar to that used for the Hellenistic Kouriaka amphorae, a thin-section of which is available by Meyza (2004, 274). In Amathus it constitutes a mere 4% of the total quantity of local amphorae, while it is absent from Paphos. Analysis has demonstrated that this source was predominantly exploited for the production of the newly identified Kourion I type (section 7.1.2), but it was also used for Dressel 2-4 imitations, Sub-Koan variants (IIB, VI, VII), and rarely for Pamphylian, Pseudo-Koan, and the Unknown IV amphorae (App. 4, table 4). It is possible that the F3xii fabric derived from the same source as F3xi, or at least from a nearby source. Despite the superficial differences, a closer observation reveals great similarities, as they both contain black, brown and grey sub-rounded and angular coarse inclusions and limestone (App. 3.2, table 1). It is therefore probable that these differences resulted
from the firing process. Its occurrence is rather rare, with examples confined to the previously unknown Kourion IV and XIII types, as well as to the H. D. 5083 type.

F5f is mostly encountered at Kourion, too, but its use was also quite limited. Its traits resemble those of F1i (App. 3.2, table 1). The application of slip may be indicative of an intentional intervention on fabric from the same source, possibly by another workshop (section 7.1.2). Again, the types produced in this fabric involve Dressel 2-4 imitations. Finally, only a few amphorae were produced in the F5o fabric. Although its traits generally resemble those of F3xi, the brown-red inclusions not identified in the latter fabric are probably indicative of an alternative source. The morphology of these inclusions suggests a possible location of the source at the nearby Kouris river.

As already noted (section 7.0.1), it has not been feasible to attribute a probable source to all fabrics. The more or less homogeneous distribution of some fabrics implied the existence of sources throughout the island – at least the southern part on which the study concentrates – or the similarity of the fabric with another, more significant group that requires petrographic analysis for the identification. Such a fabric is the F1b fabric, which is rather infrequent. In Amathus it occurs in a slightly larger quantity, but it is not so significant as to allocate this city as a source. Interestingly, visually this fabric resembles the F2d fabric, for which I also assume a source along the south coast. Despite the occurrence of the latter predominantly in Paphos, this hypothesis is based on the different types that appear in each city. Had the types produced in this fabric been distributed from a single region, one would expect the identification of similar types in all cities.

Interestingly, fabrics F4g and F5a also bear traits which resemble those of the afore-mentioned groups. They are both found in all three cities in similar quantities. Laboratory analysis will reveal whether these fabrics should be regarded as one, with the differences resulting from the firing process. However, their scanty quantity may be explained by other factors and not necessarily by a similar source. For example, the source could have been restricted or the competition between workshops could have discouraged an increased production.

7.1.2. The modes of amphora production as suggested by the data
As noted above (section 7.1.1), the great range of types attributable to local sources and their quantities reveal an expansion associated with the socio-economic context
of the empire and in particular the imposition of taxes which triggered production and market exchange (sections 4.1, 4.2, 7.1). The modes of amphora production must therefore be viewed within the wider system and the political organisation of production itself (section 7.1). They must also be considered in conjunction with the innovations brought about in the system of the agricultural regime (section 7.1.1.2), which affected social and labour structures, and the need to satisfy increasing demands as reflected in the scale of amphora production (section 7.1.1). The general complexity of the system would certainly have an impact on the methods of production.

Although the increase in the scale of production is immediately evident (section 7.1.1), the identification of the number of workshops involved is a complicated issue. As stressed elsewhere (section 7.0.1), it is almost fruitless to assert whether a type was produced in a single or a series of workshops using a single or a number of clay sources, based solely on the analysis of sherds. Such inferences remain hypothetical, and even if a kiln site is identified, nothing precludes the existence of another workshop producing similar types in similar fabrics. However, the careful scrutiny of amphora types, their fabrics, and their quantities, in relation to the context in which they were found, may generate valuable ideas in the light of the framework provided by the modes of production.

Based on the elite context of the House of Orpheus, the responsible mode for the presence of Dressel 2-4 imitations, Hayes X, and 'Pinched-handle' amphorae produced in the F1e fabric, and of Hayes VIII in F4b, may have been that of estate production (App. 3.3.2.1, table 5). The identification of these types at the House of Dionysos (Hayes 1991, 93, 94) does not necessarily contradict this idea, as products from estates were also directed to the market for the owner's profit. A better understanding of this issue will potentially be obtained once quantified data from both sites are compared. On the other hand, the link of these products with the elites could represent the dependence of the producers and the subsequent disbursement of rents or loans. The presence of the 'Pinched-handle' amphorae at the Theatre, i.e. in a non-elite context, in a larger quantity (App. 3.3.2.2, table 5), possibly shows the market orientation of certain products for the accumulation of cash for taxes. In any case, the prevalence of all three types at the villa manifests the control imposed to individual workshops by higher social ranks, or even indirect control of the market (section 4.3.1.4).
The significant quantities of the above types possibly indicate the existence of several individual or nucleated workshops using the same or different clay sources, and not a single workshop. It is not possible to infer whether each workshop specialised in the production of a single type or of a range of types. Moreover, it is unknown whether Hayes I and VIII types in F1e, and Hayes X in F4b, all identified at the House of Orpheus, were products of the workshops producing the same types in other fabrics (noted in the paragraph above), representing the occasional use of secondary clay sources. At the same time, the small quantity of these products may represent the mode of household industry. Household industry is perhaps reflected in the single Sub-Koan IV amphora in F1e and the sparse Pseudo-Cos en cloche amphorae in F4b identified at the Theatre (App. 3.3.2.2, table 5). These are, nevertheless, mere speculations. There may be other reasons behind the differences in quantities I have so far interpreted as diverse modes of production. Such reasons could be distance of certain production centres, competition between products, and also the contents of the various amphorae. Paphos therefore provides a fine example of the difficulty in identifying workshops and modes of production (sections 7.0.1, 7.0.2).

Unlike Paphos, each fabric associated with Amathus involves a greater range of types, but in a smaller quantity (App. 4, table 3). Possibly, the reason for this difference between the two cities was the greater pressure imposed to the inhabitants of Paphos as it was the seat of the administrators, resulting in a greater output. Thus, on the basis of smaller quantities, each type assigned to Amathus should not be interpreted as representing an individual workshop. Rather, it would seem reasonable to assume that similar types were produced in the same workshops. The larger quantity of Dressel 2-4 imitations in F1a perhaps suggests their production in a single workshop, possibly also manufacturing the same types in F2a and F2c. Again, Hayes VIII in F2a and F2c could have been produced in the same workshops. The various Sub-Koan versions could have also been produced in the same workshops. On the other hand, the identification of the majority of local productions at the residential site of Amathus P. L. (App. 3.3.2.5, table 5) perhaps denotes manufacture in households.

As noted above, the greatest increase in the scale of production is noted at Kourion (section 7.1.1.1). Although the examination of the modes of production is discouraged by the lack of knowledge on specific contexts of the site (section 3.1.3),
the great variety of both fabrics and types I believe to be local to Kourion favour the development of certain ideas. As opposed to Amathus, the greater quantity of certain types promotes inferences concerning the existence of individual workshops. Such an example is provided by the overwhelming amount of the Kourion I amphora in F3xi (App. 4, table 4). The considerable quantity of Sub-Koan VI amphorae in F3xi possibly signifies the existence of another workshop using the same clay source. It is not clear whether the rest of the types in this fabric were also produced in these workshops, or whether their restricted quantity implies the mode of household industry instead.

The substantial quantity of Dressel 2-4 imitations should perhaps also be associated with workshop production, although the scale of such workshops and the fabrics with which they were associated cannot be inferred. The same workshop producing Dressel 2-4 imitations in F3c could have possibly produced the Sub-Koan variants in this fabric. However, the latter variants may equally signify small workshops or household industries. The rest of the types occurring in various fabrics should rather be ‘translated’ into household industry, and not into workshops using diverse clay sources. Ground for this assertion is provided by the insignificant numbers in which these types occur, as well as by the idea concerning the growth of the agricultural zone along the Kouris river.

7.2. Middle Roman period
The amphorae belonging to this period, both those provisionally assigned to local sources and the imported ones, manifest a major change in economy (section 6.3). The majority of the early Roman productions ceased and new and more limited types emerged, indicating that economic endeavours operated within a different framework. All these changes are assimilated within regionalisation that constitutes the greatest transformation in the character of trade (section 8.3.5). As these shifts occurred throughout the empire, the causes must be sought in the broader socio-cultural context.

Particularly, in the 3rd c. AD the stability of the Roman empire was endangered by civil wars and invasions by barbarians and pirates (Whittaker and Garnsey 1998, 278; section 8.3.5). Apart from the political impact, damage was also inflicted upon agriculture and therefore economy. Economic stability was moreover affected by inflation of prices. These led to drastic reforms of the monetary system
by Diocletian in 293 AD, who also formed the Price Edict (Duncan-Jones 1982). The Edict, resulting from the depreciation of the currency (Lewis and Reinhold 1990, 421), was revolutionary as it set maximum and not absolute prices, aiming at controlling the merchants (Ermatinger 1990, 46).

Further changes involved the land, i.e. the most important source of revenue, and its taxation (section 4.3.2.1). Diocletian for the first time since the Republican period taxed land in Italy (Whittaker and Garnsey 1998. 277). Thus, the heavy taxation characterising the late Roman empire (section 8.4.5) probably has its foundations in the middle Roman period. According to Whittaker and Garnsey (*ibid*), the development of the *annona militaris* as a state tax possibly began in the 3rd c. AD. Another immense impact on the economy was the transfer of the centre of the empire to Constantinople in 325 AD.

The variety of these changes makes the examination of production in these two centuries particularly interesting, in terms of scale, modes of production, and the associated social and ideological aspects. Any similarities or differences in relation to the preceding period will be most intriguing. Hitherto, changes observed in this period were characterised as indicators of an economic crisis (Lund 1991, 193). In the present thesis, however, primarily based on distribution analysis (section 8.3.5), I argue that economic life of the 3rd and 4th centuries should be viewed as operating within a different framework instead. Indeed, literary evidence (Rathbone 1991, 58-82; section 4.3.2.1), albeit restricted, reveals the operation of sophisticated measures composing a complex economic landscape with social consequences. The picture obtained is by no means that of economic stagnation or crisis, consenting with the idea formed by the data analysed in the current thesis.

### 7.2.1. The scale of amphora production as suggested by the data

Analysis has revealed a marked restriction in the scale of production. Generally, apart from Kourion, fewer fabrics are associated with each city, while the types produced in each fabric are limited. It is, nevertheless, important not to forget the absence of studies from such contexts. Possibly, future research may bring to light more types dating to this period. Another striking observation is the broader shift in the exploitation of sources. As noted elsewhere (section 5.1.3.4), similar sediments are found throughout Cyprus, making the exact identification of clay sources more difficult. In particular, while certain fabrics were in the preceding period associated
with one city, between the 3rd and 4th centuries they are associated with another, probably documenting the exploitation of a source with similar clay traits elsewhere.

Unlike in the preceding period, hardly any fabrics apart from F3a can be attributed solely to Paphos with certainty (App. 4, table 5). The few examples of this fabric in Paphos possibly indicate the survival of this source in the area. Moreover, F1a fabric is mainly found in Paphos, while its occurrence in Amathus is still significant. In Kourion it is identified in a smaller proportion. Although the diversity in the quantities in which this fabric occurs could be used as a source indicator, its occurrence in different types in each city suggests the existence of sources across the south coast, which is the focus of this study. Further inferences concerning fabric sourcing are prevented by the identification of fabrics in single sherds. For example, the single specimens in F2a in Paphos and Amathus are not enough evidence to suggest the exploitation of a similar source in both cities. Similarly, an argument concerning the exploitation of a source of the F5a fabric in Paphos, based on a single sherd, would be groundless.

Fabrics F1i, F1m, F2g, and possibly F5f, are further fabrics presumably deriving from Amathus, but also possibly from Kourion (App. 4, table 5). The identification of fabric F1i mainly in Amathus indicates another change, as a source was previously only assigned to Kourion (section 7.1.1). The diversity in types in which it now occurs between the two cities demonstrates the continuation of the source’s exploitation in Kourion, although to a lesser degree. Fabric F1m could derive from the F1i source, with the colour difference resulting from the firing process. Apart from the similarity in the clay traits (App. 3.2, table 1), the single examples from both cities encourage this idea. Moreover, the single sherd in F2g fabric in Amathus is not adequate to establish a source, although I previously suggested that similar sources were possibly found throughout the island (section 7.1.1). Elsewhere this fabric is associated with F3c, which is attributed to Kourion (App. 3.2, table 1; sections 7.1.1, 7.3.1). Finally, although the single example of F5f from Amathus is not enough evidence, its use in a Dressel 30 amphora, generally associated with Amathus (App. 4, table 7; section 6.3.2), may suggest a nearby source.

The fabrics assigned to Kourion are considerably more numerous than those assigned to the above cities. To a certain extent this could be because Kourion presents a clear-cut middle Roman phase (section 6.3.3). In any case, it is most
interesting to observe that despite the broader changes, production in this city and its environs seem to have retained its importance. Apart from the similar sources sharing with Amathus suggested above, it is possible to allocate Kourion as a source of the F1p and F3c fabrics, based on sufficient evidence (App. 4, table 5). The traits of the well-represented F1p fabric, exclusively used for the production of the newly identified Kourion II type, suggest a source close to the Kouris river (App. 4, table 8). Moreover, the important number of types in F3c in Kourion suggests that this was the main source. However, the existence of similar sources elsewhere, and especially in Amathus (e.g. F2g discussed above), must not be overlooked; the occurrence of F3c on Dressel 30 amphorae in Paphos and Amathus (App. 4, tables 6, 7) reinforces this idea, as the production of this type is mainly associated with the latter city.

Other fabrics that probably derived from Kourion are the F1j and F1l fabrics (App. 4, table 5). Their traits resemble those of F1a assigned below to sources from all areas under study (App. 3.2, table 1). It is possible that the differences owe to firing conditions. F1j is sparse in both Kourion and Paphos. Nevertheless, in Paphos it concerns a Kourion II type, the production of which may be assigned to Kourion based on its frequency (App. 4, table 8). Fabric F1l only identified at Kourion, also involves the Kourion II type. The source of the F1n fabric must have also existed close to the Kouris river (based on the clay inclusions), although, assuming by its rarity, its exploitation must have been minimal. A nearby source must have also existed for the F1o fabric, as in this city it was observed in three types. Its similarity with F3xii reinforces this attribution (App. 3.2, table 1). Another fabric likely to be sourced at this region is F3f, only identified at Kourion.

The sources of the F3o and F3p fabrics, used for the production of the Williams I and Williams III types respectively, must also be sought in the region of Kourion, based on their distribution (App. 4, tables 5, 8). Although unlike F3p, only a single example of F3o has been identified in the present thesis, the examples identified by Williams point to this region as a source. Petrographic analyses are available for both fabrics (Williams 1987, 235-4). The possibility that these fabrics are similar to others identified by myself based on visual examination must not be ignored. The description of F3p, for example, largely resembles that of F3c. Only laboratory analysis of all fabric groups may shed light to this issue. Distribution of F3xi and F3xii fabrics indicates that their sources are still in Kourion (section 7.1.1). A variety of types were produced in the F3xi fabric, while the usage of F3xii remains
more limited. Fabric F5o seems to have been used in a small degree as well. Apart from a difference in the colour of some inclusions, it also resembles the F3xi fabric; an observation that supports an origin at Kourion, but also suggests the possibility that it could derive from a distinctive source, of restricted exploitation. F5b, assigned to sources across the southern coast in the early Roman period, possibly similar to F3a, is now found solely at Kourion in a single specimen.

The restriction in the scale of production, manifested in the constrained typology and quantity in relation to the earlier period, by no means supports an idea concerning the decline of agricultural production, as traditionally believed (section 4.3.2.1). It rather reflects the gap in our knowledge resulting from the lack of studies of material from middle Roman contexts, as well as the incapability to consider the available data within the broader framework. It is possible that the limitation in the typology amends once more middle Roman material is studied. As I argue more extensively in section 8.3.5, this period of ‘crisis’ is wrongly correlated with a ‘dark’ period in which the previous glory and economic prosperity declined. Rather, these changes must be considered in relation to the wider changes, ranging from economic to political, characterising the empire during this period (section 7.2).

7.2.2. The modes of amphora production as suggested by the data

A remarkable observation is that each city (or its hinterland) seems to specialise in the production of specific types. In the early Roman period, basic types were encountered in the production repertoire of diverse regions to a similar extent. In the middle Roman period, however, Kourion is for example associated with the Kourion II type and the types identified by Williams (1987), while Amathus appears to be the main area of manufacture of a local version (or at least similar) of the Dressel 30 amphora (App. 4, tables 7, 8). Thus, the suggestion that regionalisation, apart from trade (sections 6.3, 8.3.5), characterises middle Roman production as well would not be an overstatement.

Despite the difficulties in associating ceramic material with a particular mode of production (section 7.0.2), discussion of the early Roman material has shown that an approximate index may be provided by the quantities of types apparent in each fabric. Such suggestions on the underlying modes of manufacture are nevertheless obscured by the generally small numbers associated with fabrics.
Chapter 7

The lower quantities and the broader limitations should not be interpreted as implying the total discontinuity of pottery workshops. Rather, the reduction in the scale of production, as part of this period's economic regionalisation, may imply the existence of fewer workshops. The decreased demand resulting from the eastern focus of trade activities (section 8.3), as opposed to the earlier Pan-Mediterranean commerce, provides an adequate explanation for such constrained productions. As trade continued, albeit around the eastern Mediterranean basin, workshops must have still functioned, for the production of tradable pottery as well as of amphorae to transport foodstuffs. Household pottery must have continued, although the production of amphorae in households must have decreased due to regionalisation and dropping off of trade. Unlike in the preceding period, it is not possible to suggest the existence of estate production. The decline of early Roman villas on Cyprus sometime in the middle Roman period (section 3.1.1.1, 8.3.5), and the lack of direct data from estates makes the identification of this mode currently impossible. However, evidence from Egypt (Rathbone 1991; section 4.3.2.1) suggests the continuation of this form of production, which possibly acquired a different character from that of the preceding period. The decline of urban villas perhaps indicates the disassociation of the estates from urban economies, while the development of rural economies in the late Roman period may suggest the existence of estate production in the hinterland. In any case, it is possible that certain amphorae of the early Roman tradition were still produced in estates until the mid of the 3rd century. Unfortunately, the lack of stratigraphic information does not enable such an examination at present.

The conclusions drawn based on the scanty data from Paphos involve the existence of only a few workshops (App. 4, table 6). Data from Amathus, however, may suggest the existence of one workshop producing Dressel 30 amphorae, using diverse clay sources (App. 4, table 7). However, it is still possible that some of these specimens in isolated fabrics were manufactured in households. At Kourion, Kourion II amphorae could have also been products of a single workshop, primarily using the F1p fabric, although it is again possible that some were produced in households or other workshops (App. 4, table 8). It is difficult to explain the concentration of a single type in one city had this type not been manufactured, at least initially and principally, at a single workshop. These issues are further obscured by the lack of stratigraphic evidence as the time span of the types remains unknown. Such information could be illuminating for the issue of the diachronic succession of
workshops, or of parallel production. At Kourion it is not clear whether workshops with access to particular clay sources produced a variety of types or whether these mainly reflect the output of small workshops or households. Had production mainly occurred in workshops, the generally small numbers may be indicative of the production of a variety of types in each workshop, often using diverse clay sources. Indeed, the generally small numbers of the types in each fabric do not always support the idea of the operation of a single workshop for the production of a single type. Moreover, the small quantities may suggest that these workshops were not nucleated (section 4.3.2.3).

7.3. Late Roman period
The study of production in the late Roman period bears the advantage of more available information. Economic activities of these centuries have generally merited more research in the eastern Mediterranean (section 1.1). In Cyprus, too, the majority of types assigned to local sources on the basis of petrographic analysis date to this period (cf. Rautman 2003, Manning et al. 2002). Most importantly, all Roman kiln sites identified on the island are late (Demesticha and Michaelides 2001; Manning et al. 2001). These identifications have revealed that Cyprus was amongst the important production regions of the LRA1 type, largely circulated in the eastern but also in the western Mediterranean (App. 3.1.6.2; sections 6.4.1.2, 6.4.2.1, 6.4.2.2, 6.4.3). Indeed, unlike in the preceding periods where a variety of types were produced locally, the current thesis demonstrates that the dominant type produced was the LRA1. Other types involve versions of this type (App. 3.1.7.1) or globular amphorae. Both varieties may date to the end of this period, and may even extent to the following so-called 'dark-ages', following the Arab invasions. This ambiguity makes the study of production in this period particularly interesting. Personally, I believe that these productions continued after the mid 7th century, but within a different framework (Gabrieli et al., forthcoming). Identifications in the present thesis also involve a few imitations of amphorae. Unlike in the early Roman period, late Roman imitations have only fairly recently been more systematically identified (Empereur and Picon 1989, 243; Touma 2001, 50).}

Despite the limited range of types, the great variety of fabrics still points to the existence of a number of production centres. The main feature characterising this period is the expansion of inland rural settlements; an aspect discussed in depth in
the following chapter (section 8.4.5; Bowden et al. 2004). Such a development, in association with the variety of fabrics and the non-homogeneous attribution mainly of LRA1 amphorae, certainly denotes an expansion in the scale of production as well. These fundamental changes reveal that economics in this period must be considered within the different social and political settings, created after the transfer of the empire to Constantinople in 325 A.D.

Taxation was intense during this period, and the *annona militaris* by the middle Roman period became the main means for the acquisition of state revenue (Whittaker and Garnsey 1998, 277). Literary accounts record the great demand still imposed by the centre of the empire (Kingsley and Decker 2001, 2), that, undeniably, must have created immense pressures for intensive production. Pressures, however, were also engendered by the Church that in essence was the empire’s second centre and instigated an ideology, different from that of the earlier empire. The economic role of the Church is discussed in section 8.4.5.

Thus, the development of the countryside (cf. Whittaker and Garnsey 1998; Bowden et al. 2004), which is a major change in relation to the preceding periods, may be considered as a response to these pressures for the creation of profits. Rural expansion is attested archaeologically across the empire (sections 7.6, 8.4.4.1), whereas changes in the organisation of labour in estates secured intense production and continued to promote social distinctions (Whittaker and Garnsey 1998, 287-294). In addition, control of land changed in relation to the preceding periods (section 7.3.1.2). Both scale and modes of production can only be understood within this changed landscape, both literally and metaphorically.

**7.3.1. Scale of amphora production as suggested by the data**

The expansion of the scale of production (section 7.3) must be viewed within the general politico-economic framework discussed above. At this point it should also be noted that the role of the state in the intensification of production, albeit central, was indirect. Its influence predominantly derived through the organisation of taxation, the monetisation system and political developments (Bagnall 2000, 86). In Cyprus, increased production is primarily apparent on Paphos. Although the role of the capital was now acquired by Salamis, Paphos remained an important production centre; a conclusion supported by the range of fabrics associated with this city, as
well as the identified LRA1 kiln, and the production of fine wares and tiles (Hayes 1967; Rautman et al. 1993, 260-61; Rautman 2003, 165, 178).

The main fabric assigned to Paphos is the F3a fabric, used for the production of the amphorae identified in the afore-mentioned kiln (App. 4, table 9). The significant quantity in Amathus could, in my opinion, result from intra-regional trade (section 8.4.4.2), and not necessarily from the existence of another well-exploited source. Still, the latter hypothesis must not be completely ruled out. Such a source possibly existed in the early imperial period, while F3e fabric, mainly encountered in Amathus, is evocative of a similar source. Apart from the core it is visually largely similar to F3a (App. 3.2, table 1). Another fabric suggesting the existence of a similar source is F5b, the inclusions of which are at first sight similar to F3a. This fabric is still distributed in low quantities in both Paphos and Amathus (section 7.1.1). Despite the evidence of a sketchy exploitation of a similar source in Amathus, the kiln at Paphos and the distribution of the material manifest intensive exploitation of the source in Paphos. Distribution of products from Paphos to the south is well attested by other commodities (Rautman 2000, 322).

The source of F3f may also be located in Paphos, based on its distribution (App. 4, table 9). This category represents a fabric attributed to Cyprus by Arthur and Oren (1998, 210), following petrographic analysis. Possibly, it is similar to other categories established in this thesis, such as F3a or F3c. Such an issue, however, can only be examined with laboratory analysis. Another source probably exploited at Paphos is the one producing the F2g fabric. In the preceding period this fabric was associated with Kourion and Amathus. Fabric F11, resembling F1a (see below), is also mainly found in Paphos, possibly indicating the existence of similar sources in various regions. F1e fabric is still attributed to Paphos (section 7.1.1). However, it is not clear if a similar source also existed at Kourion, where this fabric was used for the manufacture of an imitation of the Palestinian amphora (App. 4, table 12).

F2d is found in similarly low quantities in both Paphos and Amathus. As suggested earlier (section 7.1.1), its traits are similar to fabric F1b, mainly identified at Kourion. Sources, therefore, for these groups are perhaps found across the studied regions. The inclusions of these fabrics are also similar to those of fabrics F4g, F5a and F5c (App. 3.2, table 1), mainly identified at Paphos.

Another fabric mainly identified in Paphos is F1j. Its traits however resemble those of F1a, which is the most abundant fabric in Amathus. A provenance of F1a
from Amathus is also suggested by wasters (Empereur 1985, 989). The larger quantity of F1a amphorae in Paphos rather than in Kourion, and its similarity with F1j, may imply the existence of another source in Paphos. However, the possibility that the underlying factor may have been the trade mechanisms must not be downplayed (section 8.4.4.2). Economic associations between Paphos and Amathus in the Roman period date back to the early empire (section 8.4.4.2). F1i fabric on the other hand, probably originated from both Amathus and Kourion, based on the similar quantities identified in both cities. Unlike these dubious fabrics, distribution of F2a and F2c points to Amathus as the probable source. The absence of F2c from Kourion and its presence at Paphos perhaps reinforces the idea concerning the operation of exchange networks between Amathus and the former capital.

Again, the majority of fabrics are associated with Kourion. Apart from the sources discussed in relation to Paphos and Amathus, other sources involve those of F3c, F3xi, F3xii, F4b, F5d, F5f, F5l, and F5n (App. 4, table 9). It is interesting to observe that the sources of the first three fabrics endured at Kourion throughout the Roman period. In these centuries, too, the significant quantity of types in F3c leaves no doubt concerning its origin. F4b, on the other hand, previously assigned to Paphos (section 7.1.1), seems to be a newly-exploited source at the environs of Kourion. Moreover, F5f represents a revival of an earlier source (section 7.1.1) the exploitation of which ceased in the middle Roman period. A general observation is that with the increase in production, some sources that had faded during the middle Roman period revived. Another example is that of F5f.

7.3.2. The modes of amphora production as suggested by the data
Fortunately, the existence of workshops is not solely inferred by ceramic material as in the preceding periods, but confirmed by the recovery of actual structural remains. Yet, despite the importance of this information, the predominance of the LRA1 makes the identification of the underlying modes of production particularly complex. Specifically, regardless of the association of certain types and fabrics with the kiln sites at Paphos and Zygi (sections 6.4.1.2; 7.3.1), nothing precludes the possibility of similar manufacture in other, as yet unidentified, workshops. Indeed, the significant quantity of LRA1 in the F3a fabric from the Paphos workshop in other Cypriot sites poses interesting questions regarding the production output (App. 4, table 9). Had the production of this type in this fabric exclusively involved this particular workshop,
the yield would have to be immense. The requirement would have to be intensive labour, which brings up the issue concerning part-time and full-time operation (see below). Thus, the possibility that a network of workshops was responsible for the production of such vessels, irrespective of nucleation, must not be overlooked. The same stands for the workshops (e.g. “Workshop X”, “Workshop ZA”) invented by Demesticha (2003) based on fabric and morphological traits of Cypriot LRA1 amphorae. An intriguing task for the future, when more quantified data will be available, would be the formation of models to provide rough estimations for such productions.

The rest of the LRA1 variants in the F3a fabric in Paphos could also be household productions, considering their lower quantities and lack of standardisation (App. 4, table 10). Nevertheless, as the exact date of these products remains uncertain, it is unknown whether they were contemporary to the LRA1, or whether they were produced later. Household industry possibly also underlies the manufacture of at least some of the globular amphorae in F3a and in other fabrics, produced in the later part of this period (section 6.4.1.2). The economic changes after the mid 7th century (section 7.3), i.e. following the Arab invasions, reflected in the abrupt restriction of trade, regarded to date as ‘dark ages’, are rather indicative of the decline of workshops and the continuation of the mode of household industry production. This personal belief is contrary to current ideas advocating the complete absence of production on the island in the period following the late Roman (Gabrieli et al., forthcoming).

An interesting observation concerning the excavated Paphos workshop was that it was involved with the production of a single type in a particular fabric. However, based on the data it is not possible to assert whether this was the norm, or whether other workshops produced types – usually the LRA1 - in several fabrics. Thus, it is likely that the LRA1 amphorae produced in the F2d, F4g, F5a, and F5c fabrics, possibly deriving from the same clay sources, were products of another workshop or workshops. The existence of more workshops is also suggested by the identification of wasters at the Paphos Theatre. Colour variation of the types seen at the Zygi workshop (albeit not systematically studied yet) is suggestive of such varied production. Still, it should not be disregarded that the small quantities of these types in each fabric assigned to probable local sources could be suggestive of household industry production.
Quantified data from Amathus confirm the existence of a workshop for the production of LRA1 amphorae in the F1a fabric, long evidenced by wasters (Empereur 1985, 989) (App. 4, table 11). Nevertheless, the same issue applies, discussed for LRA1s in F3a from Paphos, in that the number of workshops producing such vessels is unknown. Moreover, the mode of workshop is implied by the quantity of Globular 1 amphorae, possibly operating prior to the Arab invasions. The standardised form of LRA1b in F1a points to workshop production, possibly as a secondary product. Considering the rural expansion and the consequences of intensive pressures stemming from taxation (sections 4.3.2.1, 8.4.5), it seems more appropriate to envisage the existence of multiple production centres. Yet again, it is impossible at present to infer whether the LRA1 amphorae in the various fabrics assigned to probable Amathusian sources, such as those in F1i, F2a, and F2c, were manufactured in distinct or in the same workshops making use of different clay sources. Taking into account ethnographic data from the island (London 2000), it is possible to suggest that rural workshops exploited the same sources. The same can be suggested for the Globular 1 amphora, also encountered in a number of fabrics, unless it was the secondary product of workshops specialising in LRA1s. Household industry production on the other hand may again be suggested in relation to the LRA1 variants, assessing from the rather crude morphology and the insignificant quantities. The same may be suggested for other isolated types, such as the Amathus IV.

Similarly, at Kourion, which remained the predominant production city, amphora production from the level of household production to that of workshops must have thrived. Workshop manufacture is probably mirrored in the quantity of LRA1 amphorae in fabrics, such as F1m, F3c, and F5d (App. 4, table 12). Again, based on the argument put forward in relation to Amathus, as well as on the prominent role played by Kourion in production, I believe that these represent a number of workshops. As already stressed, it is possible that a series of workshops used a range of different fabrics. These workshops were perhaps responsible for the production of the Globular amphorae, at least in the later part of the period, as their form is more standardised. Moreover, it is not clear whether LRA1 amphorae in the F3xi, F3xii, F4b and F5f fabrics derived from smaller workshops or whether they represent alternative fabrics used by one of the above workshops. Taking into account the tradition at Kourion in production as well as the increase in settlements
(sections 7.1.1, 7.1.2, 7.2.1, 7.2.2), it is very likely that they were manufactured in households or in small workshops. In my opinion, the wide presence of different types in various fabrics (e.g. LRA1 variants in F1m, Kourion IX in F3c or amphorae in F5l and F5n) in trivial quantities supports the idea concerning the expansion of the household industry mode of production during this period.

7.4. The character of the modes of amphora production suggested by the data

Following the above discussion, the modes that most likely operated in Roman Cyprus for the production of amphorae are those of household industry, workshop industry, and possibly estate production (sections 4.3.2.3, 7.1.2, 7.2.2, 7.3.2). An essential aspect highlighted in section 7 is the divergence between amphora-production and production of other kinds of pottery. This is generated by the fact that the former were not produced for dispersion in their own right, but for the dispersion of agricultural produce. This section also examines the issue of technological choices, which is central in the study of production.

7.4.1. Household industry

At the beginning of this chapter I noted the limitations involved in the study of production based on artefacts. As stated (section 7), it is currently possible to advance certain ideas and raise issues for future study, rather than answering questions. Thus, following Peacock's (1982, 82) observation that household pottery is generally uncommon, I attributed to this mode of production variants that appeared in small quantities and usually in uncommon fabrics. It is nevertheless important to underline that such assumptions are recently challenged by studies showing that the output on a household level can be extensive and highly standardised (Feinman 1999, 81-98). Despite these novelties, I personally believe that in the Roman period, with the expansion of pottery workshops resulting from trade intensification, the mode of household industry may be better reflected by small rather than large quantities of pots. This suggestion of course should not be taken to imply the absence of workshops with a small output. Moreover, a whole range of factors may have been responsible for such low quantities.

Among these factors is the distant location of the production unit, or competition between centres of production. The first aspect could apply in the late Roman period with the expansion of economic activity in the hinterland, and
consequently the expansion of production centres. Under the early empire, however, kiln sites were most likely located close to coastal towns, i.e. the focal points of economic activity (section 4.3.2.3; also see below). Distance, therefore, would not affect their quantity at the nearest town.

Household industry, although a long-lived type of production, probably acquired a key role with the annexation of the island into a Roman province (cf. Briese 2005). The growing pressures imposed upon farmers rendered in the form of taxation, rents and loans (section 4.3.2.1), must have compelled them to produce containers in which to trade their agricultural produce. Despite the difficulties in distinguishing the various households, data used in the present thesis suggest that this form of production created extra means for exchange and commerce. Together with the manufacture of other kinds of pottery, it provided further income in times of relentless exploitation. Being in the core of such a complex marketing and redistributive system, this mode of production was also governed by the forces of supply and demand.

Despite cross-cultural similarities (Peacock 1982, 23), production of amphorae in households is distinct as they were distributed over long distances. Their trade was not confined within the limits of the broader region of production, as is commonly the case with household products (Peacock 1982, 17). Instead, the amphorae, as they were not traded as pots but as containers of essentials, managed to reach foreign markets. Frequently this followed distribution to the nearby town market or transportation to the centre of the empire as taxes. Still, they were also traded in regional periodic markets or fairs for profit, and while they may have also been exchanged reciprocally. Embedded social aspects are central in this form of production, as it existed prior to free market trading. They are also evident in the collaboration between villagers, manifested in ethnographic accounts. In Cyprus for example (London 2000), the usage of the same kiln for firing the pots, both implied and created friendly liaisons. Ultimately, it established obligations to the dependent party, who would have to offer mutual aid at times of need.

As noted above, this mode of production is not the basic form of subsistence, but supplements farming and other activities. As such, it is a part-time, seasonal activity (Peacock 1982, 8). Ethnographic accounts (ibid.) reveal that in Cyprus pottery manufacture in households took place between May and October due to good weather conditions, while in other seasons they were engaged with agriculture.
Additionally, production was practised by women, while men assisted in tasks such as clay-collecting and preparation. Large pots, however, such as pithoi, were usually crafted by men. It is therefore difficult to engender the manufacture of amphorae, as these are coarse and frequently large vessels.

As noted above, the mode of household industry producing amphorae in the early Roman period (section 7.1.2) probably took place close to coastal towns. As argued elsewhere (section 8.2.5), economic life also existed in the hinterland, but probably in the form of intense exploitation with simple exchanges. Data from Kourion, however, probably provide an example of expanded household industry production in non-coastal wine-producing areas. The increase of trade resulting from exploitation and expansion of free marketing led to the tremendous development of the Cypriot coast (section 8.2.5). The development of rural settlements on the coast, mainly engaged with household industry production, imparted easy access to the town market, and facilitated tax and rent collection.

Household production during the middle Roman period is difficult to assess. Continuation of commercial activities, albeit in a regional level, suggests that peasants continued to purchase their produce. In my opinion, the question should be one of scale rather than of survival of economic modes. In the late Roman period, as noted above, the development of the countryside and technological improvements (section 4.3.2.1) imply another change in the scale of household industry, but one of expansion instead. This is probably attested in the new and occasionally rough types. Moreover, this was possibly the basic mode of production at the end of this period, when the Arab invasions brought about a major economic change on the island, hitherto translated as an absolute catastrophe (7.3). Household production at this stage is also evidenced in the hand-made cooking pots (Gabrieli et al., forthcoming).

7.4.2. Workshops: individual or nucleated?

The close scrutiny of the material showed that the majority of productions assigned to local sources were probably manufactured in workshops. According to Peacock (1982, 90), “the bulk of Roman pottery was a workshop product”. Workshops are distinguished into individual and nucleated, the former being the main type encountered (section 4.3.2.3). Profoundly associated with marketing conditions, this mode of production is mainly practised by men, sometimes with the aid of assistants. In the Roman world such workshops supplied small communities and were mainly
associated with the hinterland (Peacock 1982, 90). Although, in general, quantity and standardisation of pottery is considered an index for full- or part-time production, manufacture in individual workshops could be seasonal, combined with agriculture and farming, and therefore practised on a part-time basis. Individual workshops, as suggested by the late Roman rural workshop at Zygi, could have also existed in villages close to cities.

When clustered together, individual workshops create nucleated workshops, characterised by collaboration and technology aiming at increased production, for a greater yield and profit (section 4.3.2.3). Thus, these workshops acquired the means for full-time production. Usually, 'urban nucleation' is promoted in urban contexts to satisfy the intensive forces of supply and demand created by the market (section 4.3.2.3). According to this assertion, it is very likely that the 'urban economy' characterising early Roman Cyprus (sections 8.2.5, 8.4.5) led to the unification of individual workshops into such complexes. Possibly, nucleation characterised workshops of Paphos, which controlled economic activity (section 8.2.5). Also workshops at Kourion could be nucleated, considering its important role in production. However, one has to acknowledge the difficulties in archaeologically distinguishing individual and nucleated workshops. As no such production centres have been excavated on the island, suggestions remain hypothetical. Additionally, as Peacock (1982, 92) stressed, it is difficult to assert whether ceramic variations represent nucleation or whether they are the products of a single long-functioning workshop.

The decrease of demand and restriction of the trade area in the middle Roman period probably indicate that workshops were individual. These traits suggest that the conditions that could have compelled their transformation into wider interconnected establishments during the early Roman period (without implying that these conditions necessarily created nucleated workshops) probably did not exist in this period. The increase of rural settlements in the late Roman period suggests the increase of individual workshops in the hinterland, to cope with the demands of inter- and intra-regional trade as well as with taxation. As discussed in section 4.3.2.3, such workshops may again be nucleated, forming the so-called 'rural nucleation'. Their existence does not preclude the operation of nucleated workshops in the cities as well. At present neither of them is suggested by the data.
Despite the unfeasibility of identifying whether the Paphian LRA1 workshop was individual or nucleated, its identification is invaluable. Primarily, it demonstrates that Roman workshops on the island could acquire a complex structure, while its subdivision into units (Demesticha and Michaelides 2001) suggests high level manufacturing technology and advanced organisation, aiming at increased yields. The parallel production of other kinds of pottery, such as tiles and lamps, imparts the sophistication involved in the organisation of production (section 4.3.2.3). According to the Roman mode of organisation of large-scale production centres (Greene 1992, 52), such workshops were probably regulated by a specialist supervisor and a number of slaves producing standardised types. The complexity of amphora workshops is also evidenced by the workshop at Zygi (App. 1, fig. 1) dating to the same period. Although not excavated nor adequately studied, its section, exposed on the shoreline, reveals a number of structures associated with the kiln, which perhaps also produced other items, such as tiles. Most importantly, it confirms the existence of individual workshops at rural settlements, and the potential for complexity.

Workshops must have been predominantly situated on the coast for easy access to harbours, and outside the city walls for fire safety reasons (Peacock 1982, 38). Both workshops identified on the island support this idea. Although no kiln sites dating to the early or middle Roman period have yet been identified on the island, the economic focus on the coast is indicative of a similar location. Workshops identified on Crete for this period are also coastal (Marangou-Lerat 2002, 68). Evidence from Rhodes on the other hand shows that workshops also existed on the mountain, close to vineyards (Empereur and Picon 1986, 115). Although inland transportation of amphorae in Rhodes would have been easier due to the smaller distances involved, it is still possible that similar production also occurred on Cypriot mountains. Yet, as noted above, had such inland units existed, they would mainly involve the late Roman period, due to the increase of inland rural centres. Further study of the survey material close to Skouriotissa (Jacobsen 2004) will be enlightening concerning such production in sites relating to mine production. Hopefully, in the future the distinction of workshops will be elucidated by a study of the amphora stamps and dipinti. The problem of nucleation however will remain speculative, unless physical remains come to light.
7.4.3. Attached production?
The distinction between ‘attached’ and independent workshops is equally difficult to tackle archaeologically. In a sense, however, elite control constituted all producers attached (section 4.3.2.1). Control, albeit economic, must have been more evident in those cases in which the land of the workshop was rented by the potter (Peacock 1982, 94). The level of state control is also hard to grasp, as amphora production was directly involved with taxation, but also with free marketing.

However, as noted in relation to the early Roman material from Paphos and in particular that from the House of Orpheus (section 7.1.2), it is possible that amphorae were also manufactured on estates. In this case, manufacture, embedded within the villa economy (Peacock *ibid*.), was attached as it was directly and utterly controlled by the rich owners. This mode of production was very popular in the Roman world, foremost for the elites to obtain private produce. Thus, by decreasing expenditure as they obtained goods for private consumption or by targeting local and foreign markets, they sought to expand their wealth. The significance of estates throughout the Roman period is highlighted in section 4.3.2.1. Amphora workshops must have been central in this form of production for packaging estate agricultural produce for commercial purposes. The difficulty in identifying this mode archaeologically has been demonstrated above (section 7.1.2), but the speculations enabled by quantified data are most interesting. Hopefully, these can be developed further once more data are available from alternative contexts.

7.4.4. Technological choices, morphological traits and imitations
The consideration of diachronic typological changes of amphorae from the early to the late Roman period has been most unfortunate. In the, albeit important, traditional attempt to provide accurate catalogues listing the typological traits of amphorae from each period, no serious effort has been made to explain the seeds of these changes. A relevant phenomenon is that of amphora imitation. Sporadic references on this issue (cf. Rauh 2004) are primarily concerned with typological elements, omitting to address the phenomenon at its core.

Widespread in the Roman empire, imitations are constantly encountered throughout the Roman period on the island. Imitations of famous amphora types were produced already in the Hellenistic period (Hayes 1991, 85-6). Present analysis has revealed that the first imitations of western amphorae moderately began during
this period as well, i.e. before the Roman conquest, set off by the first commercial contacts with the Republican world (section 8.1). With Roman conquest the phenomenon outspread. This is manifested by careful imitations or variants of amphorae predominantly produced in the centre of the empire (e.g. Dressel 2-4, and Sub-Koan variants) or even famous amphorae from other provinces (cf. Spanish, Gauloises, Aegean amphorae). Although this aspect diminished in the middle Roman period, local variations of amphorae similar to Dressel 30, assigned to Algeria (Peacock and Williams), as well as versions of N. African and Iberian amphorae attest toward the continuation of this mode. Similarly, the predominance of the LR1 amphorae in late Roman production, interesting in itself, had left little space for the consideration of the aspect of imitation. However, recent research has demonstrated the imitation of types to date mainly associated with a particular area, such as the Palestinian amphorae. Most importantly, this identification is substantiated by data included in the present study (e.g. App. 3.3.4.6, table 5).

Key to addressing these vital issues is the fundamental aspect of technological choices. Their understanding, involving "techno-functional", social, and symbolic implications (Skibo 1999, 5), requires the consideration of the broader socio-economic and ideological context. Thus, stylistic similarities mainly between early Roman Cypriot amphorae and those imported from the centre may reflect the integration of production within the regional political system. It can be argued that these imitations reflect the broader flow of innovations from the centre, and intense social and ideological interactions between the periphery and the centre (Woolf 1990, 54, 55; Schortman and Urban 1994, 404).

The transfer of symbolism through stylistic similarities in such systems encouraged the political alliances, legitimised the new order and the peripheral rulers' control (Hantman and Plog 1982, 243; Hodder 1982, 208; Schortman and Urban 1994, 404). This notion perhaps mostly applies to socially consumed materials and not to bulk containers. In any case, morphological similarities and copying of types of products as common as amphorae still demonstrates activity within a centrally controlled economic system, implementing these methods to promote marketing and consumption. Another explanation for these similarities, most likely underlying middle and late Roman imitations, may be competition between markets throughout the empire. This could result in the adoption of types associated with the transportation of highly demanded products from throughout the empire, or even in
the adoption of ideological connotations established by the centre for the promotion and successful marketing of products.

Thus, as in the early Roman period the centre sought to establish mechanisms with which to secure economic stability and expand economic growth within a vast territory, these ideas on symbolism within the wider system may explain why imitations of products from the core mainly involved the early imperial period. Integration of production within the regional political system may also explain the typological changes occurring in each period. Political changes occurring in each period may suggest that potters made their decisions within a different ideological framework.

7.5. Ideas on agricultural production as suggested by the amphorae

Organisational aspects of agricultural production and the sophisticated management involved have been noted in section 4.3.2.1. As noted, invaluable information is provided by literary accounts, and mainly by papyri, such as the Heroninos archive (Rathbone 1991). The scarcity of such evidence however constitutes the information obtained by the amphorae, which are amongst the important archaeological material enabling an insight into agricultural production and growth (section 1), particularly essential. Other kinds of archaeological evidence derive from structural remains, such as olive presses and vineries. Through the study of the scale of amphora production it is possible to deduce to an extent, the scale of agricultural growth. Such inferences are based on our knowledge on the contents of these containers, but a difficulty is frequently posed by the restricted information.

An aspect highlighted in the present analysis is the uncertainty concerning the contents of local amphorae (chapter 6). This problem arises from the lack of previous adequate and systematic research on the island. These limitations nevertheless do not prevent the development of hypotheses building on similarities with amphorae the contents of which are known, either because these were noted in painted inscriptions or because traces were found in the interior. Such deductions are more possible concerning imitations. Another related problem is the association of several contents with certain amphorae; a problem also intrinsic to the study of consumption. A solution may potentially be provided by residue analyses of the various types. However, it is still impossible to use this time-consuming and expensive method on every specimen. Thus, at present it is only possible to pose preliminary ideas based
on available evidence, with the hope that more information will be available in the future.

Concerning Cyprus the initial ideas created from such similarities between newly identified local and previously known foreign amphorae can luckily be contrasted with a study of the countryside of the entire island (Christodoulou 1959). In essence, this critical study involves a detailed agricultural ‘map’ of the island. It concentrates on the diachronic character of agriculture, and particularly of viticulture and oleoculture that, according to the Mediterranean model, occupied a central part in economy. As noted above (section 7.1), we learn from literary accounts that Cypriot wine was valued, while olive presses identified on the island show that by the time of Roman conquest oil production was well-established and aimed at large yields. Moreover, the limited import of olive oil amphorae reflected in the data (section 9.1) suggests the existence of sufficient surpluses. The production of fish-based amphorae on the other hand, which is closer to agricultural than industrial production (Greene 2000, 743), is attested by coastal establishments identified in Lapethos (Nicolaou and Flinder 1976).

The association of the majority of local amphorae with wine during the early Roman period (sections 6.2, 9.1.2), at least provisionally, is indicative of the importance of viticulture on the island. Some amphorae of unknown contents, deriving predominantly from Kourion, could possibly be associated with olive oil production. Kourion, as the major production city (sections 7.1.1-7.3.1, 8.2.5), was presumably involved with both products. Wine production was perhaps more widespread considering the vineyards north of the city, as well as the road network constructed in this region during the early empire. On the other hand, the area surrounding the city is rich in olive trees (section 8.2.5). Olive oil production is perhaps better attested in the following period with the manufacture of amphorae resembling Dressel 30, which was used for the transportation of this product (sections 6.3.2.1-6.3.2.2). The production of this amphora is associated with Amathus, which is also associated with the olive-cultivation. The contents of the majority of middle Roman local types, however, are unknown and therefore uninformative. One may suppose that viticulture continued to occupy a key role in agriculture, particularly as some early Roman types were produced into this period (sections 6.2.1.1-6.3.1.1). In the late Roman period, the almost exclusive production of LRA1 amphorae and variants (Williams 2005b) makes it particularly difficult to
examine agricultural production as this type is associated with both products. The expansion of agriculture into the hinterland rather implies the intensive cultivation of both products.

Possibly, the provisional association of the majority of local productions with wine shows that exports from Cyprus did not involve olive oil to the extent of wine. Demand for wine may have been greater as were the social aspects accompanying its consumption. Moreover, the main olive oil exporting region was N. Africa, provisioned with massive structures in order to deal with the pressures (Mattingly 1993, 485). As noted above, the fertility of the eastern Mediterranean in oleiculture most likely implied a more limited import of this product.
Chapter 8. Trade and exchange from the early to the late Roman period

8. Introduction
The chief intention in this chapter is to investigate distribution from the early to the late Roman period in order to understand the multifaceted patterns of interaction and the diachronic changes (sections 6.1-6.4.3). Key components to achieve this aim are the examination of long-distance, inter-regional networks in each period first, followed by the examination of intra-regional distribution between cities and their hinterland, and between cities. All these types of trade, as Hopkins (1983b, 85) asserted, were interconnected. A brief introduction to the general aspects of the study of these networks is provided in sections 8.0.1 and 8.0.2. In addition, section 8.0.3 offers a preliminary discussion of the role of agents and middlemen in the conduction of the trading activities reflected in the archaeological record.

Emphasis for the identification of inter-regional networks is put on model-building and statistical analysis (sections 5.2, 5.2.1). In particular, attention primarily focuses on investigating mechanisms of direct exchange with the sources and redistributive exchange, from areas other than their sources. To this end, data from other Mediterranean sites play a vital role as they also enable the development of the ideas that are statistically tested. Regression and correlation are the actual statistical tools applied, first to observe the general trends and thereafter to examine the interconnection between amphorae from diverse origins in order to explore ideas concerning redistribution (section 5.2.1). However, I need to highlight the fact that not all data, once filtered (section 5.2.1), could form part of correlation analysis. As a result, interpretation is not always conclusive and the ideas advanced in the models are occasionally not completely tested. Despite these problems, mainly generated from the point of recording the finds at the stage of excavation, the information obtained is still invaluable. Data dating to the Republican period are not included in this sort of analysis for the identification of long-distance patterns, as they do not form statistically significant assemblages. Instead, some preliminary viewpoints are put forward based on quantification (section 8.1).

The study of distribution of imports within the city, in order to understand the ‘concluding stages’ of long-distance trade is also of great significance. These
trends, however, are examined in relation to the study of consumption patterns in chapter 9. As pointed out in sections 3 and 6, throughout the analysis Paphos is analysed first, followed by Amathus, and finally Kourion. The objective is to look at the island's western and eastern contacts. Even though Amathus is a southern city, it is situated closer to the east. In the inability to analyse data from clearly eastern sites (sections 1, 3), data from Amathus are useful as they reflect more easterly patterns. Data from Kourion are examined last, as they are informative on the routes followed by in-coming ships to the west or to the east of the island. They furthermore facilitate the examination of fall-off trends and of the redistribution of imported products intra-regionally. Thus, the division between long-distance and regional exchange is not rigid; a parallel consideration is fundamental in seeking alternative networks and helps to better understand each process individually. Economic and non-economic aspects underlying the identifications (see chapter 4) are discussed at the end of each period, following the analysis of all cities.

It should be stressed that the underlying goal is to achieve a synthesis of the economic scenery from the beginning to the end of the Roman period, by combining the data analysed in the current research with our present knowledge, and published data. Other kinds of pottery, such as fine wares, lamps and tiles, may provide additional information on exchange. However, this body of evidence is only occasionally referred to in the analysis, partly due to time and space limitations imposed in the thesis, and partly because the objective is to understand the processes underlying amphora production, which are different to those responsible for more highly valued items, such as fine ware.

8.0.1. Inter-regional distribution
For a better understanding of inter-regional distribution it is important to take into account some 'hidden' factors. These mainly relate to Roman shipping conditions, in order to understand spatial distribution. For example, 'direct' exchange is not used in the sense of a continuous journey from the exporting to the importing area as ships stopped in a series of places for supplies. Rather, it implies the intention to distribute goods to a certain area. In addition, voyages were predominantly coastal, seasonal, and affected by prevailing winds (Murray 1995, 38-54). Moreover, considering that Roman economic activities were conferred an incomparable complexity amid pre-capitalist societies and expanded to being Pan-Mediterranean (sections 2.1, 2.2.1.4,
2.2.2.2), the role of central place redistribution must not be downplayed. Instead, it must be considered as a constant prospect when ‘reading’ the patterns. In addition, it is likely that interdependency among coastal centres (Fulford 1987, 59-60) probably facilitated redistribution. Therefore, the plots and maps provided for the observation of the trends are not a pure ‘reflection’ of distribution trends, but provide the basis to tackle complexity by acknowledging the above aspects.

8.0.2. Intra-regional distribution

Analysis focuses on distribution between the cities, i.e. ‘inter-city’ exchanges, but also between the cities and their hinterland (section 8). The economic relationships between the cities have been of interest in studies of Roman economy, especially recently, as more data are available (cf. Fulford 1987). It is, thus, intriguing to examine whether the previously emphasised inter-dependence between urban centres also characterises Cyprus, and also, whether this is a constant feature throughout the Roman period. The ‘city-hinterland’ model, on the other hand, has long been in the core of Roman economic studies (section 4.3.1). My intention is not to apply the model as has been occasionally developed by various schools of thought, but to explore the flow of imports from urban centres to their peripheries, and the distribution of local products from the hinterland to the centres for their marketing. Central to both approaches is the level of dependence between cities and hinterlands, once again, diachronically.

At this point I should emphasise that my intention is solely to demonstrate the flow of products intra-regionally in order to obtain preliminary ideas and start understanding Roman Cypriot economic mechanisms; expansion of these ideas will rest with future research. Inferences are drawn on material analysed in the present thesis and published material. Study is confined to a ‘broader’ understanding by the diverse methods of recording applied by different researchers, preventing a comparable statistical analysis of all data (section 5.2.1).

8.0.3. From production to distribution: the role of middlemen

The role of middlemen must not be ignored as they were the link between production and distribution, responsible for the dispersion of products to local and foreign markets. Their role in the economy and social standing from the early to the late Roman period has been the subject of debate (sections 4.1, 4.3.1.4). Although at
present it is not possible to discuss these issues at length, it is vital to acknowledge their role as they constitute another major component of the economic chain, underlying the patterns observed in the following analysis.

Middlemen were involved in the dispersal of traded ceramics, but the situation is slightly different when it comes to amphorae. Primarily, they were not traded in their own right, but as containers of agricultural produce, and secondly, the amphorae were frequently collected and distributed from individual households as taxes in kind. Thus, middlemen engaged with commercial distribution belonged to the private sector, while the imperial agents (*conductors*) responsible for managing imperial land (section 4.3.2.1), also collected and distributed the produce from the tenants. In the late Roman period, with the increase of taxation in kind (section 8.4.5), researchers tended to believe that private middlemen decreased, as there was not much produce to sell in order to obtain money (Garnsey and Whittaker 1998, 318). Recent research, however, on the scale of late imperial taxation in money and kind, has revealed that collections in cash were still substantial (Garnsey and Whittaker 1998, *ibid.*). In addition, the combination of the *annona* with commerce (section 8.4.5) required the operation of traders. The role of urban traders during the late Roman empire in modern literature was also downplayed in favour of the development of the countryside (sections 7.3, 8.4). Current viewpoints though stress the continuation of urban life as well as the importance of agents in its economy. Moreover, the organisation of traders into *collegia* did not restrict their activities, as hitherto claimed, as the intervention of the state was limited (Garnsey and Whittaker 1998, 318-319).

Amphorae as taxes, on the other hand, were collected by officers. Ample evidence for the collection of amphorae as part of taxation is provided by the Hellenistic amphorae, such as the Rhodian, which record the names of officers (Grace 1979). Tax officials in the Roman empire mainly exploited free farmers and tenants. Rich landowners or ship owners, due to their powerful and influential social position, escaped the heavy burden of tax-collection. This situation inflicted major social and economic consequences, as the taxation on the poor and middle landowners was particularly heavy (Whittaker and Garnsey 1998, 281, 310). In the late Roman period it was frequently the aristocracy which acted as the intermediary between the state and the poor to collect taxation. It was an arrangement which
stemmed from the complex relationship between the elites and the state and rendered them unlimited power (Banaji 2000, 96, 97; section 4.3.1.4).

In Cyprus private agents were perhaps involved for the distribution of amphorae from workshops. The proximity of rural households to urban centres, particularly in the early empire, suggests that household productions were distributed to the markets directly by the producers. Possibly, middlemen were involved in the transportation of inland agricultural produce to coastal centres. Such produce was stored in *horrea*, archaeological remains of which are often apparent close to harbours (section 4.3.1.2). A great corpus of ethnographic evidence concerning the storage of carobs prior their distribution is highly informative of such facilities on Cyprus (Leonard 2004). However, it is unknown whether agricultural produce was immediately stored in bulk, awaiting the transfer of amphorae, manufactured in mass in workshops, to be filled in. It is probable that produce was transferred at a place close to the amphora workshops, where they were packed and then directed to the *horrea*.

Unfortunately at present it is only possible to point out these possibilities, hoping for future examination. Certainly, the answer cannot be straightforward, considering the great level of complexity characterising all economic aspects. Although it is impossible to consider the organisation of such activities independent from the state, at least concerning the distribution of taxation, a great deal of individual decision making must have been involved, especially with regard to free market trading.

### 8.1. Distribution of imported Republican amphorae

In Cyprus the period of the circulation of republican amphorae corresponds to the Hellenistic period (section 6.1). It is, nevertheless, imperative not to overlook the patterns suggested by these productions, as they represent the first exchanges occurring between the island and Rome or even the western Mediterranean, in general. Additionally, the impact of the Hellenistic world in the Roman empire, which largely built on Hellenistic socio-economic foundations is well known (sections 1.1, 8.2.5). Although the data are diminutive, and cannot be statistically analysed, their quantification encourages the formation of preliminary ideas concerning their distribution and possible mechanisms involved (section 8).
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On the whole, between the 2nd and 1st c. BC, i.e. the main period of production and exchange of Republican amphorae, the predominant types circulating on the island were the Hellenistic, manifesting intensive contacts with the Aegean. Hence, the low quantity of Republican imports (sections 6.1 - 6.1.3) places Cyprus within the broader eastern group identified by Will (1982). According to this researcher, Republican amphorae in various regions of the eastern Mediterranean encompass 15% of the total amphorae. Exception to this rule, are the vast amounts of imports in areas such as Alexandria and Delos. But, an in-depth analysis, which is not the scope of this research, of material dating into this period is required in order to confirm the above observation concerning Cyprus. At present, it is possible to assert that amphorae from western sources dating to this period do not form assemblages, but rather indicate occasional exchange within the Hellenistic commercial circuits.

A logical inference based on this preliminary identification is that western middlemen on the island, especially between 125-50 BC, i.e. the period in which Italian merchants operated in the eastern Mediterranean (Monsieur and Paepe 2002, 162), would have been few. Possibly, these western imports were mainly redistributed from the Aegean, together with the Hellenistic amphorae. Evidence concerning their trade in the Aegean is plentiful. The significant level of exchanges between republican Rome and the Aegean is not unexpected; economic consequences resulting from the establishment of the Italian colonial enclave (free port) on Delos in 167 BC (Lund 2000a, 86) would have been great. Furthermore, the vicinity between Italy and Greece facilitated exchanges. Important information comes from research in the Agora in Athens (Robinson 1959).

The differences between quantities from the cities under study possibly reflect Lund's (ibid.) ideas concerning the exchange link developed between Ptolemaic eastern areas, rather than direct trade with Italy or other western sources, such as Gaul (sections 6.1.1 - 6.1.3). The rather insignificant quantity of Republican amphorae in Paphos situated along the sea route to Alexandria, shows that it is the Egyptian city that was the targeted market, and not Paphos, which possibly functioned as a stop to ships heading to the south. The greater quantity in Amathus, on the other hand, implies that western imports reached the city from alternative routes, presumably from the east. The sparse data from Kourion (section 6.1.3) also suggest that these products were not redistributed to Amathus from Paphos. Their
redistribution most likely primarily occurred from Cilicia directly or via another Cypriot city in the east. Asia Minor was already being exploited by Romans, also attested by data from Cilicia and other areas, such as Pessinous (Monsieur and Paepe 2002, 156, 160-163). Another possibility is that Republican amphorae were channelled to the broader eastern area from the Aegean to Antioch through the north coast of Cyprus. This route is largely suggested in relation to the sea networks of the following periods (sections 8.2.2, 8.2.5, 8.3.2). However, these models can only be tested once more data are available. A final suggestion is that these imports were considered prestigious due to their distant sources and rarity. Indeed, evidence from Paphos shows that they are more abundant in the wealthy House of Orpheus. The scarce imitations of these types possibly reveal such a high value (section 7.4.4).

8.2. Early Roman period
The assessment of quantified data from the early Roman period indicates a marked change in Cyprus' trading activities occurring with its annexation into a Roman empire in 58 BC. The different patterns observed throughout the island, not only reveal a spontaneous and unparalleled increase of trade, but also an exceptional level of complexity (sections 6.2 - 6.2.3). The predominance of Aegean imports integrated within the former Hellenistic economic framework is swiftly substituted by imports from both parts of the Mediterranean. Bearing in mind the broader novelties of this period and by following the above methodological path (section 6.1), the aim below is to tackle and understand complexity and the character of trade.

8.2.1. Distribution of imported amphorae to Paphos
8.2.1.1. Models and hypotheses
The total of the data from Paphos has revealed that the levels of imports from the two parts of the Mediterranean are very similar, with a slight excess of western products (34.7%) over the eastern (28.9%). To start with the model on the distribution of western products to Paphos, it is built on two assumptions, based on both quantified and comparative data. First, the large volume of products from Italy (12.3%), Gaul (11.2%), and Spain (6.3%) suggests the existence of direct links with these areas (App. 5, table 1, fig. 1). Evidence supporting this hypothesis may be taken from their generally low number in other eastern Mediterranean areas, such as in North Sinai (Arthur and Oren 1998, 197, 199) and Mons Claudianus (Tomber 1992, 138, 140).
and Mons Porphyrites (Tomber 2001, 244, 261) in Egypt. Certainly, such a great quantity cannot be considered as unparalleled in the eastern basin, as one would expect ample western imports in major centres, such as Alexandria and Antioch. Immense imports from the west are recorded to these areas as early as the Hellenistic period (section 8). Unfortunately, no sufficiently quantified early Roman data are as yet provided for these key cities. A few examples available from Alexandria (Empereur 1998, 395) cannot be used for comparative purposes and, definitely, cannot be considered as representative. Moreover, the fact that western products were not recorded in the Aegean and N. Africa in quantities larger than those from Paphos (Peacock and Williams 1986; Fulford 1989, 175, 182; Warner Slane 1990, 108-9; Hayes 2000, 319; Forster 2001, 161) makes their frequent redistribution to Paphos from these regions rather unlikely.

However, apart from direct exchange, Gaulish and Spanish amphorae could also be channelled through Italy. This theory is based on our knowledge that Gaulish and Spanish amphorae were the most frequent imports in Ostia (Widemann and Naciri 1989, 286; Panella 1986, 611). They are also common in Cosa (Will 1987, 209) and in Pompeii (292-4). Intense trade between Gaul and Italy in particular, is noted since the republican period and has been the subject of fervent research (cf. Laubenheimer 1991, 2003, 33; Baudoux 1996, 30-38; Desbat 2003, 49). The large volume of Italian amphorae in Paphos (App. 5, table 1, fig. 1) suggesting intense contacts with the core supports such an idea. Similarly, the strong commercial links between Gaul and Spain (Desbat 1991, 323; 2003, ibid.; Laubenheimer 1991, 254; Baudoux 1996, 40-43) in association with the larger quantity of Gaulish amphorae in the Paphos assemblage, pose Gaul as another possible channel for the redistribution of Spanish amphorae.

The significantly smaller quantity of Portuguese amphorae is suggestive of the operation of the mechanism of redistribution. The strong economic relationship shared between the areas of the Iberian coast (cf. Beltrán 1970), is highly informative. The greater quantity of Spanish amphorae could imply that these Lusitanian amphorae were indeed redistributed from Spain. Following the same argument posed above, Italy could have also been a redistribution point for Portuguese amphorae, as they are among the products frequently distributed to the core (Bruno 2002, 286; Mayet 2003, 278-9; Panella 2003, 179). To Italy, they could have been distributed directly or redistributed via Spain or N. Africa with which
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Lusitania was commercially linked (Martin-Kilcher 2003, 73). The significant distribution of N. African and Spanish imports to Italy and Rome in particular is highlighted by Panella (2003, 178-9), but is also well attested by evidence from Sardinia (Tronchetti 1996, 152-155).

The careful study of trade routes requires the consideration of the possibility of occasional redistribution of western products from other eastern regions, situated closer to the west, such as the Aegean (despite the meagre reliability level), Crete (Forster 2001, 161; Hayes 1983, 141, 145-7), and possibly Asia Minor and Cilicia. The respected links shared between Paphos and this eastern region evidenced by Cilician, Aegean and Carian imports (App. 5, table 1, fig. 1) as well as by Cypriot imports to areas such as Crete (Forster ibid.), necessitate the need to examine such a possibility.

N. African amphorae (Tripolitanian, Tunisian, Carthaginian) could have been redistributed from areas such as the Aegean (Hayes 1983, 151-3), Italy (Tronchetti ibid.; Bruno 2002, 284-5), and even Spain (Martin-Kilcher ibid.); an idea based on their lower quantity and the identification that N. African commodities were mainly distributed northwards (Fulford 1989, 171). Intensive exchanges with Spain, facilitated by the vicinity of the western N. African coast, are long identified (cf. Keay 1984). Although their lower quantities may reflect smaller production at the sources, the idea that they may simply document their absorption predominantly by Italian markets must not be overlooked (Panella ibid.). Yet, it is possible that any surpluses in the capital of the empire were traded to other regions, including Cyprus, for profit.

Contrary to the more complex ideas for the distribution of western amphorae, the models for the examination of trade routes involving the distribution of eastern products are rather straight-forward. In brief, hypotheses entail the possibility of both direct and redistributive exchange. Behind the development of these exploratory models (sections 5.2, 5.2.1), are the small distances separating the island from the rest of the eastern regions due to its centrality. Clearly, these would promote direct trade. In addition, the intensive exchange ties among eastern Mediterranean regions dating back to the Bronze Age, may point to the operation of the mechanism of redistribution.
8.2.1.2. Statistical analysis

To start with the model on the distribution of western amphorae, the general impression given by regression analysis (App. 5, fig. 2) reflected in the 'negative' relationship between quantity of imports and distance from their region of origin, is that the closer the source, the greater was the quantity of amphorae reaching the city. This could be suggestive of possible direct exchanges with these areas, even though other factors such as redistribution may have still been responsible. For example, had the Aegean been the mediating region, one should probably expect more Italian amphorae than Gaulish, due to its proximity to Italy. It is therefore important to reassess this statement with the application of correlation analysis.

Most data from western sources, apart from those originating in Portugal and most N. African regions, were appropriate for such an analysis (App. 5, table 2). A first, interesting observation is the lack of correlation between amphorae from Italy and from Gaul, confirming that these products arrived to Paphos directly from their respective sources (App. 5, fig. 3). In which case, the second hypothesis suggesting that Gaulish products could have been redistributed via Italy is rejected. This is evidence that, at least, Gaulish products imported to Italy were primarily consumed within the centre of the empire, leaving no surpluses for regular exchange beyond.

The significant correlation between Italian and Spanish amphorae, however, albeit not strong, attests that in Italy there were a few surpluses of Spanish amphorae, rarely redistributed to long-distance markets (App. 5, table 2, fig. 3). A similar correlation occurs between Spanish and Gaulish amphorae, also indicating a sparse redistribution of the former from Gaul. Nevertheless, the fact that none of these correlations are strong shows that Spanish amphorae were predominantly distributed directly. Indeed, the large quantities of western imports are in accord with the identification concerning direct distribution. Italian commodities, in particular, were imported to Paphos since the republican period (section 8.1). Evidence provided by fine wares manifests that Italian imports became more abundant in the Flavian period, even though they were already distributed in the Julian-Claudian period (Marquie 2002, 291-2). Moreover, the lack of a significant correlation between Tripolitanian amphorae and amphorae from other sources possibly suggests their direct distribution to Paphos. It is therefore possible that the trade routes proposed by Fulford (1989, 171; sections 8.2.1.1, 8.2.2.2) were not the norm. The expansion of trade most likely impelled the occasional exploration of other routes as well.
Data from the Aegean and Cilicia formed part of correlation analysis enabling the speculation of possible redistribution of western products from these eastern areas situated west or north of Paphos. However, the only significant correlation between eastern and western sources (Aegean and Gaulish) is negative, suggesting competition rather than redistribution (App. 5, table 2).

Concerning the investigation of the distribution of eastern Mediterranean amphorae, it was also possible to incorporate the amphorae attributed to the broader ‘Cilicia/Syria’ region. A moderate, but statistically significant, correlation occurred between Aegean and Cilician amphorae (App. 5, table 2) confirming the idea advanced in the model, i.e. that eastern amphorae were also redistributed from neighbouring areas (section 8.2.1.1). This issue is clarified better in section 8.2.2.2. In this case, it is most likely that Aegean amphorae were also redistributed from Cilicia, which is geographically closer to Paphos (App. 5, fig. 4). Additionally, Cilician products were imported in greater quantity (App. 5, table 1, fig. 1). Aegean amphorae must have been traded directly as well, as the correlation implying redistribution is not very strong.

The lack of correlation between amphorae from the ‘Cilicia/Syria’ region and the Aegean or Cilicia is intriguing (App. 5, table 2). Although it may just be due to the broad definition of that region, it may also be suggesting that products from the Levantine coast arrived to Paphos from an alternative route, and not via Cilicia. Such a route should be sought within the island, and most likely its eastern part, or in direct journeys with the opposite coastland. Hopefully, more eastern data from Paphos will be suitable in the future for correlation analysis, in order to address the issue of direct and redistributive exchange in its full extent. At present it is possible to observe few correlations between sources, pointing to the operation of direct exchanges between Paphos and the rest of the empire, particularly the western.

8.2.2. Distribution of imported amphorae to Amathus
8.2.2.1. Models and hypotheses
As with Paphos, in the case of Amathus, too, the first model involved the distribution of western amphorae. The divergence in the quantities observed between products from Amathus and Paphos (App. 5, tables 1, 3, fig. 1, 5) pointed to the operation of diverse mechanisms. As a result, the proposition of alternative models was necessary to examine whether the patterns observed were the result of direct or redistributational
trade. The model precludes the redistribution of western amphorae predominantly from Paphos; had this been the norm, the pattern would have been largely similar. Additionally, the lower volume of western amphorae from Kourion, situated between the two cities, in relation to Amathus (section 6.2.3) rules out the possibility that this route was central for the distribution of western amphorae to the east of the island.

This model was confirmed statistically by means of regression analysis, the results of which are described in detail below (section 8.2.2.2). Consequently, a more complex model was advanced proposing an alternative route for western products. In view of the significant quantities of products from the northern eastern Mediterranean regions and Amathus’ rather easterly position (App. 5, table 3, fig. 5) this model stresses the possibility of redistribution of western amphorae from neighbouring areas. The same idea may be advanced concerning the distribution of N. African products. Again, their greater amount in Amathus, rather than in Paphos, suggests their redistribution from eastern regions. In order to explore these hypotheses it was considered appropriate to apply statistical techniques to all data, from throughout the Mediterranean.

With regard to the distribution of eastern amphorae, it is possible to hypothesise that, apart from those the origins of which are situated in the western part of the eastern Mediterranean, such as the Aegean amphorae, the majority were distributed directly from their sources. Once more, this model builds on the small distances involved. Yet, as stressed in relation to Paphos (section 8.2.1), the small distances involved between eastern regions and the long established exchange networks in the area would probably promote the redistribution of products from areas other than their sources. An exploratory quality is therefore attributed to these models aiming at identifying the relevant distribution trends.

8.2.2.2. Statistical analysis

As said above, the first statistical analysis aimed at testing the model on the distribution of western amphorae by using regression analysis (App. 5, fig. 6). The patterns observed led to verifying the ideas advanced through the model and, finally, to the development of a more complex model. Contrary to the previous models, and with the few Portuguese imports as exceptions, these trends showed that the further the source, the greater the quantity. The outcome was ‘unexpected’, as one would anticipate the greater quantity to derive from the nearest source. A possibility is that
these patterns did not solely result from direct exchange. Moreover, Spanish amphorae could not have been redistributed from Italy, which is the nearest source, as in Paphos (section 8.2.1), as the quantity of Italian amphorae is significantly smaller. Similarly, intense direct contacts with Spain are unlikely, due to the great distance involved. Indeed, one would expect more Spanish vessels in Paphos, considering that this was the capital, as well as the first harbour for the ships coming to the island from the west.

The investigation of the more advanced model, stressing the possibility that eastern Mediterranean regions could have acted as redistribution centres, likewise, began with the application of regression analysis (App. 5, fig. 7). Among the most perceptible trends are the remarkable high volume of Cilician imports and the respectable volume of Aegean amphorae. In regression, two ‘groups’ are formed by the low quantities of some eastern on the one hand, and N. African and Italian imports on the other. In order to test whether western products were redistributed from the better represented eastern Mediterranean areas, I considered it best to first establish correlations between products from eastern sources.

Unfortunately, the restrictions posed by rank correlation analysis (sections 5.2.1, 8) prevented testing data from all sources. Not all eastern amphorae could be analysed, and, unfortunately, apart from Spanish amphorae no other data from western sources could form part of correlation analysis (App. 5, table 4). Still, the examination of data from Spain is very important, as it enabled the investigation of the interesting issue of their distribution, discussed above. Again, Tripolitanian are the only N. African amphorae analysed.

Despite these problems, rank correlation analysis revealed the existence of very strong, and statistically significant, links between amphorae from the Aegean and Cilicia. Taking into account Empereur and Picon’s (1989, 243) identification that the Aegean, and Rhodes in particular, supplied A. Minor, this could be suggestive of the redistribution of Aegean products to Amathus from Cilicia (App. 5, fig. 8). Cilicia is closer to Amathus geographically, and the abundance of products from this area manifests that they were most likely transported directly, although partial redistribution from cities such as Salamis or Kition, situated closer to Cilicia must not be ruled out. Additionally, Aegean products are almost as strongly related to products from the ‘Cilicia/Syria’ region (App. 5, table 4), suggesting their redistribution from the broader north area of the Levant. As noted earlier (section
However, the problem with the broader definition of this region may affect the patterns.

The smaller quantity of Aegean products in Paphos makes their redistribution from the capital of the island unlikely. However, it is probable that they could have also been redistributed through N. Cyprus, and presumably via Salamis, which was a major city in the east of the island (section 3.1.4). Both, this idea and the idea of their redistribution from Cilicia involve the operation of an alternative trading network, which existed between the Aegean and Antioch, traversing the north coast of Cyprus (App. 5, fig. 8). As suggested elsewhere (section 8.1.0), it is probable that this network for the distribution of western amphorae to Amathus has its roots in the Hellenistic period. It is also noted in written sources (Lucian *Navigium*), but its importance has been disputed in past research (Murray 1995, 39), possibly because of the lack of investigation in the area due to the current political situation. North Cypriot harbours were stops for these ships. As such, transported products would be off-loaded and local products on-loaded. On the other hand, one can easily imagine continuous exchanges between the north coast of Cyprus and the opposite Cilician coast, separated by a very short distance. At present, these links are demonstrated by imports at the north-western area of Kioni (Leonard 1995b, 144, 149). The efficient road network would have facilitated their inland redistribution from the north to the east and south of the island (section 8.2.4.2).

A moderate and significant correlation occurs between Cilician and Syrian amphorae (App. 5, table 4). Although these are neighbouring regions, it is not necessary for them to be highly correlated, as they are two rival sources: a merchant or a consumer could have chosen the product from one area or the other, therefore resulting in the lack of correlation between the two regions. This correlation suggests that Cilician amphorae were rarely redistributed from Syria, or vice versa (App. 5, fig. 8). Most importantly, it demonstrates that products from areas in close proximity were mainly distributed to Cyprus (and possibly to other eastern regions) directly from their sources. The relatively significant quantity of Syrian amphorae and the proximity of their source, as with Cilician amphorae, are indicative of direct exchange.

Concerning the Spanish amphorae, their greater quantity in relation to Paphos, best reflected in regression analysis (App. 5, fig. 7) reinforces the idea of
redistribution from another region. Had they been imported directly, one would expect a larger quantity in Paphos instead, not only because it was the capital, but also because it is situated first on the route from the west. Their statistically significant strong correlation with amphorae assigned to the ‘Cilicia/Syria’ region points to extensive redistribution from that area. Additionally, a statistically significant, strong correlation occurs with amphorae produced in the Aegean, possibly reflecting a sea route uniting the Aegean with the Iberian peninsula (App. 5, table 4, fig. 9). Exchange links between the two regions are attested by fragments of Spanish amphorae recovered on Crete (Hayes 1983, 146-7). Thus, both correlations provide important evidence concerning the hitherto overlooked network expanding from the Aegean to the Syrian coast via north Cyprus, commented upon above. Although not as strong, the correlation between Spanish and Cilician amphorae further supports this network (App. 5, table 4). Moreover, as with the Aegean amphorae, Spanish commodities could have also been transported to Amathus via Salamis or even Kition, both situated on the east of the island.

A key issue concerns the reasons responsible for such a quantity of Spanish amphorae, ranging from marketing procedures to consumption trends, or their contents. These are discussed in detail in the following chapter (section 9.1.2.2.i). The identifications concerning the distribution of Spanish amphorae provide invaluable evidence for the distribution of other western amphorae to Amathus, such as Gaulish and Italian. On the face of available evidence, these must have also followed a similar route of redistribution.

Tripolitanian amphorae share fairly strong statistically significant correlations with amphorae from Cilicia, the Aegean, and Egypt (App. 5, table 4). The first two correlations are in line with Fulford’s (1989, 171) ideas concerning the northward distribution of N. African products. They indicate that Tripolitanian commodities were initially distributed to the Aegean, and from there traded off to Cilicia, together with Aegean amphorae (App. 5, fig. 9). As identified above, the broader region of Cilicia was a key point of redistribution to Amathus. Redistribution from the broader area is also suggested by the average correlation occurring with amphorae from the ‘Cilicia/Syria’ region (App. 5, table 4). As stressed in relation to the Aegean amphorae, they could have also been involved in intra-regional trade from northern or eastern Cyprus.
8. 2. 3. Distribution of imported amphorae to Kourion

8.2.3.1. Models and hypotheses

Thus far, data from the above cities point to the operation of diverse trading networks between the western and eastern part of the island. Material from Kourion, situated between Paphos and Amathus, is invaluable as it enables a clearer insight into the character of these networks and of the interconnections between the western and eastern part of the island. Trade routes suggested in past research (Murray 1995) refer to Kourion as the final stop-point for the ships heading to the Levant via Cyprus, after having first disembarked at Paphos. One of the aims is to elucidate the existence of such a trade route and identify whether Kourion was indeed a place that shared frequent direct connections with the west, or whether it was simply an occasional stop. By addressing this question it will also become clear whether imports were redistributed intra-regionally. Such an examination will clarify the areas with which Kourion was economically linked. Although for long now the general tendency is to examine Kourion in relation to Paphos (e.g. Stillwell 1961), it is, I believe, vital to examine the possibility that it was more linked with Amathus, as it was geographically closer. It is suffice to recollect that the vast majority of amphorae imported to Kourion are eastern (section 6.2.3). Yet, eastern amphorae could have been imported directly from their sources, due to the small distances involved. The large quantities of western amphorae at Paphos, on the other hand, may be indicative of their redistribution to Kourion from western Cyprus, as Paphos is situated closer to the west.

8.2.3.2. Statistical analysis

To explore the above models, all data formed part of regression analysis (App. 5, fig. 10). The most noticeable observation is the remarkable resemblance between these patterns, and patterns from Amathus (App. 5, fig. 7) reinforcing the idea of local redistribution. This similarity is particularly evident in the distribution of western amphorae. As with Amathus, the most popular western amphorae come from Spain, while Italian and Gaulish amphorae are found in small and comparable quantities (App. 3.3.2.6, table 3). As opposed to the hypothesis advanced in the above model, it is suitable on this ground to suggest that western amphorae were mainly redistributed from the eastern part of the island, and particularly from near-by Amathus, instead from the capital. The significantly lower quantity of western amphorae, indeed,
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reflects a fall-off trend in relation to data from Amathus, supporting the idea of an eastern distribution. Had Italian amphorae been predominantly redistributed from Paphos, one should perhaps expect more at Kourion. Such redistribution is not dismissed, but rather considered to have been infrequent.

These ideas need to be further tested with correlation analysis (App. 5, table 5). The possibility that western amphorae could have been redistributed from another foreign eastern area should not fail to be appreciated. Again, only some of the data were suitable for such an analysis, including Spanish, Aegean and Cilician amphorae. Surprisingly, no significant correlations appear between these data. However, intra-regional redistribution of these products would result in such an absence of correlation. This result, together with the pattern revealed in regression analysis, may suggest that imports from the western and north-eastern Mediterranean regions were predominantly redistributed from Amathus (App. 5, fig. 11). Consequently, the idea noted above that western ships normally continued their journey to Kourion must be rejected. Had this been the case, a similar pattern of western products to that from Paphos would have occurred. Prevailing winds may have occasionally directed ships to Kourion, but data suggest that this was not the norm.

The best documented eastern imports concern the Cilician amphorae. Taking into account the supremacy of Cilician amphorae in Amathus (section 8.2.2), as well as the economic links identified between the two cities, one could suggest that they were redistributed from there. However, at Kourion they are found in a higher proportion, imposing the consideration of additional exchange mechanisms. Direct distribution from Cilicia is one such mechanism (App. 5, fig. 11). Presumably, it co-operated with redistributive mechanisms, as this alone would not have resulted in a larger quantity, considering that Paphos and Amathus are both closer to Cilicia. Paphos must therefore be considered as a complementary source of redistribution, although Cilician imports are not as abundant. Ideas involving their redistribution from areas such as Syria are not convincing, as this should have been the case for Amathus also. Nevertheless, the above analysis has demonstrated that distance between Kourion and Cilicia should have been calculated from the east rather than the west of Cyprus which is closer (section 5.2.1).

Generally, it seems likely that amphorae from the north-western part of the eastern Mediterranean basin were also distributed via Paphos. Carian amphorae, for
example, appear in a significantly greater quantity in Paphos (4.4%), while their quantity in Kourion and Amathus is rather similar (0.9% and 0.5% respectively). It is, therefore, possible that amphorae from this source were redistributed to Kourion from Paphos, possibly together with Cilician amphorae. Moreover, as with Cilician amphorae, the quantity of Aegean amphorae, which surpasses that of the other two cities, is possibly suggestive of their redistribution from both, Paphos and Amathus (App.5, fig. 11). The lack of correlation between Aegean and Cilician amphorae suggests that these kinds of imports were not distributed together directly, but, rather, that they were redistributed intra-regionally from areas, such as Paphos and Amathus.

8. 2. 4. Intra-regional distribution

Intra-regional distribution has been mentioned several times in the above discussion, especially with regards to commercial activities of Kourion. Facilitated by a road system unifying the island, and also conducted by boats along the coast (Leonard 1995b, 149), the study of intra-regional distribution is central for understanding exchange and economy of the island. Bekker-Nielsen (2004, 108) through his painstaking attempt to reconstruct the roads of ancient Cyprus has shown that early Roman roads, identifiable by milestones, albeit renovated, followed the peripheral Hellenistic highway circuit. Innovations mainly involved inland roads or shortcuts constructed to connect previously secluded centres (Bekker-Nielsen 2004, 110).

In spite of the roads constructed, one of the most striking observations from reviewing the research undertaken throughout the island in recent years is the low inland activity recorded. The majority of Roman sites identified in the Troodos Survey Project (TAESP) (Given et al. 2002), belong to the late Roman period, while early Roman exchanges characterising the sites identified at the Mitsero-Politiko area (Moore 2003) include hardly any amphorae (section 8.2.5). Based on current knowledge it can be thus inferred that for its greatest part commercial activity concentrated around the coastal line, although exchanges occurring inland must not be overlooked (section 8.2.5). Further evidence is provided by the site of Ayios Kononas on the north-west Akamas peninsula (App. 1, fig. 1). While there is abundant material at the nearby anchorage, the site itself, situated more inland, has produced little early Roman material (Leonard 1995b, 146-7). Emphasis on further aspects relating to this subject is put in the discussion section (8.2.5).
In sum, exchanges within the island in this period mainly occur between cities and between cities and their peripheries, examined below. Smaller rural settlements were presumably involved with some sort of exchange activity with each other. Unfortunately, the lack of research prevents the study of such exchanges, and consequently inferences remain hypothetical.

8.2.4.1. City-hinterland exchanges

Central to this subject is the key-theme of the city-hinterland model of the Roman empire and the relationship between them (section 4.3.1). Apart from the attraction of products grown in the countryside to the cities as taxes in kind, products were also distributed to the nearby centre for their marketing. The motivating factor would be the acquisition of money for the payment of taxes and rents, or, simply, for profit (sections 4.1, 7.1). This relationship also involves the distribution of foreign products to the countryside from the city, where they were initially traded to. As argued by Hopkins (1983b, 84), not all peasants lived "at the level of minimum subsistence", as previously believed, and their demand for goods and occasionally for luxuries motivated Roman trade.

Although no material was available for analysis from the hinterland of any of the cities under study, the published material from Palaepaphos (Lund 1993) has proved useful for some initial inferences. Certain limitations are nevertheless imposed, stemming from the derivation of the Palaepaphos material from a survey. These are mainly methodological problems (Orton 2000, 57-65), as the main body of this research's data comes from excavated sites. Despite the limitations, these data can still provide us with an idea of the amphora types that once circulated in this area, for comparative purposes. The road connecting Paphos to Palaepaphos is attested by Strabo (Geography, 14.6.3.) and is described in detail by Bekker-Nielsen (2004, 114-6).

It is most interesting to observe that the type attested most frequently is the local 'Pinched-handle' amphora (Lund 2000b). The majority of imported amphorae are Aegean, but this may result from the inclusion of Hellenistic/Republican material into this assemblage. Most importantly, even though in small quantity, the majority of the amphorae from the west come from Italy, while Tripolitanian amphorae are the only recorded N. African amphorae. This shows that, generally, the hinterland followed the trends observed in the city, and is further evidence of the high volume
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of imports shipped from the centre of the empire. It is also apparent that not all types reaching the city of Paphos circulated in the countryside. Although this may be partly due to the origin of the material from a survey, it most likely reflects the general trend of the period. As attested by minor roads (Bekker-Nielsen 2004, 116-9), Paphos was also connected to other, smaller rural settlements (section 8.2.5).

Rural sites were probably scattered in the periphery of urban centres along the coast, but many are yet unidentified. One such settlement is the so-called ‘Bamboula’ site, close to Kourion (App. 1, fig. 1), material from which remains unstudied. A brief inspection I conducted of the amphorae from this site has confirmed that the trends observed in the city were broadly followed in the periphery. As with Kourion, the majority of the types were local, presumably from the environs. Imported material, particularly western, was infrequent. Further east, from the broader periphery of Kiton, a rural site was excavated at Panayia Ematousa (Sorensen et al. 1998). However, the lack of a detailed publication from Kition (section 3.1.4) does not permit any preliminary conclusions.

Despite the deficiency of data on the island, these two examples reveal a flow of products from cities to their countryside, and, therefore, the existence of an economic relationship. Although at present the study of the hinterland-to-city distribution is obscured by the lack of extensive research in the countryside and of the identification of local amphorae, evidence from Kourion helps the development of related assumptions. In particular, the large quantity of amphorae identified as local possibly sustains the hypothesis that small settlements distributed their produce to the centres for the reasons outlined above. The range of local fabrics from Kourion (section 7.1.1) shows that possibly this city pulled in products from a number of settlements, unless fabric variation was the result of multiple clay sources used by single workshops (section 7.1.2). As suggested earlier (section 7.5), the surroundings of Kourion could have been related to wine production. If this is true, settlements could have been situated inland, possibly close to the modern wine-producing areas. Indeed, the road constructed around 110 AD uniting the regions around the plateau of the Kouris river (App. 1, fig. 1) with Kourion (Bekker-Nielsen 2004, 110) may be evidence for such production and exchange. Moreover, certain local amphorae identified at the House of Orpheus in Paphos may indicate such distribution of products from an attached estate to the land-holder, or to the city’s market (section 7.4.3).
8.2.4.2. Inter-city exchanges

I. Exchanges of imported products

Model-building and statistical analysis of data from the three sites under study have shown that imported products, generally, were not redistributed intra-regionally from the western to the eastern part of the island, and vice versa. Rather, western and eastern territories were part of different long-distance networks. Additionally, it has been revealed that southern Cyprus was predominantly economically linked with the eastern trading network (sections 8.2.2 and 8.2.3). Although it is difficult to pinpoint the level of intra-regional exchange of foreign products, analysis indicated that exchanges mainly took place between neighbouring cities. Such exchanges are well attested in the case of Amathus and Kourion (section 8.2.3). The redistribution of certain amphorae, such as those from Cilicia and the Aegean, from Paphos to Kourion is not surprising, considering that the latter was geographically linked with the western part of the island. Possibly, redistribution from the capital was restricted to specific products.

Nevertheless, certain imports could have also been redistributed between centres not in such close proximity. For example, products from the Levant, as suggested by the fall-off trend of Syrian amphorae (App. 5, fig. 1, 5), were possibly redistributed to Paphos from Amathus (section 8.2.1). Another idea encouraged through model-building concerns the redistribution of imports to Amathus from the cities of Salamis and Kition, and possibly from the north coast of the island (section 8.2.2). At present this idea cannot be proven with primary data, as it is impossible to study material from Salamis and the north due to the current political problem. However, a preliminary publication of amphorae from Salamis (Diederichs 1980) gives us a rough idea of the types that once circulated in the city. The study of material from Kition, on the other hand, lies with other researchers (section 3.1.4). Despite these limitations, the roads linking Amathus with Kyreneia, Kition and Salamis (Bekker-Nielsen 2004, 111) reinforce the idea that products, such as the Aegean, could have been engaged in intra-regional redistribution. Certain factors, other than geographical, may have been in operation, controlling the channelling of various products (section 8.2.5).
II. Exchanges of local products

The intrinsic question to better understand exchange between cities is whether these trends apply to the circulation of local amphorae as well. Although the lack of petrographic analysis prevents us from sourcing fabrics, an attempt was made to demonstrate that a combination of systematic visual examination and statistical analysis may produce invaluable information concerning the origins (section 7.1.1). The fall-off trend of types in certain fabrics provisionally assigned to a particular city by means of distribution analysis is most suggestive. A fundamental problem however is the existence of similar sources throughout the island, as well as the similarity of fabrics attributed to different categories due to the lack of scientific analysis (section 7). Ideas below are merely hypothetical and need to be confirmed by future research.

Distribution analysis suggests that the sources of the F1e and F4b fabrics are situated in Paphos (section 7.1.1). Outside of Paphos, F1e is found in Amathus and to a lesser extent in Kourion. Not all types associated with this fabric are found in both Amathusian sites (App. 3.3.2.4, table 5; 3.3.2.5, table 5; App. 4, table 3). In particular, the ‘Pinched-handle’ amphora is found in a significant number in the Agora, while it is almost absent from the site representing the housing complex. Another type appearing solely in the Agora is Hayes VIII. In the Amathus P.L. site the majority are Dressel 2-4 imitations and other Sub-Koan types, which are rare in the Agora. Possibly, these were exchanged reciprocally, or from periodic markets (section 8.2.5). The Paphian ‘Pinched-handle’ amphora, targeting the market, was perhaps of a higher value than the more ordinary Sub-Koan imitations identified in ordinary contexts (sections 9.1.2.2.i-ii). Unlike F1e, F4b is almost exclusively found in Paphos. Only a few examples are found in Kourion. It is, therefore, possible that the source(s) of F1e was exploited extensively, with types in this fabric being more common and popular. If the above pattern indeed indicates exchange between Paphos and Amathus, and is not also local to Amathus, other factors need to be considered in order to understand this link between the two cities. Amathus, situated further east than Kourion, could have acted as a redistribution point of products produced in the capital to the east. The reason, I believe, lies in the wider politico-economic framework of the empire (section 8.2.5).

Interestingly, the fabrics provisionally assigned to Amathus, i.e. F1a, F2a and F2c (although the last two could be variations of the same fabric), are found in
larger quantities in Paphos than Kourion. Considering the commercial links between Amathus and Kourion, manifested in the redistribution of foreign products, one would expect that Amathusian products would have also been distributed primarily to this city. Taken that sources of these fabrics are unique to Amathus, their distribution was primarily directed to the capital. Again, the reasons must be sought in the broader framework (section 8.2.5).

Distribution of local products to Paphos is also attested by the fabrics provisionally assigned to Kourion. F3c was primarily distributed to Paphos, while F1i is found in similar quantities in both, Paphos and Amathus. Contrary to these observations, fabric F3xi is predominantly identified in Kourion, with a meagre appearance in Amathus. Possibly, the production of this type was commissioned by the city for central profit, primarily targeting foreign markets, such as those of the opposite Levantine coast (section 8.2.3). Such an idea has previously been stressed for the Beirut amphora (Reynolds 1997-8, 50). This would perhaps explain the limited presence of these products in Amathus, as the neighbouring city could function as a redistribution point. The other fabric believed to be from Kourion, F5f, was of a very limited production. Only a few specimens were found in the other two cities. Considering the region's vast production (section 7.1.3), it is probable that amphorae from Kourion were often equally distributed to Amathus and Paphos, for local consumption and for redistribution to the north-eastern and western regions of the empire. Undoubtedly, petrographic analysis will shed more light to the obscure issue of production and exchange of local products.

8.2.5. Discussion
Expansion, complexity and variability are the eminent characteristics, manifested in distributional analysis, accompanying the active involvement of the island in the early Roman commercial endeavours in the eastern Mediterranean. Intense trading activities involved both major and minor ports of the Mediterranean. Diverse networks operating around the island were revealed, with the main ones passing through the west and the north coast, respectively (sections 8.2.1 and 8.2.2). Another network existed between eastern and southern Cyprus and areas from the northern Levant (section 8.2.2 and 8.2.3). Interestingly, these territories were linked with the northern network as well, as imported products were probably redistributed from northern or north-eastern areas (section 8.2.2).
The main mechanism underlying these patterns is market exchange, which is the predominant form of exchange in the Roman world (section 4.3.1.3). Based on world systems theory (section 4.2.0) the expansion of these exchanges must be seen as a response to the disequilibrium (Algaze 1993, 2) created by the exploitation of the peripheries by Rome. According to Hopkins (1980, 101), as a result of this exploitation “the tax exporting provinces had to earn money with which to pay their taxes by exporting goods of an equal value” (section 4.1). Money was also raised by inland exchange which intensified and became complex (section 8.2.4), as a result of the socio-economic and political situation. Circulation of money is evidenced in the archaeological record of the major cities of the island (cf. Parks 2004) although it is not the scope of this research to keep a detailed record of coins. Judging from Egyptian evidence (Rathbone 2002, 162), coinage probably circulated everywhere on the island, despite the persistence of exchanges in kind. As Lo Cascio (2000a, 78) pointed out, “the working of the empire as a single political entity or system was crucial in determining both the expansion of the market and the level of growth that was achieved in the first centuries AD in the provinces”. Apart from these broader factors, the absence of army on the island facilitated its economic development further, as it was not affected by army payments, which was the case on frontier areas (Lo Cascio 2000a, 81).

Two important distinctions can be drawn from the analysis; the concentration of commercial activities on the coast and the opposition between urban and rural centres. The involvement of the entire coast in trade is evidenced in the vast number of harbours and anchorages, listed in ancient literary sources and investigated archaeologically (Leonard 1995a, 227-242; Unpublished PhD thesis). Indeed, partly building on the pre-existing Hellenistic model, involving development around the coast, and partly on the peaceful conditions, promoted by the pax Romana (Petit 1976; section 7.1), encouraging voyages and exchanges in the entire Mediterranean, Cypriot coasts thrived commercially. The marked reduction in transaction costs that occurred within the empire (Lo Cascio 2000a, 78), was another decisive factor for such a development in sea trade. However, as already argued (sections 7.5; 8.2.4.1), it is not possible to allege that life inland paused completely, as generally believed (cf. Moore 2003). Arguing towards this viewpoint, Kourion has been cited as an example for the existence of inland economic activities. Despite the lack of more
concrete evidence, it was suggested that the areas situated north of this city were probably important wine producing areas.

Current evidence mainly from the Mitsero-Politiko area (section 8.2.4.), points to the existence of inland economic activity and exchange. The striking lack of amphorae (*ibid.*), should not be interpreted as implying economic decline. Examining the situation within world systems theory it becomes possible to assert that these territories were not directly involved in trade, but they were being extensively exploited. Thus, 'economic downturn' of inland regions is the by-product of such exploitative economies. From the particular area the Romans mainly exploited its metal resources. If this area generated tradable agricultural produce, it could have been transported to coastal centres for distribution within alternative containers, such as leather flasks or barrels. The use of barrels already from the early Roman period has been extensively argued by Desbat (1991). Had metals or other products been transported to large cities for market exchange, it is most likely that, at least some, amphorae would have been exchanged in return. Thus, the lack of amphorae highlights the degree of exploitation. The fine wares identified could have been exchanged reciprocally as valuables or obtained through down-the-line trade (see below).

Coastal rural centres, although still exploited in order to provide the means to pay taxes or to trade, were commercially more vigorous than inland rural settlements. They often provided shelter for ships, and their coastal location probably enabled them to, at least occasionally, trade their produce directly. Analysis nevertheless revealed that the ships' destination was the large urban centres. Despite the mutual relationship that became apparent in the examination of the city-hinterland model (section 8.2.4.1), it was demonstrated that these areas generally depended upon the cities for the supply of imported products. Additionally, villagers depended upon urban markets to sell their produce. Economic forces of supply and demand related to rural areas were to a large extent controlled and arranged by the cities. Thus, this dependence constitutes another major contrast between urban centres, where large-scale trade concentrated, and rural settlements. Social consequences brought about from this relationship are examined below.

The patterns revealed that Paphos was an important market in the eastern Mediterranean, sharing strong commercial contacts with eastern and major western ports, and in particular Rome. This identification is confirmed by the existence of an
advanced harbour “for all winds” (Leonard 1995a, 232), and its political role as the seat of the administrators of the island. As a highly organised city, it controlled all economic activities. Intense contacts with the centre of the empire (section 8.2.1.2) could suggest that Paphos was a stop for the ships travelling from Italy to Egypt for the transfer of the annona. The wind and currents between Egypt and Cyprus, studied by Murray (1995, 40) support such a possibility.

Amathus and Kourion, on the other hand, were mainly involved in regional networks. They were engaged with production, making the most of the fertile plateau in which they are situated. If, however, we are to attribute a role to each city, the ‘producer city’ would have to be Kourion (section 7.1.1). Analysis of intra-regional trade revealed that products from each of these cities were mainly pulled in by the capital, presumably to be distributed to Rome as taxes or to be sold in western markets. A portion of them possibly constituted supplies for the army across the empire, as identified for the Rhodian amphora (Peacock 1977, 270; Williams 2003, 26), although Hopkins (1983b, 86) believes that supply of the army became established in the 3rd c. AD. If market exchange lies behind the distribution patterns of local products to Paphos, one would perhaps expect greater exchange between Kourion and Amathus instead, as they are neighbouring cities. In this sense, it is perhaps erroneous to stress that the cities within the island were inter-dependent, in the same way that cities were inter-regionally (Fulford 1987). Direction of Cypriot products to the west is attested by Strabo, mentioning that Kourion was the stop before Rhodes (Murray 1995). Additionally, the description of some types and their fabrics on Crete (Hayes 1983, 151) largely resembles that of certain amphorae (F3c) associated in this thesis with Kourion. Although petrographic analysis is needed, these specimens could reflect the above trend to the west. In any case, it is an interesting similarity to be researched in the future.

The different networks in which the island was involved were probably the result of the broader economic organisation of this part of the empire, created to facilitate the exploitation of the region. Based on the common occurrence of regional nodes in core-periphery systems “to act as foci for tax and tribute gathering and as delegates of military and ideological control” (Matthews 2003, 144) it could be suggested that Paphos acquired such a role in the eastern part of the empire. Such an hypothesis is supported by the city’s administrative role and its strong links with the centre, as well as the links between the entire island and the eastern regions. In
particular, the striking rarity of Egyptian products, despite the identification of a
series of kiln sites in Egypt (Empereur 1986, 106-109; 1993; Empereur and Picon
1992, 145-149; Majcherek and Shennawi 1992, 134; Ballet 1995, 116) and the
occurrence of Egyptian types in the western empire (Tomber and Williams 2000, 46)
could suggest that Paphos collected and redistributed the taxes paid in kind by the
eastern areas which were not located along the regular route of the ships transporting
the annona from Egypt. This is supported by Reynolds’ (1995, 128) assertion that
"direct and indirect distribution were likely within the east prior to their arrival to the
west".

Possibly, cities situated on eastern Cyprus, such as Amathus, acted as
‘promoters’ of products imported from the opposite coastland to Paphos for their
distribution to the west. Moreover, the relatively low number of Aegean amphorae in
the study assemblages, as opposed to their widespread identification in western
territories (Desbat and Picon 1986, 637; Panella 1986, 611; Abadie-Reynal 1992,
365; Lemaître 2002, 213-225), indicates that eastern commodities were mainly
directed to the west, due to intense exploitation. A clear example is provided by the
Cretan Dressel 43 amphora, which presents a fairly wide distribution around the
western Mediterranean and as north as Britain (Williams 2003, 28-29). This situation
could ultimately lead to increased market trading between the island and eastern and
western areas of the empire, involving items produced locally or imported from
Arabia, Asia or the Black Sea. The organisational efficiency required for such an
expanding trade to operate is also evidenced in the exchanges of local products
within the island to facilitate their marketing abroad. Apart from the direction of
local products to the capital for distribution to the west, the identification of
amphorae provisionally assigned to production centres in Paphos mainly at Amathus
(section 8.2.4.2.II) may potentially reflect a trend formed to serve their redistribution
to the opposite eastern regions. Such structures add up to the complexity observed in
intra-regional trade.

Long-distance trade, however, was also promoted by the competition between
the centres and the establishment of a common identity between the exchanging
parties. Despite the debate on the ‘Romanisation’ of the empire (Freeman 1997, 8-
13), certain values conveyed by the centre were implanted in the societies of diverse
socio-cultural background. Following the theoretical framework (section 4.2.2) it is
possible to infer that the information transferred in interactions between the trading
agents and through the meaning embedded in the exchanged commodities facilitated the transmission of such values.

According to the 'world-empire' concept (sections 4.2, 4.3.1.4), these patterns are the result of urban monopolies with close ties to the ruling elite. As noted above, urban monopolies are clearly reflected in the data from throughout the island. The social consequences of the circulation of essentials by the local aristocrats, who possessed the capital to move goods in bulk (Santley and Alexander 1992, 26), and sought to establish their leadership (Roscoe 1993, 115; Arnold 1996, 6) were major. Further social changes resulted from the competition between the elites, the agents and the various financiers (Andreau 1999, 50-63). Dependence of rural settlements, encouraging urban monopolies and social differentiation, was maintained with the constant and coerced flow of products to cities as taxes, land rents, or market exchange to obtain the means to overcome pressures. However, to a smaller scale, social distinctions could have been created in rural centres as well, depending on the liaisons a producer could share with an aristocrat or an agent, facilitating the selling of his produce.

Spatial patterning is also characterised by the rest of the features accompanying Roman market exchange (sections 4.3.1.3, 4.3.1.4), such as the main market forces of supply and demand. The demand for the various products determined their production output, which in turn affected distribution. This aspect underlies the trends observed in the analysis, as each region is represented by diverse types, the output of which, as represented by their quantity, was different. Another significant aspect influencing distribution is the nature of the cargoes, which were composed according to the importance of regional industries and agricultural products (Reynolds 1995, 127). Thus, the frequency of the exportation of certain amphora types was affected by the value of the products they contained, which would constitute them as a primary, secondary or a tertiary cargo. Other decisive factors are whether products were destined for localised or inter-regional marketing, produced for military consumption, for the state bureaucracy or the population of Rome (Reynolds 1995, 127).

Unlike market exchange, the mechanism of reciprocity is more difficult to identify. However, it is very likely that Italian Dressel 2-4 amphorae identified in the House of Orpheus in Paphos were exchanged as gifts. Although still awaiting confirmation by petrographic analysis, such a vast number of imperial productions
has not been excavated in other sites in the eastern Mediterranean previously. Considering the important role of Paphos revealed in the analysis, it is possible that the inhabitants of this villa retained strong connections with the centre of the empire.

Reciprocity must have been a central form of exchange between villagers. Relevant documentations exist from ethnographic evidence (London 2000). Although such information needs to be manipulated with caution, this evidence demonstrates the existence of reciprocal exchange between Cypriot villagers until fairly recently. The identification of fine wares in the Mitsero-Politiko area, while amphorae are completely absent, may be the best evidence available for the operation of this mechanism. Considering the great degree of exploitation of these inland territories, it is difficult to believe that they got hold of these luxury items from the city. As argued above, if these were products of market exchange, one would expect other items to have been exchanged as well, such as amphorae. As these highly exploited inland regions were secluded from major trade activities, it seems more likely that such luxury items signify gift exchange between villagers. Moreover, gift exchange or exchange in periodic markets probably underlie the occurrence of certain amphora types in Amathus P.L., such as local Sub-Koan amphorae and imports from the Black Sea, which are less common or absent in the Agora (section 8.2.2).

Periodic markets are difficult to identify and can be easily confused with reciprocity. According to De Ligt's (1993) eminent work (section 4.3.1.3), apart from large, permanent markets, villagers sold their produce in periodic markets or in fairs. This is another institution possibly underlying the above differences observed in Amathus. Significant social consequences accompany the operation of both mechanisms. Gift exchange would promote friendly relationships between families (and possibly secure marital arrangements), that could also provide economic security in times of shortage. Exchange in periodic markets would again provide the means for eventual economic upturn and increase of social status within smaller communities. They, too, provided the means to accumulate wealth by selling produce or by obtaining comestibles. Yet, based on the available evidence (cf. Moore 2003), exchanges in periodic markets seem to have taken place mainly in coastal and not inland rural settlements.
8.3 Middle Roman period

Between the 3rd and 4th centuries trade ceases from being Pan-Mediterranean in the form of intensified early Roman networks expanding from one edge of the Mediterranean to the other. Maritime activities predominantly focus within the eastern Mediterranean basin, and contacts with the west become restricted. Economic change is best reflected in the typological changes, and the limitation of products circulated in relation to the preceding period (section 6.3). In literature this period has been generally referred to as a period of decline and economic recession, following invasions and economic transformations. As I already argued (section 7.2), I prefer to consider this period as one of economic change instead, operating within a different politico-economic framework. The reasons are outlined in section 8.3.5. As expected, the models advanced below for the identification of exchange networks are not as complex as those for the earlier period, due to the geographical restriction of maritime activities. Unfortunately, the identification of trade patterns is obscured by the fact that most data, in all cities under study, are not adequate to support statistical analysis. As a result, ideas cannot always be confirmed at present.

8.3.1 Distribution of imported amphorae to Paphos

8.3.1.1 Models and hypotheses

In contrast to the early period, western amphorae are confined to Italian amphorae and amphorae produced either in Spain or Portugal (App. 5, table 6, fig. 12). However, the supremacy of Italian amphorae in the total middle Roman assemblage from Paphos is misleading, as the House of Orpheus in which they were predominantly found (App. 3.3.3.1, table 3) did not survive throughout the period. The decline of the building is placed in the late 2nd/early 3rd c. AD (Daszewski and Michaelides 1988, 47). The MRCA amphora (App 3.1.4.4), however, produced in Italy until the late 3rd century, could extend the building’s lifespan. In any case, the fact that western amphorae concentrate on this site, which existed only at the beginning of the period, shows that commercial activities were generally not directed to western territories during the main part of the middle Roman period. As noted by Panella (2003, 180), after Diocletian’s economic transformations trade of Italian wine amphorae became extremely regionalised, with only one type being more widely distributed. In any case, following the identifications from the analysis of data from the preceding period (section 8.2.1.2) it can be assumed that Italian products
traded to Paphos in this period were still distributed directly. As before, data from the Aegean do not support the idea of redistribution of Italian products. Similarly, Iberian amphorae could have been imported directly, or redistributed from Italy. As previously demonstrated by Hodder and Orton (1976, 115) for a different situation, "products managed to reach similar distances to those reached before, presumably because the marketing channels still existed".

From the western part of the empire, exchanges continued with the N. African coast (section 6.3.1). From the 4th c. AD the production of N. African amphorae was re-organised and, unlike the majority of western products, they were re-directed to the new core, Constantinople (Panella 2003, 179). Apart from the Carthaginian, N. African amphorae are spread in all sites, manifesting distribution throughout the period. Taking into account the prevailing winds (Fulford 1989, 171), some of them, such as the Carthaginian, were possibly redistributed from Italy where they were initially traded at least until the mid 3rd c. AD, i.e. the period that Italian products were still traded. Others, such as the Tripolitanian, could have been traded directly (section 8.2.1), or redistributed from the Aegean and A. Minor. Egyptian amphorae are absent in this period (at least in the main part), and as a result, Egypt cannot be considered as a channel (section 8.2.2). As observed in section 8.2.1, it seemed unlikely that Tripolitanian amphorae were distributed to Paphos via the Aegean.

Aegean, Cretan, and Cilician amphorae, on the other hand, considering the small distances involved, must have been traded directly (section 8.2.1). The same can be suggested for Palestinian imports. Even though Palestinian amphorae are abundant in Amathus, their feeble presence in Kourion discourages the idea of redistribution to Paphos from south-east Cyprus, and reinforces the belief for direct trade. Syrian amphorae, however, apart from direct exchange, could have been redistributed from other Cypriot areas (sections 8.2.1, 8.3.4). The larger quantity of these vessels in both Amathus and Kourion could be considered as supportive evidence (App. 3.3.3.6, table 3; app. 5, table 8).

8.3.1.2. Statistical analysis

The regression of the quantities of various types on the distance from source (App. 5, fig. 13) shows that quantity does not always depend on distance. As noted above, the overwhelming quantity of Italian amphorae, mainly involving the early part of the
period, is associated with an elite context. The same can be asserted for the Carthaginian amphorae; although they are more plentiful than the Tripolitanian, they are mainly found at the House of Orpheus. Eastern imports, nevertheless, the quantity of which is rather modest, are generally affected by distance. Exception to this norm is the rather low quantity of Cilician amphorae, when in fact Cilicia is the region situated closer to Paphos.

Only data from Cilicia, Italy and Syria were suitable for rank correlation analysis, with a single significant correlation occurring between Italian and Syrian amphorae (App. 5, table 7). As this correlation is negative, it may suggest competition. However, it is problematic as Italian amphorae were limited to the first part of the period, and must have been imported directly (App. 5, fig. 14). There are insufficient data for further analyses here.

8.3.2. Distribution of imported amphorae to Amathus

8.3.2.1. Models and hypotheses

Amathus was mainly involved in regional networks, since the early Roman period (section 8.2.2). Indeed, this focus becomes more evident during the 3rd and 4th centuries, with Palestinian productions outshining all other imports (App. 5, table 8, fig. 15). The significant quantity of Syrian amphorae as well as the presence of imports from the broader Cilician/Syrian region, that were absent from Paphos, further emphasize this connection to the Levantine coast. Building on this evidence, it can still be assumed that trade with neighbouring regions was mainly direct. As with the early imperial period (section 8.2.2), however, it would be interesting to examine the level in which these imports were redistributed from areas other than their sources, facilitated by the small distances involved. The smaller quantity of Aegean amphorae is again suggestive of redistribution, presumably from other Levantine regions, or even other eastern or northern Cypriot regions (section 8.2.2).

The presence of products from either Spain or Portugal is most interesting as it corresponds to the early Roman pattern (section 8.2.2). In all probability, these western products followed the same route via the Aegean to Cilicia and Syria, from where they must have been ultimately redistributed to eastern Cyprus. Additionally, redistribution from the north coast of Cyprus would not seem unlikely, considering that the ships transporting these amphorae to Cilicia traversed this region (section 8.2.2). As in the preceding period, Iberian amphorae in Amathus largely surpass
those from Paphos. This identification supports the idea that marketing channels survived through the centuries (section 8.3.1).

The slightly larger quantities of N. African amphorae in relation to those identified at Paphos (although this difference is not very significant), but mainly the presence of Algerian imports absent from Paphos, are suggestive of an alternative network. Ideas for such a network are offered by the significant correlation identified between Tripolitanian amphorae and amphorae from the Aegean and Cilicia in the early Roman period (section 8.2.2), showing that N. African amphorae were initially transported to the Aegean, from where they were channelled to the Levant traversing the north coast of Cyprus. It therefore, seems likely that they were still redistributed from Cilicia, or even from eastern or northern Cyprus. The significant quantity of Cretan amphorae (in comparison to the quantities of other imports) supports such a connection between N. African amphorae and the Aegean.

8.3.2.2. Statistical analysis

Regression analysis did not reveal that distance of the amphora sources played a substantial role (App. 5, fig. 16). Possibly, one underlying reason is the rather similar distance separating these eastern Mediterranean regions and Amathus. Other factors affecting the patterns must therefore be considered. Amphorae from Cilicia and the broader Cilicia/Syria region were not imported in substantial quantities, although their distance is roughly the same as that of the above areas. Considering that in Paphos, too, Cilician amphorae were fairly sparse, it is possible that large-scale production, characterising the early period, ceased in this region because of politico-economic changes (section 8.3.5). On the other hand, it is possible that marketing conditions underlie the continuing higher quantity of Spanish/Portuguese amphorae in this city (section 8.2.2; section 9.1.2.2.i)

More data were available for rank correlation analysis than in relation to Paphos (App. 5, table 9). The low correlations between Cilician, Palestinian, and Syrian amphorae indicate direct distribution, and the idea of redistribution from neighbouring regions is rejected (App. 5, fig. 17). The significant correlation between Syrian and Tunisian amphorae could indicate redistribution of N. African amphorae from northern Levantine regions. As suggested above, and confirmed in relation to the early Roman material, this was presumably the route still followed by Iberian amphorae to Amathus as well. Although the low correlation needs to be
highlighted, as distribution channels could persist through the centuries (section 8.3.1), it is likely that Iberian amphorae continued to be redistributed from these regions (App. 5, fig. 17).

8.3.3. Distribution of imported amphorae to Kourion

8.3.3.1. Models and hypotheses
Regionalisation characterising this period implies that many imports arrived to Kourion directly (App. 3.3.3.6, table 3). Direct links with areas of the Levantine coast are also noted in the early Roman period, despite that the city relied on Paphos and mainly Amathus for the supply of imports (section 8.2.3). Based on the key identification that channels of communication survived into these centuries (sections 8.3.1 and 8.3.2), examination focuses on exploring whether products were obtained directly, or whether part of them were still redistributed from neighbouring cities.

8.3.3.2. Statistical analysis
Regression analysis revealed that distance did not affect the quantity of eastern imports (App. 5, fig. 18). Palestinian amphorae are sparse, but, by contrast, Syrian amphorae are very popular, attesting frequent links with the northern part of the Levantine coast instead. Amphorae from Cilicia, on the other hand, distance from which was again calculated from the western part of the island, are less. Surprisingly, Aegean amphorae are also more abundant than the Palestinian. Finally, distribution of N. African and Iberian products remained restricted (section 8.2.3).

To start with the Syrian amphorae, their proportion is twice as large as that imported to Paphos or Amathus. Redistribution of Syrian amphorae from Amathus, situated slightly closer to Syria, seems unlikely. The similar distance between the two Cypriot cities and Syria, rather suggests that direct exchange may have been the mechanism behind their distribution (App. 5, fig. 19). Palestinian amphorae should have also been traded directly, due to the distance involved, but their unusually low quantity could signify redistribution from Amathus, where they were most popular (section 8.3.2). The considerable difference in the quantity of products from these two sources is difficult to explain. Had the site at Kourion been properly studied, it would have been easier to draw conclusions based on contextual evidence. Nevertheless, differences between amphorae from these sources are also noted in Paphos (section 8.3.1). At present, it is only possible to advance mere speculations. If
Palestinian amphorae were imported at the last quarter of the period, their rarity at Kourion may be explained by the failure of trade connections following the collapse of the city by the 367 A.D. earthquake (section 3.1.3). Although a higher value associated with Syrian amphorae on the one hand, and different preferences between cities on the other, could possibly affect distribution (section 9.2), it is difficult to understand such a discrepancy considering the high demand of Palestinian amphorae in Amathus. Once more, I strongly believe that the gap in our understanding can only disappear once contextual information and stratigraphic evidence become available.

A striking similarity with the preceding period is the quantity of Aegean and Cilician amphorae, which is larger than that imported to Paphos and Amathus. It is therefore possible to assume that these products continued to be redistributed from both western and eastern Cyprus (section 8.2.3). However, their relatively low quantity in Amathus suggests that these products were no longer redistributed from Amathus in quantities. Thus, a change is observed particularly concerning the distribution of Cilician amphorae during the middle Roman period, from the west instead of the east of the island as identified for the early Roman period (section 8.2.3; app. 5, fig. 19). A plausible explanation is that ships transporting these products, also traversed the west coast of Cyprus, and stopped at Kourion, from where they continued their voyage to the Levantine coast. This idea was examined in relation to the early Roman period, but was rejected (section 8.2.3). Thus, current evidence suggests that such a route developed in the 3rd and 4th centuries, and should therefore be considered as middle Roman. As trade became regionalised and eastern products were not largely consumed by the west, new routes could have been explored, apart from the pre-existing ones, to facilitate and promote trade throughout the eastern Mediterranean basin.

The redistribution mechanism probably operated for receiving 'Spanish/Portuguese' and Algerian amphorae, taking into account their greater quantity in Amathus (App. 5, fig. 15). Yet, their trivial quantities can only be suggestive of meagre commercial exchanges between the two cities. Disassociation between the two cities during these centuries is one of the most significant differences between the early and middle Roman periods. Responsible factors must be looked for in the wider politico-economic changes characterising this period (section 8.3.5). Economic flow from east to west in the later part of this period possibly slowed down, because of the change of the capital to the east of the island.
It is most interesting to examine whether the same pattern involves intra-regional distribution of local products (section 8.3.4). Unfortunately the lack of a more detailed contextual study of the material does not permit the examination of distribution within the city of Kourion at present.

8.3.4. Intra-regional distribution

8.3.4.1. Inter-city exchanges

Analysis of long-distance trading networks hinted at a less dynamic intra-regional exchange of imports compared to the preceding period (section 8.2.4). Regionalisation must be partly considered the catalyst for such a change, as it facilitated direct exchanges. Investigation revealed that Paphos obtained eastern imports directly, without the operation of redistributive mechanisms from eastern Cyprus. Most importantly, distribution of imports from Amathus to Kourion dropped substantially. Although exchanges between Amathus and the eastern part of the island must have continued (section 8.3.2), it is not possible to pinpoint the level of these interactions. As before, this is hindered by the dearth in the publication of material dating to this period from other cities. Hitherto published material from Kition is limited to early Roman amphorae (Marquié 2004, 256-8), whereas only a couple of middle Roman Aegean amphorae are published from Salamis, incorrectly attributed to the Byzantine period (Diederichs 1980, 57). Still, these specimens provide some evidence for links between Salamis and the Aegean, and possibly for the operation of the network traversing the north Cypriot coastline. As a result, it is not possible to develop a more complete 'dialogue' concerning the broader character of intra-regional trade within the island.

However, conclusions on intra-regional trade based solely on imported material can be elusive. Key to understanding whether these trends expand to all inland exchanges is the examination of the distribution of types assigned to diverse local sources (section 8.2.4.2.ii). A general restriction in the use of clay sources and changes in the location of sources in relation to the early Roman period, such as that of F5f, are noted in section 7.2.1. A thorough analysis of the distribution of local fabrics (section ibid.) has revealed that, contrary to the preceding period, intra-regional trade did indeed become substantially restricted. Trading activities between Paphos and Amathus became extremely rare. In particular, only a Dressel 30, possibly produced in Amathus (section 7.2.1), was distributed to Paphos (App.
3.3.3.2, table 5). Likewise, not many local products were being distributed from Kourion to Paphos. Fabrics such as F1j, F3p, and F3xi, assigned to Kourion, were distributed to Paphos, but not in large numbers. A further drawback is noted in exchanges between Kourion and Amathus. Although the focus of distribution of both cities in the preceding period was mainly Paphos (section 8.2.4), they still exchanged their produce with each other to a considerable level (section 8.2.4.2.ii). In the middle Roman period, however, exchanges dropped dramatically, corresponding to the pattern revealed by the imports (section 8.3.3.2). Generally, it can be stressed that Kourion traded with both cities on an equal level, although these interactions are not intensive. Thus, an assertion concerning the decline of intra-regional trade would not be an exaggeration. Reasons for these changes are outlined in section 8.3.5 below.

8.3.4.2. Exchanges between cities and their hinterland

The lack of published material obscures a closer examination of exchange between cities and their hinterlands. From Palaepaphos, that offered a case study for the early Roman period (section 8.2.4), very few middle Roman amphorae are reported, limited to a few Aegean and N. African products. This is not surprising, considering the overall reduction of material dating to this period in relation to the preceding period. Furthermore, other taphonomic conditions need to be taken into consideration as the material derived from a survey (section 8.2.4). Maier and Karageorghis (1984, 249) refer to both Paphos and Palaepaphos as the political centre of the island until the 4th c. AD, presumably, because of the strong connections the new city shared with the old one. Patterns from Palaepaphos should therefore still reflect those identified at Paphos (section 8.3.1). The lack of published material prevents the testing of these assumptions, as the development of the city-hinterland model into this period cannot be better examined. However, as part of regionalisation, exchanges between cities and their peripheries probably continued.

8.3.5. Discussion

Major economic shifts occurring in this period are manifested in the regionalisation of trade, the restriction of amphora types circulating in this period, and the morphological change of the amphora types themselves (section 6.3). Cyprus from the 3rd to the 4th centuries was almost exclusively involved in eastern networks. Paphos remained the capital of the island until mid 4th c. when Salamis/Constantia
acquired this role, probably for strategic reasons (Maier and Karageorghis 1984, 284; section 8.4). The western network, however, with which Paphos was predominantly associated, deteriorated (section 8.3.1), as probably did the sophisticated economic organisation of the entire eastern basin, which, as I earlier argued, was probably designed to promote exploitation of the region (section 8.2.5). Under the early empire, the western focus of the Cypriot capital and the eastern focus of the eastern part of the island, implied the operation of local redistributive mechanisms for the supply of Levantine products to Paphos and reinforced the idea that Paphos functioned as a collection point (section 8.2.5). Regionalisation is also apparent on small-scale, local, exchange networks, and is evidenced in the suspension of distribution of local products and imports to Paphos from other Cypriot cities (section 8.3.4). Thus, it is the best documentation provided for the interruption of Paphos' redistributive role and the intermission of imperial economic organisation. The disruption of vigorous western links is also emphasised by the direct exchanges occurring between Paphos and the Levantine coast, which are clearly more evident in the middle Roman period.

Transformations of trading patterns occurred throughout the empire, and, as stressed earlier (section 7.2), causes must be sought in the broader socio-cultural context, which underwent major changes. Economic stability was affected in the mid 3rd century by a chain of factors, ranging from invasions to price inflation and changes in taxation and the administration of land, such as that of the 'deserted lands' (section 4.3.2.1). Certainly, this crisis must not be considered extraneous to the change of the centre of the empire from Rome to Constantinople in A.D. 325. Logically, such a major shift in the system signifies an almost automatic direction of the flow of products to the new core, and the concentration of trading activities to the east (Panella 2003, 179-180). The earlier economic breakdown as well as the interruption of peaceful conditions in the empire denotes that distribution between the eastern and western part of the empire were impeded already from the 3rd century A.D. Economic crisis, in particular, had gradually led to low production in the west, without vast surpluses to trade over great distances (Panella 2003, 180). This was not the case concerning N. African products, the production and circulation of which reached a peak from the mid 4th to the mid 5th century, manifested in the amphora finds predominantly throughout Italy (Kingsley and Decker 2001, 3). Thus, it is not surprising that the western products still distributed to Cyprus are N. African
(sections 8.3.1 - 8.3.3). On the other hand, the possible adoption of other containers, such as barrels that do not survive in the archaeological record, as a response to the crisis, must not be ignored.

Even though Roman trade eventually lost its Pan-Mediterranean character, as seen in the analysis, the two parts of the empire were not alienated and previous channels of communication did not cease to exist (sections ibid.). Trade decreased, as the fundamental structures on which the relationships between the centre and the peripheries were built faded; hence, the restriction and regionalisation of market exchanges, for the creation of incomes, reflected in the data patterning. The economic and political threats the empire faced in the 3rd century undoubtedly lead to a reduction of exploitation, which in turn brought about restriction of exchange activities, both short-haul and long-distance.

These centuries are reportedly referred to as ‘problematic’, or as centuries of a general ‘decline’ (Lund 1991). In Cyprus, the middle Roman period ended abruptly with a devastating earthquake in 367 AD, in which Kourion was completely destroyed (section 3.1.3). ‘Decline’ is therefore associated with such disasters. However, evidence from the House of Orpheus examined in the present thesis, demonstrates that this villa did not decline in the early 3rd century but later, and that it maintained some links with the west (section 8.3.1.1). Besides, the reconstruction of mosaic floors in this period points to the existence of some degree of prosperity (Michaelides 1989, 276-283; Lund 1993, 142). Further evidence is provided by the continuation of amphora production on the island, including that of the ‘Pinched-handle’ amphora (Lund 2000b, 571). The presence of this type in Italy (Panella 1986, 622) could suggest the continuation of some contacts with the primary core. Additionally, the prosperous House of Theseus extends well into the middle Roman period (Michaelides pers. comm.).

Thus, I believe that ‘decline’ is mistakenly attributed to the middle Roman period, due to the lack of a more detailed examination of the data. It would be more appropriate to speak of a period with broader changes, rather than of decline. Evidence for this argument is also provided by the newly excavated theatre at Paphos, which functioned until the later part of the 4th c. (section 3.1.1.2). Although it is believed that the Roman coins of Cyprus first minted under Augustus ceased around the mid 3rd c. (Maier and Karageorghis 1984, 249), recent research by Banaji (2000, 93) shows that payments continued in the 3rd and 4th centuries, and that gold
coins still circulated. Once again, current viewpoints may be the result of old and inadequate studies based on insufficiently studied contexts. Also, Ammianus Marcellinus (XIV. 8.14) (Maier and Karageorghis ibid.), informs us that the ship-building industry was still of importance.

Albeit restricted, the continuation of trade activities clearly manifests that economy was not weakened, but rather that it operated within a different framework. It is perhaps safe to suggest that the mechanism of redistribution, at least before the transfer of the capital of the empire to the east, did not motivate trade to the extent of the preceding period, due to the politico-economic crisis. From the 4th century onwards, trade must have been considerably triggered by exploitation. As economy possibly became less monetised (Hopkins 1983b, 87), goods could have been distributed as taxes to a greater extent. The debate relating to this issue is discussed in more detail in section 8.4.5. Despite the termination of the early Roman economic organisation of the territory under study, regionalisation resulted in the exploration of new sea routes in the eastern basin. Evidence is provided by patterns from Kourion, which reveal that the city became a stop for ships coming from the west of the island, probably heading to the Levant (section 8.3.3). In the earlier period, intensive exploitation and the greater distances that had to be commercially covered discouraged regions from the Aegean or western Asia Minor to actively trade with areas of the Levant (section 8.2.5). Moreover, in the middle Roman period, too, trade reflected by the movement of amphorae was conducted by market exchange. It is possible that the role of the political elites in the economic ventures, and the subsequent impact on social structures did not change dramatically. Therefore, despite the broader crisis and limitation of exchange, transactions must have continued. The asymmetric nature which still characterised the relationships between the centre and the periphery, despite being weakened, could continue to promote social distinctions.

As in the early Roman period, gift exchange may possibly be behind the Italian containers identified in the House of Orpheus, which are rare elsewhere. In a troublesome period, in which the early Roman ideological implications began to fade away (section 7.4.4), this identification reinforces the idea that the inhabitants of this villa continued to share strong links with the centre of the empire (section 8.2.5). Additionally, the mechanism of reciprocity could possibly underlie the immense quantity of Palestinian amphorae identified in the “Amathus Palaea Lemesos” site,
while in the Agora their volume is essentially smaller. Reciprocity did not necessarily occur directly with Palestinians, as these products could have also been reciprocally exchanged intra-regionally. However, their absence in the city’s market does not preclude the possibility that they were obtained from periodic markets and fairs instead (sections 4.3.1.3, 8.2.5.).

8.4. Late Roman period
The increase in the range of types circulated (section 6.4) signifies another change from the late 4th to the early 7th century. However, as observed in the analysis, circulation of products still focused around the eastern Mediterranean basin. Before attempting the ‘reconstruction’ of the trade routes in which each of the cities under study were involved, it is important to bear in mind two significant changes: first, the change of the capital of the Roman empire from Rome to Constantinople that occurred earlier, in 325 AD (sections 7.3, 8.3.1), and second, the change of the capital of the province of Cyprus, from Paphos to Salamis. This change occurred in 368 AD, but it was not confirmed until AD 431 by the Council of Ephesus (Maier and Karageorghis 1984, 284). The foundation of the Christian Church is another novelty with great economic and ideological consequences. The impact of these aspects will be examined in detail in the discussion in section 8.4.5. Finally, the change in the habitation and economic landscape resulting from the development of the countryside (section 7.3) is reflected in the substantially greater amount of published sites dating to this period (section 8.4.4.1). This major transformation was fundamental in the formation of trading activities, but mainly of intra-regional exchange patterns.

8.4.1. Distribution of imported amphorae to Paphos
8.4.1.1. Models and hypotheses
As in the middle Roman period (section 8.3.1), the model for understanding late Roman trade networks builds on the regionalisation observed in the patterns (section 6.4; app. 5, table 11, fig. 20). However, in comparison to the preceding period there is an expansion of the areas with which Paphos was associated economically. An increase in commercial endeavours is revealed, almost parallel to the economic growth of the early Roman period. The defining difference is the near absence of western Mediterranean products. From the western part of the empire, only sparse
amphorae from the N. African coast are present, as their production increased already from the 4th century (sections 8.3.1, 8.3.5, 8.4.5).

Again, regionalisation is mainly suggestive of direct trade, although redistribution probably also operated. Specifically, amphorae from Palestine and Egypt must have been distributed directly, as suggested by their great quantities (App. 5, table 11, fig. 20). Supportive evidence is provided by the identification of Cypriot amphorae in these regions (Arthur and Oren 1998, 201-3, 209; Tomber 1999, 301). It is equally possible that amphorae from other sources were also predominantly distributed directly, but in smaller quantities, or less frequently. The moderate quantity of amphorae from the broader Aegean and Black Sea area for example, may be explained by the absorption of these products predominantly by the centre of the empire. As for the distribution of N. African products, it was suggested, primarily based on Tripolitanian evidence (section 8.2.1), that they may have been primarily traded to Paphos directly and not via the Aegean (section ibid.). In this period too, the insignificant supremacy of Aegean/Black Sea amphorae does not support an idea concerning the redistribution of N. African products from that area. The large quantity of Egyptian amphorae in Paphos during these centuries however, supports an idea concerning the redistribution of these amphorae from Egypt.

8.4.1.2. Statistical analysis
Regression analysis of the quantities of the amphorae and the distances of their sources revealed that distance did not always affect quantity (App. 5, fig. 21). Cilician amphorae for example, the source of which is situated very close to Paphos, are low, while Egyptian and Palestinian amphorae are significantly more common. Thus, other factors need to be considered to explain this discrepancy. One such factor could be the anonna route from Egypt to Constantinople. It is believed that it traversed the west coast of Cyprus, using areas of the broader region of Paphos, such as Ayios Yeorgios, as stops (Bakirtzis 2005; App. 1, fig. 1). Although Egypt was still exploited as a granary, Egyptian amphorae are well represented in comparison to the early Roman period, possibly because the area that had to be covered with these products was now more restricted. This idea of course does not imply that Egyptian amphorae were solely distributed to the eastern Mediterranean, as specimens are identified in the west (Bonifay and Villedieu 1989, 31-33), but that the focus of their trade was predominantly in the east. The same maritime route was perhaps followed
by Palestinian products distributed to the centre of the empire, as suggested by their significant quantity. Exploitation is perhaps the reason underlying the lower quantities of products from A. Minor, Caria, and the ‘Aegean/Black Sea’ area. Taxation would merely entail less commercial activities with areas of the eastern Mediterranean, as they may have been constantly exploited by the nearby centre. Similarly, products from the regions situated in the northern Levant probably followed a route traversing the north coast of Cyprus and south A. Minor to Constantinople. As a result, very few amphorae would have been traded to Paphos.

Rank correlation analysis was applied to amphorae from a considerable number of sources (App. 5, table 12). Generally, no strong correlations appear between imports to Paphos. The reason for this result is two-fold: first, it could signify the existence of direct trade, and second, it could be because of the paucity of data relating to a substantial range of amphorae. The great quantity of Palestinian and Egyptian amphorae points to direct trade, as suggested above (App. 5, fig. 22). The direct route between Paphos and Cilicia, noted throughout the Roman period, must have survived although it was no longer as vibrant as in the early imperial period (App. 5, fig. 22; section 8.2.1). To conclude, even though the majority of imports were probably involved in direct trade, ideas on the degree of redistribution remain pure speculations, until further data are available.

8. 4. 2. Distribution of imported amphorae to Amathus

8.4.2.1. Models and hypotheses

An eastern focus has characterised the trading activities of Amathus from the beginning of Roman conquest (sections 8.2.2, 8.3.2). In this period of regionalisation, it is intriguing to examine the character of these eastern commercial endeavours, and identify any diachronic similarities or differences in the exchange networks in which Amathus was involved. The commercial connections with Palestine, established during the middle Roman period (section 8.3.2), almost represent a monopoly in Amathus’ foreign trade, as they are the most important by far. Even though Amathus has been long economically associated with the Levantine coast, it is possible to observe a shift, from the northern to the southern Levant (App. 5, table 13, fig. 23; sections 8.2.2, 8.3.2). In particular, amphorae from Cilicia or Syria are not well represented, while the quantity of Aegean products, mainly involving Globular amphorae, is moderate.
Based on the identifications on trade routes achieved thus far, as well as on the small distances involved, it is possible to form ideas concerning the distribution of certain products. For example, it is most likely that amphorae, such as Palestinian and Egyptian were imported directly. As noted above (section 8.4.1.1), evidence for such exchanges is also provided by the presence of Cypriot amphorae in these areas. Based on previous identifications (sections 8.2.2, 8.3.2), Aegean and Carian amphorae were probably redistributed. The same can be suggested for N. African imports. Unlike the early Roman period, the small quantity of Cilician amphorae may be suggestive of their redistribution, or of sporadic exchange. As inferred in relation to material from Paphos (section 8.4.1.2), these shifts probably reflect broader changes in the networks as a result of the change of the centre of the empire and the redirection of traded goods. Statistical analysis is therefore mainly used in an exploratory way, to examine the nature of networks, and to understand whether this was formed according to the prevailing conditions of the empire.

8.4.2.2. Statistical analysis

Regression analysis mirrored the observations noted above, and confirmed that distance did not affect the quantity of imports (App. 5, fig. 24). It demonstrates in a tangible manner, the diminutive quantity of amphorae from Cilicia, Lebanon and Syria, despite the small distance involved. At first glance, patterns are largely similar to those identified for Paphos (section 8.4.1). However, this similarity merely reflects broader economic trends, or even the production output of the exporting regions. A closer examination, as demonstrated below, reveals no underlying connection between imports to the two cities.

The amphora types from the Aegean were mainly distributed to Amathus in the later part of the late Roman period (section 6.4.2.2). Redistribution from Paphos is rejected as these late types are sparse in this western city. The relative absence of Aegean amphorae in the 5th and at least the first half of the 6th centuries signifies a change in relation to the preceding periods. The insignificant quantity of Cilician amphorae may explain the lack of Aegean amphorae during these centuries, if the latter were indeed redistributed to eastern Cyprus from Cilicia, as previously suggested (section 8.2.2). The quantity of Cilician imports is suggestive either of irregular direct exchange, or of their distribution predominantly to the new capital Salamis (section 8.4) from where only a small part was redistributed to other Cypriot
regions (App. 5, fig. 25). As in the early Roman period, the majority of traded goods were pulled by the capitals of the provinces (Kingsley and Decker 2001, 3). Despite the low quantities of Cilician products in Paphos and Amathus, the identification of possible Cypriot amphorae and of Cypriot fine wares in south Asia Minor suggest the continuation of links between the two areas (Williams 1977, 176, 182). Thus, perhaps this is evidence for the focus of exchanges around the north and eastern coasts of the island (section 8.4.1.2).

As suggested by statistical analysis of data from Kourion (section 8.4.3.2), the meagre quantity of LRA1 and LRA2 Aegean amphorae could have been redistributed from Palestine. Aegean globular amphorae in the later part of the period however, must have reached Amathus via alternative channels. Their presence possibly represents a reduction in the exploitation due to crisis of the centre brought about by the threat of Arab invasions. The moderate correlation between Aegean and Egyptian amphorae (App. 5, table 14) could suggest their infrequent redistribution from Egypt as the two regions were united with the annona route (App. 5, fig. 25). It may possibly also suggest that direct trade with Egypt became more frequent during the later part of the period, as one would expect the redistribution of Aegean products during the earlier part of the period as well. Alternative channels may have been the eastern, or even the northern, part of the island. Such an intra-regional network presumably existed as early as the early Roman period (sections 8.2.2., 8.3.2.).

It is worth noting that correlation analysis of data from Amathus conveyed more information on exchange mechanisms than the analysis of data from Paphos. Of interest is the fairly strong correlation between Palestinian and Egyptian amphorae (App. 5, table 14). Although commercial links between Egypt and Palestine are known (Adan-Bayewitz 1986, 103-4; Ballet 1995, 116; Tomber 1999, 302), this correlation provides evidence for the redistribution of Egyptian imports from Palestine and possibly vice versa (App. 5, fig. 25). It also demonstrates the intense exploitation of Egypt and the direction of Egyptian trade predominantly to the centre of the empire via western Cyprus (section 8.4.1.2). Moreover, it supports the idea put forward above concerning direct links with Egypt mainly in the later part of the period. Unfortunately, data from Caria, Lebanon, Cilicia/Syria, and Syria could not form part of analysis.

Another important correlation is the one appearing between Tunisian and Egyptian amphorae. It is only moderate, but it indicates the propensity of N. African
products to be distributed from Egypt, confirming the idea that they were not solely directed northwards as suggested by Fulford (1989, 171-2) (App. 5, table 14, fig. 25; section 8.2.2). Logically, not many N. African amphorae directed to Italy were redistributed to the eastern Mediterranean, not only for geographical reasons, but also due to regionalisation of trade. As an alternative, these products could have been distributed along the N. African coast to Egypt for their redistribution further east. The existence of this mechanism has been suggested in the analysis of data from the early Roman period (section 8.2.2). In this period it probably became more effective, possibly because of the substantial increase of products being traded to the Mediterranean from N. Africa, already from the 4th century (Bonifay 2004; section 8.3.5). Under the early empire, N. African exports were probably less because of the extensive exploitation of the region by Rome (Panella 2003, 178). To Amathus, they could have also been channelled via the north or Salamis. The final correlation that appears between N. African amphorae and amphorae from the Aegean/Black Sea area could merely manifest their mutual distribution from the above areas.

Although the strong contacts Amathus shared with areas situated in the northern Levant faded in relation to the preceding periods, its plausible reliance on Salamis for bringing in merchandise, still reflects an inclination to the northern eastern network. By observing Amathus, which in this research is the city situated closer to the east, it becomes feasible to make certain inferences concerning the economic activities of Salamis. Definitely, it was affiliated with the northern eastern network, and throughout the Roman empire it probably shared very strong links with the Levantine regions, particularly those situated in the northern part.

8. 4. 3. Distribution of imported amphorae to Kourion

8.4.3.1. Models and hypotheses

Before presenting the relevant models I would like to pay attention on the idea put forward by Leonard and Demesticha (2004, 202) concerning the plausible difficulties in accessing the Kourion harbour and its subsequent decline, following the major 4th century earthquake (section 3.1.3). The authors suggest that the anchorage at the Dreamer's Bay on the Akrotiri peninsula (App. 1, fig. 1) possibly acquired the role for the supply of the city of Kourion. Even though this idea remains to be confirmed by ongoing research at the Akrotiri peninsula, I find it difficult to believe that an active harbour, such as Kourion has been for centuries, declined completely. In my
view, the revival of the city following its destruction, and the establishment of a bishopric (section 3.1.3), provide adequate evidence for the opposite. Additionally, the late Roman church excavated on the coast of the city possibly manifests access from the sea, as it was very likely destined for sailors to worship. Thus, taking into account the direct exchanges identified in previous periods between Kourion and Levantine regions (sections 8.2.3, 8.3.3), I believe that imports from the Levant continued to reach Kourion from its own harbour as well. If certain products were redistributed, even from the nearby anchorage, this was not because of the decline of the harbour but of other reasons noted below.

Generally, a few imports have been noted in Dreamer's Bay, comprising amphorae from the Levant, Egypt and Cilicia (Leonard and Demesticha 2004, 199). In Kourion, however, the quantity of Palestinian amphorae is large, demonstrating that they were most likely distributed directly (App. 3.3.4.6, table 3). Quantities of other imports detected in quantification analysis are rather small. As in the case of Amathus, it is not clear whether products from other regions were redistributed or occasionally imported straight from their sources. Having examined the distribution trends in which imports from the other two cities were involved (sections 8.4.1, 8.4.2), it becomes possible to consider the prospect that the small quantities of amphorae from the northern Levant particularly, were the end result of a change in the direction of these amphorae to the new core (sections 8.4.1.2, 8.4.2.2). Such a redirection could result in fewer commodities being traded elsewhere in the eastern basin. It has also been suggested that products from Palestine and Egypt followed a different route, traversing the west coast of Cyprus (section 8.4.1.2). Statistical analysis, in association with data from both Paphos and Amathus, will shed light to the existence or not of the above two networks operating in the eastern Mediterranean during this period. An idea will also be obtained as to which products, if any, were redistributed from the above cities.

8.4.3.2. Statistical analysis

The first impression obtained from regression analysis corresponds to that achieved from the regressions of data from the other two cities. Again, quantity of imports is not affected by the distance of their sources (App. 5, fig. 26). Although such a relationship between distance and quantity exists for Palestinian, Egyptian, and Aegean amphorae, it does not count for products from the northern Levant, which are
situated closer than the above three regions. Thus, analysis clearly suggests the existence of two deviating networks, as suggested above.

More information on distribution trends is obtained by correlation analysis (App. 5, table 15). Of particular interest is the rather strong correlation between Palestinian and Aegean products. It mainly suggests that Aegean amphorae to Kourion were not predominantly redistributed intra-regionally, mainly via Paphos, as in the preceding periods, but that they were instead imported from Palestine (App. 5, fig. 27). The strong links shared between Palestine and the Aegean (Riley 1975, 33; Abadie 1989, 54-55; Vogt 2000, 86-88), presumably because of the route followed by Palestinian vessels to Constantinople via the Aegean, stopping at Paphos (section 8.4.1.2), support this identification. The correlation appearing between Aegean and Lebanese amphorae is probably misleading, as data from Lebanon are scarcely adequate for this analysis.

As at Amathus, another important correlation is the one appearing between Palestinian and Egyptian amphorae, also evidencing the existence of significant exchanges between the two regions (App. 5, table 15, fig. 27). It is likely that some Egyptian amphorae were redistributed from Palestine, considering the significant quantity of products from the latter source to Kourion. From Palestine, Lebanese amphorae were probably occasionally redistributed as well, as suggested by the moderate correlation (App. 5, table 15). This is nevertheless not certain, as data from Lebanon are scarcely adequate. In any case, Lebanese amphorae could not have been redistributed to Kourion from Amathus, as their quantity is largely similar.

Despite the occasional redistribution of Egyptian amphorae from Palestine, the proximity of Egypt and the quantity of its products at Kourion, show that they were principally imported directly. The fall-off in their distribution in relation to Paphos, should not be interpreted as implying redistribution from Paphos. Commercial activities must have occurred with other regions, irrespective of the exploitation imposed by the centre (section 8.4.5).

Neither could N. African products (including Tripolitanian and Tunisian) have been redistributed from Paphos or Amathus, as their quantities in all three cities are approximately the same (App. 3.3.4.6, table 3; app. 5, tables 11, 13). A most plausible explanation is their redistribution from Egypt where they could have been initially traded (section 8.4.2.2; app. 5, fig. 27). As with Amathus, they could have also still been channelled intra-regionally from the eastern part of the island, where
they could have been distributed following the route north of Cyprus from the Aegean. However, their redistribution from this route was probably eliminated in comparison to the early Roman period, as from the Aegean they must have been predominantly distributed to Constantinople.

Possibly, products from Cilicia also reached this city directly (App. 5, fig. 27). Their direct trade, resulting from the utilisation of new routes, was asserted in relation to the middle Roman centuries (section 8.3.3). Reasonably, the same routes continued to be followed, due to regionalisation. Their similar quantity to that identified at Paphos (App. 5, table 11), discourages the idea concerning their redistribution from Paphos, which is closer to Cilicia. Carian and Aegean amphorae, on the other hand, could have been redistributed together with Cilician amphorae, or, more likely, from Paphos. Nevertheless, it has been generally demonstrated that Kourion did not rely on Paphos or Amathus for imports.

8. 4. 4. Intra-regional exchange

The above analysis has revealed that in the late Roman period, Cypriot cities did not rely much on each other for obtaining foreign products. A few products were probably redistributed from Salamis to Amathus (section 8.4.2.2) or other eastern and southern cities, while the road from Kyreneia to Salamis presumably continued to facilitate trade of products from regions situated closer to the north, such as the Aegean. Some imports were presumably distributed from Paphos to Kourion (section 8.4.3), but these exchanges are diminutive in comparison to early Roman exchanges. Evidently, regionalisation encouraged the operation of direct trade with most of the areas.

The reduction of intra-regional exchanges of imports should not necessarily be considered as implying reduction of exchange of local products. An interesting aspect to be examined would be whether the flow of local products to the capital, observed in the early Roman period, occurred in this period as well. A problem is posed by the lack of adequate material from Salamis. But, in the lack of data, the observation of fall-off trends from the west to the east may to an extent be informative. The fact that such a distribution to the capital would only involve local products constitutes another difference in relation to the early Roman period. As suggested in section 8.2.5, under the early empire eastern imports were directed to Paphos, as it probably was a tax-collection point. In the later centuries, such points in
the eastern Mediterranean were probably unnecessary, at least to the extent of the early empire, as imports from this region were easily transported to the new centre of the empire.

Exchanges, however, within the island did not only involve the cities (sections 8.4.4.1, 8.4.4.2). Perhaps the most important characteristic of late Roman Cyprus is the substantial increase of inland settlements, resulting in the expansion of economic activities in areas other than the coastal. Thus, trade between cities and their hinterland, examined below first, intensified, as peripheral settlements multiplied (cf. Leonard and Demesticha 2004; Winther Jacobsen 2004). Exchanges probably often involved neighbouring rural settlements. A more detailed analysis of such rural exchanges can be achieved once full publications of the data from the various areas are available. However, it is important to acknowledge them, in order to begin understanding the changing socio-economic landscape of the island suggested by this evidence. A look into these exchanges is attempted in this section, but more in-depth ideas are put forward in the discussion (section 8.4.5) that follows.

8.4.4.1. City-hinterland exchanges
With the significant increase of inland settlements exchanges between cities and peripheries intensified, with products being traded both ways. Unlike the preceding periods, more published data are available from rural settlements. The review of published information in association with data from the present analysis has revealed a change in the city-hinterland model. In earlier periods it was suggested that rural areas provided the city with local produce, while the city provided its periphery with imports (section 8.2.4.1). In this period, however, with the increase of settlements, it appears that imports could have also been distributed to a city via its hinterland. The majority of the inferences are drawn on evidence from the Kalavasos-Kopetra site (Rautman 2003, 168-175). Situated in the Vasilikos Valley (App. 1, fig. 1), this small rural settlement, represents a milestone in the development of pottery studies on the island. Not only are the data represented in a quantifiable manner, but the advanced petrographic analysis applied to a range of pottery (Rautman 1995) constitutes the first systematic attempt to pinpoint local sources.

Both the origins and quantities of imported amphorae identified in this rural site reveal a focus on the eastern Mediterranean and the eastern Aegean (cf. Rautman et al. 1993, 234; 1999, 389; Rautman 2003, 168), similar to Amathus. Based on the
early Roman model (section 8.2.4.1), it would be expected that these were distributed from Amathus to Kalavasos as it is the closest city. However, quantification reveals that Aegean LRA2 amphorae, comprising 10% of the total amphora assemblage, are more abundant in Kalavasos-Kopedra. Indeed, this evidence supports the idea put forward above (section 8.4.2) concerning the distribution of certain amphorae to Amathus via eastern Cyprus. Most likely, this rural site was situated along the road from Salamis or Kition to Amathus. Based on this information, the great quantity of 'Cilician/Syrian' amphorae may again suggest that these products were also redistributed to Amathus from inland networks (section 8.4.2), and were not mainly traded directly as in the early Roman period (section 8.2.2). As already noted, a similar idea has been put forward concerning the redistribution of imports from the Akrotiri peninsula to Kourion, but, in my opinion, without implying the absolute decline of the Kourion harbour (section 8.4.3.1). The most important contribution of this body of evidence is that it demonstrates the use and significance of inland networks, at least during this period. It also shows that cities did not always supply their hinterland. As inland occupation developed considerably, exchanges were also dependent on geographical factors and not solely on the city-hinterland model, which emphasised rural dependency.

By contrast, products from Palestine and Egypt would have been distributed from Amathus to its rural surroundings, as it is the closest harbour and shared direct links with these regions (section 8.4.2). This idea is opposed to Rautman's (2000, 322) suggestion that imports arrived to Kalavasos-Kopedra from Paphos. His assertions were based on the occurrence of Cypriot Red slip wares and red tiles believed to have been produced at Paphos. Considering the city-hinterland model, however, products from Paphos could have been redistributed to Kalavasos from Amathus instead. These data, I believe, provide more solid evidence than the absence of LRA3s in Paphos, used by Winther Jacobsen (2004, 146) to contradict Rautman's assertion concerning redistribution to Kalavasos from Paphos. Her presumption was merely based on the House of Dionysos (Hayes 1991), which is predominantly early Roman. As revealed in this research, LRA3s were in fact imported to Paphos (App. 3.3.4.2, table 2).

Peripheral settlements must have continued to supply the cities with local products. LRA1s in yellow fabric, associated with the Kalavasos-Kopedra environs (Rautman et al. 1993, 245; Rautman 2003, 170), could be identical to the ones
identified in Amathus produced in F1a fabric (App. 3.3.4.4, 3.3.4.5, table 5). But, as this fabric is susceptible to subdivisions (Rautman et al. ibid.), it is possible that only a sector of the Amathus specimens belong to this workshop. It is also possible that production occurred at the nearby Zygi-Petrini kiln site where fragments of LRA1, in a variety of colours possibly resulting from firing conditions, were found (section 7.3.2). Thus, it is plausible that at least some of the examples identified at Amathus represent exchanges with products from the outskirts. Chemical analysis, alone, will shed light into the degree of such exchanges.

Unfortunately data from Kition are not yet published. As a result, it is not possible at present to take advantage of the opportunity offered by the material from Panayia Ematousa (Winther Jacobsen 2004, 144; 2005) or even Alaminos-Latourou Chiftlik (Leonard and Demesticha 2004, 200) to study exchange between an eastern Cypriot city and its hinterland. Yet again, Palaepaphos (Lund 1993) offers the prospect to study exchange between the city and the periphery in the western part of the island (section 8.2.4.1). Interestingly, it is still possible to observe similarities with the assemblage from Paphos. Here, too, Palestinian amphorae are more frequent than the Egyptian, reflecting the trends apparent in the city.

Recent research in the hinterland of the Solea Valley, and specifically the Skouriotissa mine, has enabled an insight into inland exchange activities between this area and the prosperous, north-western city of Soloi (App. 1, fig. 1). Copper extracted from the mine was probably shipped from this city during the Roman period, but, unfortunately, archaeological evidence is restricted due to the current political situation on the island. A preliminary description of the amphora finds is given by Winther Jacobsen (2004, 146), but the material is not fully published yet. Unlike the sites reviewed thus far, LRA1 is not the predominant type, but other types prevail instead. This evidence has, incorrectly in my opinion, led the author to argue about separate economies between northern and southern Cyprus. Criticisms for this viewpoint are summarized below (section 8.4.5).

Inland commercial growth is also manifested in the area of Politiko-Mitsero. In the later period, unlike the early period, amphorae are well manifested, mainly involving local LRA1s (Moore 2003, 280). Imports are confined to eastern Mediterranean regions. The absence of Aegean products perhaps indicates that this region did not commercially depend on the road to Kyreneia, but rather on the road to Kition. A road also existed connecting this region with Amathus (cf. Bekker-
Nielsen 2005, 113) but the road to Kition would have been more accessible due to the absence of mountains. Exchanges must have existed between this region and Tamassos which is the closest city (App. 1, fig. 1).

8. 4. 4. 2. Inter-city exchanges

As noted above, the complications in assigning amphorae to their origins, due to the lack of petrographic analysis, make the study of intra-regional distribution difficult at this point. A number of types were produced locally, but production predominantly involved the LRA1 and its variants (section 7.3.2). Kiln sites have been identified at Paphos and Zygi-Petrini, but wasters point to production at Amathus and Kourion, as well as to more workshops at Paphos (sections 7.3.1, 7.3.2). The range of seemingly local fabrics in which the type occurs probably shows that production cannot be attributed to these areas alone; possibly more workshops existed, that are yet to be identified. What is more, unexpected trends observed in the analysis add to the complexity.

For example, the fabric used by the kiln identified at Paphos (F3a) is found in significant quantities in Amathus, but not in Kourion. Similarly, the F1a fabric assigned to Amathus is mainly found in Paphos, while it is rare at Kourion. These observations reflect the complexity involved in production and the difficulty in making inferences concerning intra-regional trade at this stage of research. It is possible that sources for these fabrics were found in both cities (section 7.3.1), with only a small proportion having been exchanged. Some light can perhaps be shed with petrographic analysis of samples from both regions. However, exchanges of local products are manifested by the distribution of fine wares and tiles produced at Paphos (Rautman 2003, 164-5, 178).

Considering that these patterns are the results of exchange, and that Kourion outlived the entire late Roman period (Christou 1986, 10), it is possible to put forward certain assumptions to explain these ‘unexpected’ outcomes. First, regarding the distribution of amphorae from the Paphos kiln, it is possible that Kourion was not a profitable market as it could have been self-contained. Amphorae could have been transported to Amathus to be distributed further east, to Salamis. From Salamis, local products could have been exported to the Cilician Selihke, Seleucia-Pieria, or other regions of the northern Levant. This network has been suggested for the distribution of local tiles (Rautman et al. 1999, 389).
Chapter 8

Amphorae provisionally assigned to production centres in Amathus, on the other hand, could have been directed to Paphos to be distributed to the Aegean and/or to the centre of the empire. A problem concerning this theory is posed by the rarity of types in F3c, assigned to Kourion, at Paphos. Had products been distributed to Paphos for their channelling further west, one would expect more amphorae from Kourion at Paphos. Generally, amphorae appearing to have been produced in Kourion were traded either to Paphos, or to Amathus. If these tendencies of exchange to the west or to the east are true, and do not result from the existence of similar sources in Paphos or Amathus, it is possible that they were affected by the demand or changes in the networks in which Kourion was involved. Possibly, certain products were directed to the capital of the island, following a route to the east (e.g. those in F3c), whereas other products to Paphos for their distribution to western territories of the eastern Mediterranean. This could explain the scarcity of amphorae in F3c in Paphos noted above. In any case, these are mere assumptions to be tested once more data are available. The implication underlying the above suggestions is that inter-city trade of local products was mainly conducted by sea.

Exchanges between Paphos and Kourion were nevertheless fairly low in intensity as revealed by the small percentages of the amphorae that were presumably exchanged (section 7.3.1; App. 4, table 9). Possibly, these limited affairs confirm that imports were hardly redistributed from Paphos to Kourion intra-regionally (section 8.4.4.1). It also supports the idea that ships from those regions stopped to Kourion after Paphos on their journey to the Levant, in this period also (section 8.3.3.2).

The rest of the fabrics were not as widely used and the picture obtained by their distribution is not very clear either. In most cases it is difficult to assign a probable source, but, even so, exchanges appear to have occurred to a low degree. Amphorae in F2a, probably produced in Amathus, were only distributed to Kourion but not widely (section 7.3.1). Possibly, these were not directed to Paphos as their production was not major in the first place. It is probable that LRA1s in F1a occupied the greatest part of Amathusian late Roman production, and that these were the amphorae distributed as tax. An underlying factor for these limited intra-regional exchanges could be the involvement of the cities predominantly in distribution and exchange with their growing peripheries. Additionally, direct trade of imports to most Cypriot cities (sections 8.4.1 – 8.4.3), perhaps discouraged the operation of local exchange activities.
8.4.5. Discussion

Regionalisation of late Roman commercial activities and changes in the urban and rural habitation and economic landscape must be primarily understood in relation to the political reorganisation of the system after the relocation of the centre of the empire (Whittaker 1983, 178). Such shifts in centres and peripheries are a central feature of world systems (Champion 1995, 17) and common in the evolutionary process (Friedman and Rowlands 1977, 269). This change resulted in broader socio-economic and ideological modifications. Another debatable issue is the degree in which the political uncertainty and sea raids in the Aegean, A. Minor, and the Levant after the mid 3rd century continued to affect the character of late Roman trade (Whittaker and Garnsey 1998, 278-279). Undoubtedly, the early Roman *pax Romana* (section 8.2.5) is not a feature of the late Roman period. At the same time, the ascendancy of the Christian Church played a significant role in these political changes, influenced the development of the late Roman empire, and impacted on social and ideological structures. As a great proprietor of wealth (Hunt 1998, 257, 260, 262) it largely determined the empire’s social and economic life.

Nevertheless, despite the broader changes underlying regionalisation, it would be erroneous to believe that trade between the two parts of the Mediterranean ceased completely. Eastern imports to western areas, such as those recently identified in Gaul (Pieri 2005), as well as the presence of N. African amphorae in eastern regions (Bonifay 2004) reveal the continuation of exchanges, albeit in a different level; it rests with future research to identify the degree of late Roman production in the western empire and the extent to which products were directed to the eastern part of the empire.

In any case, late Roman economy was based on new principles and values (section 4.2.2), and the exchange mechanisms underlying the data were partly altered. The redistribution mechanism of the annona, now directed to Constantinople, continued to stimulate the operation of market exchange (sections 4.3.1.2). Despite the initial belief that taxation in kind reduced the necessity for raising money for taxes, and that economy perhaps became less monetised (section 8.3.5), it is now accepted that taxes in money and transactions were also important in the late Roman period, whereas taxes in kind were not uncommon under the early empire (Garnsey and Whittaker 1998, 318). It is worth noting that the debate extends to the level of taxation in kind in the early and late Roman periods (Garnsey and Whittaker, ibid.).
In any case, the two mechanisms were frequently combined (Whittaker 1983, 165), as traded goods were shipped together with taxes in kind. As Rome, Constantinople was “a consumer of enormous magnitude” (Kingsley and Decker 2001, 2), and as such, a vast market. Taxation during the late Roman period was heavy (Whittaker and Garnsey 1998, 298). The sheer quantities of wheat pulled in from the provinces, for redistribution to the capital’s population and the army, estimated by Kingsley and Decker (2001, 2) are impressive. Literary evidence, provided for example by the Theodosian Code (Pharr 1952) and Libanius (Autobiography, 279; tr. Norman 1992), attests towards late Roman exploitation.

Redistribution was imposed both by court and Church, which redistributed goods to the poor. A respectable body of written documents (Hunt 1998, 257) provides solid evidence for the redistribution controlled and operated by the Church. As Hunt (1998, 258) put it, the Church “provided the appropriate arena for traditional displays of virtuous imperial giving”. Taking place in an institutionalised form, Church redistribution depended on the generosity of wealthy people, often expressed in the form of euergetism (Hunt 1998, 257, 260; section 4.3.1.2).

Cyprus may have been a basic resource for the empire, considering the vast production of local LR1 amphorae (section 7.3.2). Their important quantities possibly suggest the exportation of agricultural produce to the centre of the empire as part of taxation and market exchange. Indeed, LRA1s are found in Constantinople in great abundance (Hayes 1992, 63-4). Petrographic analysis of the LRA1s carried in the Yassi Ada shipwreck discovered along the Turkish coast (Van Doorminck 1989, 247-248) will potentially be informative of the role of Cyprus in the supply of the capital. In addition, petrographic analysis will show whether specimens of this type identified in the western empire (Bonifay and Villedieu 1989, 23-5; Remolà Vallverdú 2000, 216-225) were also traded from Cyprus.

As in the early Roman period, the mechanism of redistribution underlies the exchange networks operating in the eastern Mediterranean observed in the analysis of data from Cyprus. In brief, it has been identified that redistribution of products from the south Levant regions, such as Egypt and Palestine, was mainly associated with a route passing from Paphos (sections 8.4.1), whereas products from the north Levant followed a route from the north coast of Cyprus, or south Cilicia to Constantinople (section 8.4.3). Based on world systems theory and as reflected in the archaeological record, the network involving Cyprus facilitated market exchange of
Palestinian and Egyptian products with western, southern and eastern Cypriot cities (sections 8.4.1, 8.4.2, 8.4.3). Despite the lack of adequate data, one can assume the trade with eastern Cypriot cities as Salamis was the capital. The second tax route, on the other hand, is suggested by the low number of amphorae from those sources in the cities under study. As the two exchange mechanisms during this period were largely combined, one would expect more traded products on Cyprus from these sources. It is important to note that trade routes under the late empire were not confined within the Mediterranean; the identification of amphorae around the Black Sea (cf. Kassab Tezgör and Dereli 2001; Kassab Tezgör et al. 2003, 181-3) as well as of types assigned to this region (cf. Kassab Tezgör and Touma 2001) is suggestive of intense trade and exploitation in those areas as well.

Contrary to the early empire, distribution of Cypriot products to the centre of the empire probably occurred from both eastern and western Cyprus. Salamis, as the new capital, must have played an important role in the distribution of local products to both the core and the peripheries of the northern Levant and Cilicia. However, this role does not seem to be analogous to the one previously acquired by Paphos. Analysis of intra-regional distribution demonstrated that local products to an extent continued to be distributed to the former capital, presumably for their promotion further west (as taxes or as traded products) (section 8.4.4.2). This is not surprising, considering the key position Paphos continued to hold as a central stop in the annona route from Egypt. As I argued (section 8.4.4.2), certain products may have been distributed from the capital and others from Paphos. Additionally, the expansion of economic activities inland (section 8.4.4.1) implied that other cities, such as Soloi in the northwest, were significant distribution points. However, the lack of a more centralised distribution on the island prevents us from making assumptions concerning the efficiency of the mechanisms involved.

As argued (sections 8.4.1.2, 8.4.4), these patterns suggest that Cyprus no longer acquired the role of a tax-collection point as in the early Roman period, due to the small distances separating these eastern regions with Constantinople. This, however, is not the only reason behind the clear differences in both the level and scale of market exchange in relation to the early Roman period (App. 5, fig. 1, 5). It is worth noting that the 'decline' of trade during the late Roman period has in the past been the subject of intense debating (Gamsey and Whittaker 1998, 313-316). Recent research nonetheless has shown that the evidence was generally biased and
that the volume of transactions had not changed considerably (Garnsey and Whittaker 1998, 315-316).

Concerning Cyprus, one would perhaps expect a more dynamic trade between the island and the eastern regions, because of regionalisation. Decisive for this diversity must have been the greater distances that had to be covered under the early empire, which created more pressures and forced market trading (section 8.2.5). Possibly, the restricted geographical region covered by the late empire assisted greater control over the distribution of products. In fact, expanded state intervention may have limited the activities of private traders (Garnsey and Whittaker 1998, 316-7; section 4.3.1.4). In addition, heavy taxation, attested in literary sources but frequently considered as a mere exaggeration (Whittaker and Garnsey 1998, 298), may have been critical for the level of market exchange.

The increase of rural settlements, I believe, also played a key role in the apparent limitation of foreign exchange activities, as demands were largely satisfied locally. Nevertheless, despite their effect in the volume of inter-city exchanges (section 8.4.4.2), their expansion magnified exchanges within the island rather than compressed them, as the exchanging parties increased. Farmers, apart from selling their produce in the city markets, could retail in fairs or in periodic markets (sections 4.3.1.3, 8.2.5). Indeed, according to Whittaker and Garnsey (1998, 308), estate markets and fairs became more common in the late Roman period. Such ventures helped peasants obtain the means with which to pay their taxes, rents and loans, despite the increase of taxation in kind. The augmentation of such exchanges, I believe, made the rural settlements mediators in the exchange of products between cities, and the peasants, inadvertently, acquired the role of middlemen.

Put in a few words, if an 'urban economy' may be attributed to the fiscal life of early Roman Cyprus (section 8.2.5), a 'rural economy' describes best that of late Roman Cyprus. Certainly, the cities must have continued to control all sectors of life of their hinterland as in the early empire. However, as attested by the data (sections 8.4.4.1), villages played an active role in the exchanges and promotion of products, and their part in the broader economy was major. Perhaps it would not be an exaggeration to observe that in the early Roman period individuals obtained the means with which to pay their taxes by long-distance trade (section 8.2.5), while in the late Roman period, predominantly by intense inland exchange. This pattern reflected in the data is in accordance with the general character of the late Roman
economy, and related to another debate. Rural expansion that had occurred during the 4th and 5th centuries had led researchers hitherto suppose that economic development was in favour of the countryside. Inclination towards the countryside, they believed, had led to the reduction of the role of agents and traders. However, researchers such as Garnsey and Whittaker (1998, 312), highlight the existence and significance of urban plebs and their association with agents and traders. Contrary to previous ideas and relying upon archaeological data, these researchers have shown that cities, at least in the eastern Mediterranean, had not declined during this period, and that the expansion of estates did not bring about the economic consequences previously asserted (Garnsey and Whittaker 1998, 326).

Following this discussion, it becomes clear that it is inappropriate to speak of different economies within the island, and even more so of different economies between north and south Cyprus (Winther Jacobsen 2004, 148). Analysis suggested that products were still channelled from the north to the south (section 8.4.2.), while the exchanges of certain products between western and eastern cities (section 8.4.4.2.) designate a tendency towards economic unification. Additionally, rural exchanges would ultimate result in the amalgamation of economic activities. Thus, I believe that the argument concerning diverse economies between north and south Cyprus is arbitrary, and supported by inadequate and premature evidence. In fact, similar bases of amphorae, such as the ones on which Winther Jacobsen (2004, 146-8) builds her assertions, are identified in the research for the present thesis, but were at present included in broader ‘unknown’ groups as detailed descriptions are not as yet provided nor published (e.g. App. 3.1.8.1, 3.1.8.3, 3.1.8.8). Any differences in the patterns must be conceived of as outcomes of the different trading networks operating around different areas of the island rather than products of distinctive economies. Additionally, as seen throughout the Roman period, the areas of northern Cyprus were connected to the network involving eastern Cyprus as well.

A significant body of literary evidence is informative of the reciprocal exchanges of the late Roman empire, which were common among the individuals of high social status (Whittaker 1983, 166, 169, 171), despite the difficulty in identifying this mechanism archaeologically. Thus, it is possible to infer that the aristocrats and the church of the island conducted, at least a substantial part of, the above exchanges to expand wealth and secure their status. As already noted, both control and competition between the interested parties could result in social changes.
Based on ethnographic sources (London 2000), echoing the basis of rural economic life prior to industrial revolution on the island, the reciprocal form of exchange must have been central in the transactions between the farmers of the numerous rural settlements. With all the necessary precautions when drawing comparisons between ancient and modern data, it is not difficult to envisage that similar exchanges of agricultural produce were basic in the late Roman period. Most importantly, these would have promoted social and economic liaisons between the settlements, and would have provided security in times of stagnation and economic stress (section 4.3.1.1). Gift exchanges between farmers and citizens of a higher status or even merchants could secure the economic position of the former and possibly eventually affect their social standing, impinging on rural social structures.

8.5. Conclusion

Even though there are certain generalisations that can be made from the early to the late Roman empire, such as the impact of exploitation on the development of trade and socio-economic structure, there are central differences in the overall structure of distribution. Undoubtedly, both the geographical area covered in each period and the location of the centre of the empire were decisive in the establishment of various forms of organisation to facilitate exploitation diachronically. In economy, the different character of each region since pre-Roman times nullified as all regions strove to survive exploitation. In the eastern Mediterranean, at least, regions usually submitted yield produced 'traditionally', since pre-Roman times. Changes on social structures generated from trade, triggered by taxation, were similarly uniform.

With the change in the geographical and compositional landscape of the empire from the early to the late Roman period there is a marked change of the economy of Cyprus. The geographical and political factors were important in the development of the character of distribution in which the island was involved in each period, but it was fundamentally formulated according to the sea networks created to facilitate exploitation. Thus, it cannot be considered independently of the operational system of the empire in which it was integrated. Yet, throughout the analysis it became evident that certain components of distribution, operating long-distance, but especially inland, were persistent. It therefore becomes clear that decision-making was not entirely ruled and controlled by the state. Rather, economy was also
influenced by decisions aiming at facilitating its process, sometimes by choosing the traditionally learnt modes (cf. Andreau et al. 2004)
Chapter 9. Consumption trends

9. Introduction
Consumption in amphora studies, as discussed in chapter 4, is related to food consumption, and a key determinant is value. Both economic and social, value of amphorae was based on the foodstuffs they contained (section 4.3.3). It was thus argued that the consumption of certain wines and olive oils considered luxuries, could affect the formation of social hierarchies. Accordingly, the effect that value has upon the consumption of products in the social hierarchy (Sinopoli 1999, 119-120) makes possible the archaeological examination of such symbolic connotations based on contextual evidence (Hodder 1982, 207). Moreover, the study of consumption helps obtain a more complete understanding concerning the essential forces of supply and demand, the role of which has been referred to at several points previously (section 4.3.1.4).

With the current chapter the main objective is to identify consumption patterns of each site and the social implications relating to the consumption of the various types extending from their value. In a way, the study of consumption supplements the analysis on trade and exchange (section 8), as it enables the study of distribution of products within each city. This chapter is separated into two major parts: one focuses on the distribution of various products in each site of every city under study from the early to the late Roman period. The intention, apart from identifying what products were preferred and consumed on each site, is to achieve an understanding on the underlying value and social dimensions of their consumption. This is the aim in the second part of the chapter. However, the lack of more precise contextual evidence, as well as a number of limitations posed by the nature of the amphorae or the state of research, permits only general assumptions at present. The socio-economic and political framework of each period will not be discussed extensively, as it has been noted in chapters 7 and 8. Moreover, consumption of products transported within Republican amphorae is discussed briefly as their trade falls within the Hellenistic period. Before continuing with these issues let us outline certain limitations in the study of consumption posed by the very nature of the amphorae.
9.0.1. Limitations

9.0.1.1. Amphorae as luxury items

Despite the association of foodstuff consumption with social diacritics (section 4.3.3) and the well-attested central role particularly of certain wines in Roman society, there are inherent issues concerning the identification of their value and social aspects based on amphorae. For example, it is possible that high-valued amphorae containing expensive products are found in non-elite contexts. Consumers belonging to lower social ranks could have occasionally afforded them, possibly for specific events. Alternatively, it is equally possible that pricy amphorae are found in other contexts as a result of re-use (section 9.0.1.3). Although other luxurious kinds of pottery may be found in non-elite contexts, possibly through down-the-line exchange, the fact that amphorae break into more sherds often results in ill-interpretation. Particularly, sherds may be taken to represent more vessels. Thus, the high value attributed to an amphora should not be degraded because of the identification of the type in non-elite contexts. In brief, to gain an idea on value and a clearer indication concerning the economics involved with social strata it is important to obtain sufficient quantified data from various contexts and draw comparisons.

A further issue that needs to be highlighted, possibly affecting our understanding of consumption of everyday essentials is the ways in which these products were sold. A logical assumption is that a consumer could also purchase a certain amount of the product contained in an amphora, and not the entire amphora. Perhaps amphoriskoi, jars, or even barrels were used for this purpose. It is therefore possible that prestigious wines were consumed by lower social groups, without leaving traces in the archaeological record. In which case, social consequences relating to the consumption of high-valued foodstuff could have been greater.

The capacity of an amphora is perhaps another aspect affecting the value. For example, the cost of a small container of high-value contents could have been less than that of a large container of lower-value contents. These are certainly mere assumptions, which, in my knowledge, have not been adequately addressed by previous research. Hopefully, these ideas will form a starting point for the development of a dialogue in future research incorporating these issues.
9.0.1.2. Contents

Another fundamental aspect obscuring the study of consumption is our restricted knowledge concerning the contents of amphorae. Often the contents are attested by *tituli picti*, or are found intact in shipwrecks (section 1.1). However, on occasions they are simply assumed, based on similarities with types the contents of which are known (section 7.5). Such suppositions, though, are not feasible for new types that bear no similarities to known types. Another aspect that poses further limitations is that frequently a single type was used as the container of a number of products. Residue analysis potentially offers a solution to the identification of contents. Nevertheless, the fact that this method is costly and not widely available indicates that such information cannot be obtainable in the near future. In addition, it will still be impossible to identify the exact contents in the case in which a type was used for a number of products. Equally important are Desbat’s (1991, 322-3) assertions concerning the filling of amphorae in regions other than the ones in which they were produced. It is however hard to prove whether this issue, which still remains in the theoretical sphere, affected the value of products. The operation of such a mechanism would undoubtedly also affect our understanding of trading networks.

9.0.1.3. Re-use of amphorae

A central issue, that merits special attention, is that of the re-use of amphorae. Amphorae, due to their long life span, were used as containers of products other than the ones they were originally manufactured and traded for. The focus in the present thesis is the understanding of consumption based on their primary contents, irrespective of the contents they could have transported at a later stage. However, the likelihood of re-use must be largely taken into account, as amphorae are frequently found in contexts dating to later periods. This trait constitutes the amphorae a difficult dating tool, as the use of a type could extend over the period of its general circulation.

In occasions, amphorae were used for a completely different purpose. For example, they could have been used as water pipes for the drainage system, while ethnographic evidence shows that similar vessels were, at least until recently, used as bird nests. Additionally, amphorae could be used instead of sarcophagi for children burials (Dr. Raptou, *pers. comm.*). A detailed analysis based on stratigraphic layers is required to tackle this issue in cases which are not as obvious as the ones noted
above. Nevertheless, the identification of an amphora in a context of another date
could simply imply extension of circulation.

9.1. **Products consumed diachronically on each site**

9.1.1. **Consumption of Republican amphorae**

Analysis has shown that although interactions with the core and the rest of the
western provinces were reinforced with the annexation into the Roman empire, links
had already began in the Hellenistic period (section 8.1). Albeit scanty, these are
manifested by the presence of Republican amphorae. As a result of these interactions
and of the consumption of products from the western part of the empire, Roman
values began to be transmitted, in a smaller scale, well before Romanisation.

Wine was the main product consumed in the Hellenistic period, as usually
attested by the abundance of Rhodian and other Aegean amphorae on sites dating to
this period (Barker 2004). Republican types circulated on the island during this
period also mainly involved wine, including Gaulish wines transported in probable
imitations of Italian amphorae (App.6, table 4). However, consumption of western
products could also involve olive oil, *defrutum, garum,* and olives, as these were also
transported in the containers from Italy or Istria (App. 6, tables 1-5). Consumption of
olive oil in this period has been examined by Lund (2004). *Defrutum,* a substance
produced from fruit, could have also been transported in the Greco-Italic amphorae
from Sicily, the Aegean, or Cilicia/Syria.

Despite the scarcity of these imports, in relation to the plentiful Hellenistic
imports (observed by the author, but which still need to be analysed), it is still
possible to observe varying consumption trends across the sites under study. For
example, the inhabitants of the House of Orpheus had a preference for Italian
products at least from the 1st c. BC, while they also consumed Spanish and Istrian
foodstuff. Although, as noted above, the majority of these imports could contain a
range of products, wine seems the most probable commodity consumed (App.6, table
1). On the contrary, consumption trends are deviating at the Theatre (App. 6, table 2).
On this site of entertainment it is more obvious that spectators consumed wine,
which is the commodity transported in Greco-Italic amphorae. Analysis revealed a
probable eastern origin for these specimens, although some imports could have been
produced in Sicily. It seems likely that products consumed at the former elite site
were considered as exotica, and acquired a high value, due to their distant origin. Patterns at the Theatre suggest the consumption of less pricy imports.

At Amathus Palaea Lemesos, a site involving a complex of houses (section 3.1.2.2), Republican amphorae appear in quantities comparable to the House of Orpheus (App. 6, table 4). However, consumption of products transported in Republican amphorae at the House of Orpheus almost exclusively involved western products, while at the Amathusian site they also consumed eastern products purchased in imitations of the western prototypes. This identification supports the idea concerning a higher value associated with these distant products. Access to western products to Amathusians is also implied by their quantities in the Agora (App. 6, table 3). Unfortunately, the lack of detailed stratigraphic information prevents inferences based on contextual analysis, analogous to that achieved from Paphos. At Kourion on the other hand, Republican amphorae were not consumed at a level comparable to that from other sites. The hidden factors may be the period’s trade patterns as well as the level of local production at Kourion during the Hellenistic period (section 7.1.1).

9.1.2. Consumption of early Roman amphorae

Production and trade patterns identified in relation to the early Roman period have revealed an unparalleled economic expansion, largely set off by the taxation imposed by the centre of the empire (sections 7.1, 8.2.5). Thus, the contextual approach enables an insight into the ‘value’ of these products, as was formed within the broader socio-economic and political framework of the period. Consumption of Roman products did not commence abruptly as it had already began in the preceding period (section 9.1.1), facilitating the transmission of values generated within the Roman empire.

A primary remark concerns the consumption mainly of wine, although in most cases it is inferred and still awaits confirmation (App. 6, tables 6-10). The most important inference, however, is that western products were mainly distributed to contexts relating to high-ranking social groups. Eastern imports, for their larger part, relate to non-elite contexts. Additionally, local products were also consumed considerably at all sites. As luxurious wine is associated with the elites (section 9), the predominance of western types at the House of Orpheus, as opposed to their infrequency on other sites, is suggestive of a high value.
9.1.2.1. Paphos

i. House of Orpheus

The most consumed product transported in amphorae at the House of Orpheus was wine (App. 6, table 6). Thus, western amphorae, identified at this villa in abundance, manifest the popularity of western wines among rich consumers. As implied by the Dressel 2-4 amphorae, the most preferred wine was the Italian, which was the primary content of this type. Gaulish wine was also consumed largely, and specifically the wine transported in Gauloise 4 amphorae. Spanish wine, although not consumed to levels similar to the afore-mentioned wines, was also consumed.

In its greatest part consumption of eastern wine is assumed, based on similarities of eastern types to western types associated with wine transportation. The most consumed eastern wine was probably the Carian, while Lebanese, Cilician and Aegean wines were also consumed. The surprising absence of Carian wine from the Theatre (section 9.1.2.1.ii) is possibly indicative of a higher value of this product. Local wine was also consumed to a considerable level, regardless of the preference for western wines. The association of luxurious products with the elite diet is further highlighted by the exceptional consumption of fruit imported from the centre of the empire.

Imported olive oil, on the other hand, was rarely consumed. Such imports derived from N. Africa and Spain, revealing the reputation of these regions in olive oil production (cf. Mattingly 1993). Possibly, such rare imports were preferred for cosmetic or religious purposes (section 4.3.3). A greater consumption, nevertheless, must not be out-ruled, considering its essential role in the Mediterranean world. Perhaps, consumption of olive oil principally involved local produce (section 7.5). Its potential storage in large vessels, such as pithoi, or barrels, could obscure its identification. Moreover, amphorae of ‘unknown’ contents could have contained oil, while it is possible that some of the amphorae provisionally associated with wine contained olive oil instead.

Fish products consumed on this site were also imported from the western Mediterranean (App. 6, table 6). Spanish were the most preferable, followed by Gaulish and Portuguese. Consumption of western fish-based products in this context, most likely implies a higher value. Instead, at the Theatre (section 9.2.1.1.ii) fish
amphorae were of eastern origins. As with olive oil, it is possible that some amphorae of ‘unknown’ contents contained fish products.

ii. Theatre
In the absence of sites comprising ordinary housing units in Paphos, the Theatre is very important as it provides a context for comparison with the better studied elite contexts. Although it is not informative of consumption on an everyday basis, it provides vital evidence for consumption in areas of entertainment at the capital and the island as a whole. In addition, due to its centrality, merchants most likely made use of the area for exchange activities. As such, the Theatre provides an insight into the products sold and consumed on an everyday basis by inhabitants of an average status at the capital.

Wine seems to have been the main commodity consumed at the Theatre. However, the great majority of the amphorae are only provisionally associated with wine (App. 6, table 7). Contrary to the House of Orpheus the bulk of imported wine was of eastern origin, primarily from Cilicia. Consumption of western Mediterranean wine was restricted to very few Italian and Gaulish amphorae. Instead, the majority of Dressel 2-4 amphorae derived from Egypt. Moreover, the presence of Aegean wine shows that it was generally consumed on sites other than villas. Although of fine quality, Aegean wine was perhaps not as prestigious as that from Italy and the western provinces, at least in this part of the empire. Amphorae possibly containing wine derived from various regions of the eastern Mediterranean. Most of the wine consumed, however, seems to have been of a local origin.

Consumption of olive oil is again not very well attested. In the context of the theatre, olive oil could have perhaps been associated with cosmetic purposes or even for lighting lamps, rather than with food consumption. As suggested earlier (section 9.1.2.1.i), it is probable that olive oil was kept in large storage vessels instead, or that it is associated with types the contents of which are unknown.

Only a few amphorae containing fish products were identified at this site. Their presence sustains the above hypothesis concerning the function of the Theatre as a market place during festivities. Undeniably, it is difficult to imagine the consumption of this product during a performance! The same argument explains its restricted quantity. Unlike the House of Orpheus, amphorae from the Iberian peninsula and N. Africa are rare, suggesting a higher price for these commodities.
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Instead, the presence of probable fish amphorae from Cilicia and Cyprus shows that fish products of these origins were more affordable by common consumers.

9.1.2.2. Amathus

i. Agora

Data from the Agora are very important as they provide an insight into general consumption trends and preferences of the Amathusians. Despite the lack of data from an elite context in this city, it is still possible to achieve an understanding of consumption relating to diverse social strata, by comparing data from the Agora and Amathus P.L. As an ordinary site, Amathus P.L. primarily reflects patterns related to consumers of an average status (section 9.1.2.2.ii). As with Paphos, the most demanded product was wine, although amphorae of unknown contents constitute a significant percentage (App. 6, table 8). Italian wine, however, was not consumed as greatly as in the capital. An underlying reason would be the diverse trading networks in which Amathus was involved (section 8.2.2.2). A higher value associated with imperial products would also prevent their wide consumption. Instead, Gaulish and Spanish wines were consumed more extensively. Their absence from the Amathus P.L. site is indicative of the products’ association with consumers of a higher social rank.

The quantities of Lebanese and Aegean wine amphorae in the Agora show that these were the most demanded wines in Amathus among eastern wines. The rarity of Carian amphorae, indicating a lower consumption of this wine, is worth noting; it possibly also shows that this product was mainly consumed by elites and was not widely available (section 9.1.2.1.i). Consumption of other eastern wines is merely assumed, based on containers provisionally believed to have contained wine. Of these, Aegean wine still possesses an important percentage, as does the wine contained in vessels attributed to the ‘Cilicia/Syria’ region. The presence of local amphorae in the market place suggests the popularity of local wine, which may have been the content in most occasions. Local amphorae transporting wine were also brought in from Paphos (section 8.2.4.2.ii).

The impression given by amphora evidence is that consumption of olive oil was also restricted in Amathus. However, consumption predominantly of local olive oil, stored in alternative containers, could be the reason for the relatively low
quantity of amphorae related to this product (section 9.1.2.1). Again, imported olive oil could have been the content of amphorae that are not as yet associated with a particular product. Still, it seems that more imported olive oil was consumed at Amathus in comparison to Paphos (App. 6, tables 6-9). The larger quantity of Spanish olive oil does not simply mirror a higher demand, but the exchange networks in which Amathus was involved (section 8.2.2.2).

Iberian fish products were also largely consumed in Amathus. Their significantly smaller quantity at Amathus P.L (section 9.1.2.2.ii) suggests that these imports were accessible primarily by the elites, as a higher value is implied. Apart from this idea, it is intriguing to consider the marketing mechanisms involved with this product, which could have also resulted in a higher quantity of containers in the market place. Possibly, fish products imported in amphorae were not normally sold together with their original containers, but were sold by portion to the consumers. Such a trading would certainly result in the identification of more fish amphorae in an agora than in another context. This idea reflects the complexity involved in the marketing and consumption mechanisms and reveals the great scope of amphora studies in understanding such issues. In any case, a significant percentage of these vessels (5.3%) could have also transported defrutum or wine (App. 6, table 8). Fish products could have also been transported from Gaul, as these were the secondary contents of a probable Dressel 28 amphora.

ii. Amathus Palaea Lemesos

Wine is probably the main foodstuff also consumed by consumers of an average status, inhabiting this site. This assertion, nevertheless, is still to be confirmed as the majority of these vessels are only conditionally linked with this product (App. 6, table 9). Western wine amphorae are almost absent, presumably due to their luxurious quality making them unaffordable to the ordinary consumer (section 9.1.2.1.i). Only modest quantities of western wine were consumed, represented by a few rare Dressel 2-4 specimens of Spanish and Italian origin. Unless these amphorae were re-used as containers of products other than their original contents, they signify the occasional consumption of luxury products by non-elite groups (section 9.0.1.1). Hopefully, a future stratigraphic analysis will shed light to this hypothesis.

The great majority of consumable wine derived from local sources. Eastern Mediterranean wines were also consumed, originating primarily from Cilicia,
'Cilicia/Syria', and the Aegean. The larger quantities of some amphorae in relation to the Agora, as well as some typological differences, suggest the parallel existence of alternative exchange mechanisms, such as gift exchange and exchange in periodical markets or festivals. Possibly, produce sold in the Agora was more expensive. This possibility perhaps explains the lack of Lebanese amphorae, which were well-represented in the Agora (section 9.1.2.2.i). Moreover, the probable local origin of the majority of the wine consumed in this ordinary context, represented by variants of known types, suggests a lower value.

Imported olive oil, although significantly less than wine, is again more abundant than in Paphos, reinforcing the idea that the decisive factor is the deviating networks in which Amathus was involved (section 9.1.2.2.i). These networks involved the extensive circulation of Spanish amphorae, a sector of which contained oil. In all probability, though, consumption levels of olive oil in this settlement must have been significantly greater than attested by imported amphorae. Supportive evidence is provided by the association of this area with olive-tree cultivation (section 7.5). In addition, a number of amphorae of unknown products may have contained olive oil. On a regional level, consumed olive oil may have also been reciprocally exchanged.

The presence of amphorae containing fish-based products suggests that Amathusians probably did develop a taste for fish products, even if marketing procedures had affected their presence in the archaeological record of the Agora (section 9.1.2.2.i). The circulation of Spanish fish amphorae at least in the north Levant implies the popularity of this product in the broader region. Such popularity would have triggered the production of eastern imitations of containers of fish products, such as the ones present on this site (App. 6, table 9). Possibly, Iberian fish amphorae, mainly identified at the Agora, were more pricy and perhaps considered a delicacy, while eastern fish amphorae were cheaper and therefore affordable by non-elites.

9.1.2.3. Kourion

Unfortunately, the lack of more precise contextual information from Kourion (section 3.1.3) discourages the study of social aspects of consumption within this city, and only permits the identification of broader trends. As with the previous cities, the main product consumed was wine (App. 6, table 10). However, only a
small fraction of the amphorae can be safely associated with wine (11.2%), while the
great majority is only provisionally linked with this product (63%). These are mainly
newly identified eastern types, with the bulk being assigned to local sources (42.1%).
This is hardly surprising, considering the important role Kourion played in local
production in this period (section 7.1.1).

The mostly preferred imported wines were Cilician and Aegean. Unlike the
previous cities, western wine was not consumed frequently; Spanish and presumably
Italian and Gaulish wines were rarely imported. Based on previous identifications
(sections 9.1.2.1, 9.1.2.2), the few western products were most likely consumed by
the elites. The elites however, may have also consumed local produce considerably,
as production was under their control.

An underlying reason for these patterns could also be the trading network in
which Kourion was involved. The demand of more valued products in Paphos and
Amathus, which were the main redistributors of foreign produce to Kourion Amathus
(section 8.2.3), may have resulted in their restricted redistribution. However, within
such a ‘world empire’ it is difficult to envisage the inability for a more extensive
circulation of products to Kourion. Moreover, other products such as fish were
imported to levels similar to those of the other two cities, whereas eastern products
were substantially redistributed, presumably from Amathus (section 8.2.3). The latter
observations also contradict an idea concerning the restricted consumption of
western commodities due to sufficient local surplus. Thus, consumption at this chief
producing city was possibly centrally controlled to maintain exploitation (section
9.2). Vital for the examination of this suggestion is the study of material from an elite
context.

Imported olive oil was also limited, with a few examples deriving from Spain
and N. Africa. As with wine, western olive oil appears in a significantly less quantity
in relation to the other cities. Considering its producing role, inhabitants probably
consumed locally produced oil, stored in alternative containers (sections 9.1.2.1,
9.1.2.2). Again, amphorae of unknown contents may have been related to olive oil.

Unlike the other two commodities, imported fish products were consumed to
a considerable level, analogous to Amathus (section 9.2.2.2). As noted above, fish
products derived from Spain, Tripolitania, and eastern Mediterranean regions. The
latter were probably more affordable, considering the proximity of their origins.
Evidence at this stage of research also points to the consumption of local fish, but the contents of these amphorae need to be confirmed.

9.1.3. Consumption of middle Roman amphorae

The change in trade patterns and the typology of amphorae observed in the middle Roman period also implies a change in consumption trends. The different socio-political and ideological framework in which economy was embedded, due to the broader changes of the empire (section 8.3.5), imply the existence of alternative values relating to consumption. Even though basic diet still encompassed the same foodstuffs, the changing interactions signify a change in the taste of consumers. Regionalisation affected the level of demand of products that in the previous period were perhaps not as popular. Despite these changes, wine retained its position as the most demanded commodity, although it is sometimes unclear whether the same vessels contained fruit (App. 6, tables 11-16). Imported olive oil, on the other hand, is more evident, while fish products were still demanded.

Nevertheless, there are further difficulties in understanding this period’s consumption trends. Partly, this is due to the lack of extensive research, resulting in more limited data. An additional aspect imposing difficulties is the continuation of early Roman types into this period (e.g. Tripolitanian amphorae), and the beginning of the production of late Roman types in the 4th century. This ‘problem’ characterises all sites, and can only be addressed once detailed stratigraphic information becomes available. Differences in the patterns between sites are often the result of stratigraphic inconsistency, and do not necessarily signify divergence in consumption trends. This particularly applies in the middle Roman phase of the sites analysed from Paphos. Specifically, the House of Orpheus gives an insight into the 3rd c., i.e. the period of its final collapse (section 3.1.1.1). The Customs House, on the other hand, gives an insight into the 4th c., as the site is predominantly late Roman (section 3.1.1.3). The only clear middle Roman phase is provided by the Theatre, which was destroyed by the 4th – century earthquakes.
9.1.3.1. Paphos

i. House of Orpheus

The main characteristic of trade during this period is the termination of the strong links characterising the island, and particularly the capital of Paphos, with the western Mediterranean (section 8.3.1). Despite this major change, middle Roman western products were still consumed at the House of Orpheus, mirroring the continuation of bonds between its inhabitants and the centre of the empire. Restricted consumption by the elites reveals a higher value of these products. Their absence from other sites encourages the belief that contacts with those regions became rare if not extinct by the end of this period.

The special liaisons shared with the centre of the empire (section 8.2.1) are particularly manifested in the rather plentiful consumption of Italian wine, which continued after the centre's economic crisis during the 3rd century (App. 6, table 11). These elites also consumed wine that probably derived from Syria, but to a significantly lesser extent. Its meagre quantity suggests a restricted preference for this product, or the beginning of its production roughly in the period of the decline of the villa. The second possibility seems more viable, as its identification in contexts described below reveals that the quality of this product was rather appreciated. As noted above, a future study focusing on detailed stratigraphic evidence will be most informative (section 9.1.3).

Fish products and perhaps olive oil imported from the Iberian peninsula or N. Africa were still consumed. Tripolitanian products analysed in relation to the early Roman period possibly continued to be consumed into this period (section 6.2.1.1). The general lack of imports from the eastern Mediterranean should not be interpreted as lack of demand for these products. It is very likely that production and consumption of some of the early Roman eastern types continued until the mid 3rd century. Possibly, amphorae of a middle Roman tradition were introduced after this period, when the villa no longer survived.

ii. Theatre

Unlike the House of Orpheus, the predominant type consumed at the Theatre is the Syrian Carrot amphora (App. 6, table 12). As previously observed, wine was the primary commodity consumed at the theatre (section 9.1.2.1.ii). The abundance of
this type therefore suggests that the primary content was wine instead of dried fruit (Tomlin 1992 308). The clear middle Roman phase provided by this site may be responsible for such a vast quantity in relation to the previous site. Although, based on early Roman identifications (section 9.1.2), its wide consumption at this context could be interpreted as an indicator of a lower value, analysis from other sites suggests the opposite (sections 9.1.3.1.iii, 9.1.3.2, 9.1.3.3). Responsible for such shifts in consumption trends may have been the broader socio-ideological changes (section 9.2). Less frequently, spectators at the Theatre consumed wine which was probably imported from Palestine and Cilicia (App. 6, table 12).

Although consumption of other products would not have been as common in the Theatre (section 9.1.2.1.ii), the potential use of olive oil is better attested in this period, by a local type resembling Dressel 30 (App. 6, table 12). It provides possible evidence concerning the eminence of local produce, but it remains unknown whether imported oil was equally consumed.

In section 9.1.2.1.ii the centrality of the Theatre in conjunction with the presence of fish products triggered the idea concerning its function as a market place. Amphorae presumably containing fish-based products are still apparent, encouraging the idea that the place was still important for exchanges. Fish consumed in Paphos, apart from local sources, still derived presumably from Tripolitania, stressing the reputation of these products, as well as from Cilicia.

iii. Customs House
Data from the Customs House, comprising part of the city’s walls (section 3.1.1.3), do not give an insight into consumption taking place at the site itself, but into consumption taking place in the city in general. Dumps, enabling such inferences, are not uncommon close to walls, as they have also been identified at Kourion (section 3.1.1.3). Walls could have also functioned as exchange points, reflecting the products consumed on an everyday basis. The widespread consumption of wine is still attested, but the most consumed wine according to this assemblage is the Palestinian (App. 6, table 13). The Syrian Carrot amphora is only present once. Value difference could merely be an underlying reason for such a discrepancy. Possibly, Syrian wine, consumed at a place of entertainment, merited of a higher reputation (section 9.1.3.1.ii). In Amathus, too, it is identified in a larger quantity at the Agora rather
than at Amathus P.L, showing that it was perhaps not widely available to ordinary consumers (section 9.1.3.2).

Yet again, the late Roman date of the Customs House was probably the most decisive factor for such a distinct patterning. If the peak of circulation of Palestinian wine was the 4th century, its scarcity at the Theatre (App. 6, table 12) is logical, as it declined following the earthquake of this century. Indeed, other wines consumed in the middle Roman period, such as the Campanian and the one transported in the Hollow Foot amphora, are also feebly represented at the Customs House. In addition, the absence of amphorae containing other products is indicative of the late Roman character of the site. Hopefully, a future analysis based on detailed typological traits and stratigraphy will be more useful. In any case, the distribution of Cilician and Aegean products in both the Theatre and the Customs House reveals similar consumption levels across the city.

9.1.3.2. Amathus

i. Agora
Data from the Agora reveal an overall change in the market economy of Amathus. Generally, there is a decline in the quantity of products delivered to the Agora in relation to the preceding period. On this basis, one could argue that not many traded products were consumed in this period. However, such an hypothesis is not supported by data from Amathus P.L. (section 9.1.3.2.ii). Thus, a decline of the market associated with the broader economic change provides a more liable explanation.

Despite the apparent decay, wine is still the primary commodity distributed to the Agora (App. 6, table 14). The main wine demanded by Amathusians was probably Syrian, while wines presumably from Palestine and Cilicia were also consumed. Consumption of imported olive oil, primarily from Algeria and possibly Tunisia, is better attested in this period. This evidence testifies for the importation of olive oil to the island, despite the dominance of local produce suggested above (sections 9.1.2.2.i, 9.1.3.1.i).

A possibly change occurred in the consumption of fish products. In the preceding period the popularity of imported fish amphorae in the Amathusian Agora, in comparison to other sites, was striking (section 9.1.2.2.i). Unless the Almagro 51
amphorae contained fish products, this commodity was now consumed in levels similar to the House of Orpheus (App. 6, table 11). Nevertheless, despite the possible decrease, there was still a demand for Iberian fish products, reinforcing their traditional popularity not only in this city, but also in the northern Levant with which Amathus was economically associated (sections 8.2.2, 8.3.2). Their general absence from Amathus P.L. (section 9.1.3.2.ii) possibly suggests an elite-consumption. The absence of other western products, apart from a few N. African amphorae, implies the cessation of an analogous demand. As noted elsewhere (section 9.1.3) the reason may have been the weakening of commercial links between the two parts of the Mediterranean.

ii. Amathus Palaea Lemesos

Wine remained the best-documented commodity on this site as well. Its abundance, as opposed to the smaller quantity at the Agora, reinforces the suggested crisis at the latter site (section 9.1.3.2.i). Its consumption involved Palestinian, Cilician or ‘Cilician/Syrian’ sources, and rarely Aegean (App. 6, table 15). Based on the different patterns in relation to the Agora, it can be inferred that non-elite consumers continued to obtain foodstuffs by other means (section 9.1.2.2.ii). Syrian wine, which was perhaps more luxurious than other imported wines (section 9.1.2.1.i), was possibly purchased from the Agora where it is better represented. Other mechanisms, however, may underlie the consumption of Palestinian wine, identified in this context in an unparalleled quantity.

Consumption of local olive oil is possibly attested by the version resembling Dressel 30. Olive oil was perhaps also imported from Tunisia, unless these containers transported fish products. Moreover, the change in the preference of Amathusians for fish products (section 9.1.3.2.i) is also reflected in the drop off of amphorae presumably containing fish products in this assemblage. The restricted consumption of Iberian fish products, as suggested above, possibly indicates a higher value, while such products contained in probable eastern imitations were also sparsely consumed. Possibly, the decline of earlier networks that unified the Mediterranean economically made them hard to obtain and expensive. The rarity of their circulation in the eastern Mediterranean could have triggered the discontinuity of eastern imitations. As a result, they could have become inaccessible by non-elites, and demand for this product would have decreased.
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9.1.3.3. Kourion

Consumption is not very clear at Kourion during this period as the contents of the vast majority of the amphorae are unknown. Yet, consumed products particularly involved local products and products imported from the Aegean and Cilicia. As already noted, production, especially at Kourion, remained important in this period, contrary to previous ideas of economic decline (sections 7.2.1, 8.3.5). Hopefully, future study will give information on the actual products contained in these types.

The great majority of wine consumed at Kourion derived from Syria (App. 6, table 16). The unusually large quantity of Carrot amphorae demonstrates its high demand. However, an elite-consumption is possible, as this context is probably associated with the Agora of the city (section 3.1.3). Moreover, the significant consumption of this product constitutes a very interesting difference in relation to the preceding period, as the consumption of valuables was previously restricted (section 9.1.2.3). Thus, the significant presence of a demanded wine may be explained by the changed socio-political framework, which established different values from the ones prevailing in the preceding period. The rest of the wines derived from Cilicia, Palestine and the Aegean, but in insignificant quantities. Wines from the last two sources in particular were rarely consumed. It is, nevertheless, most likely that a considerable amount of the newly identified types, many of which have been attributed to local sources, also contained wine.

Again, the presence of Dressel 30 amphorae provides testimony for the consumption of olive oil. Seemingly, oil within these vessels was imported from Algeria and N. Africa, Cilicia and the Aegean. A Tripolitanian Africana II amphora, possibly also contained oil. However, their scanty volume suggests the consumption primarily of local produce. This can be represented in the ample quantity of amphorae of unknown contents, unless it was predominantly stored in pithoi and other vessels.

Unless the single example of the Africana II amphora contained fish products, consumption of this commodity is solely attested by a probable fish amphora of local origin (App. 6, table 16). Considering the popularity of Iberian fish products (section 9.1.3.2.i), the single example of the Almagro 51 amphora possibly also contained fish products. The lack of further examples though shows that Iberian products were generally not consumed at Kourion during the middle Roman
centuries. Thus, as with the majority of foodstuffs, consumption was still directed to local products in this period.

9.1.4. Consumption of late Roman amphorae

The character of consumption in the late Roman period is different in relation to the preceding periods. A major change is signified by the development of rural economy (section 8.4.5), which led to the consumption primarily of local produce (section 7.3.1). As trade concentrated around the eastern Mediterranean, imported products consumed across the sites under study were mainly of an eastern origin. The different socio-economic and political framework within which trade operated in this period (section 8.4.5) implies another change in both, the social and economic value of the exchanged products. An intriguing aspect to investigate is the association of the various social groups with local or foreign produce respectively. At present however, as elite contexts are lacking, suggestions may be made by inference based on comparisons between the Agora and Amathus P.L.

Unfortunately, the exact products of late Roman amphorae are not very clear yet. In most instances it has not been possible to assign a particular product, even provisionally, to the diverse types. For example, it is not yet certain whether LRA1, the most common late Roman amphora on the island (section 7.3.2), contained wine or olive oil (App. 3.1.6.2). In addition, a number of amphorae were used for a range of products (e.g. LRA4), making the study of consumption more complicated.

9.1.4.1. Paphos

i. Theatre

The occupation levels revealed in excavation attest that the area was still used, despite the decline of the Theatre in the late Roman period (section 3.1.2). Unfortunately, the absence of an elite context, as in the preceding periods, prevents the distinction of consumption trends based on social ranking. Regardless of the difficulties in distinguishing between wine and olive oil (section 9.1.4), it is possible to observe that wine was probably still the main commodity consumed by the Paphians (App. 6, table 17). Apart from the vessels definitely transporting wine (12.5%), a significant number of amphorae are provisionally associated with wine
(18%), while a small quantity contained either resin or wine (4.1%). Generally, wine was mainly imported from Palestine, Egypt, and to a lesser degree from the Aegean and/or the Black Sea. To a smaller level it was imported from Egypt, Lebanon, Cilicia, and possibly Syria. The reputation of Palestinian wine must have been considerable, considering the scanty imitations of its container, presumably in areas such as Cilicia, Syria/Palestine, and even locally (section 6.4.3). The same may apply for the Aegean LRA2 amphora, which was also imitated in Cilicia.

The majority of LRA1 amphorae consumed on this site were local (38.7%), but the ratio between wine and olive oil is unknown. Products carried in these vessels also derived from Cilicia, Egypt, the Aegean, and the Black Sea. However, apart from Cilician products, their low quantities reveal a restricted consumption. Occasionally, consumption involved wine or olive oil from Caria, transported in LRA3 amphorae. It is also unclear whether the Globular amphorae and the LRA1 variants probably dating to the later part of this period signify the consumption of wine or olive oil. Nevertheless, it seems that inhabitants still consumed imports from the same sources (App. 6, table 17). In fact, the percentage attributed to local sources manifests that consumption of local products was not markedly higher. Most importantly, this evidence shows that consumption trends had not changed dramatically during this troublesome period (section 6.4).

Concerning the consumption of olive oil, none of the amphorae are safely associated solely with this product. Apart from the LRAls and LRA3s that possibly contained olive oil, Palestinian LRA4 amphorae could have also transported olive oil as well as sesame oil. In addition, it is possible that olive oil also derived from N. Africa, an area renowned for this kind of production. It is nonetheless unclear whether these vessels represent consumption of fish products instead (App. 6, table 17). Apart from these examples, consumption of fish products is not clearly attested by the amphorae.

**ii. Customs House**

Information obtained from the Customs House is largely similar to that from the Theatre, as it represents products consumed on an everyday basis disposed at the city’s walls (section 9.3.1.3). Based on this evidence, one could assume uniformity in the consumption trends of Paphos. Regardless of the unavailability of specific contextual information, data manifest that inhabitants generally consumed both local
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and foreign products. Possibly, the proximity of the sources did not make products as expensive as in the early Roman period (section 9.2).

Specifically, data from this site confirm the reputation of Palestinian wine among Paphians (App. 6, table 18). They also show the tendency to consume wine from Egypt, the Aegean, and the broader Aegean/Black Sea area. The association of LRA1 amphorae with local sources reinforces the idea concerning the consumption predominantly of local wine or olive oil contained in these vessels. Another trend is the preference of Carian wine or olive oil (section 9.1.4.1.i). Wine and olive oil presumably consumed towards the end of this period are only vaguely attested, by scarce local products. As with the Theatre, consumption of olive oil, apart from local sources, possibly also involved Gazan (LRA4) or N. African sources, unless the amphorae from the latter region contained fish products instead.

9.1.4. 2. Amathus

i. Agora

Consumption levels at the Agora are characterised by a marked increase, compared to the decline of the preceding period. As observed in Paphos, apart from the LRA1 vessels of ambiguous contents constituting the majority of the amphorae, the best documented commodity is wine (App. 6, table 19). Amathusians preferred to consume wines mainly from neighbouring Palestine, and to a lesser extent from Egypt, Lebanon, and the Aegean. However, the great quantity of Cypriot LR1 amphorae perhaps suggests the prevalence of local wine, even if part of these vessels (possibly LRAlb) may have contained olive oil. In any case, produce transported in LRA1s was also consumed from Cilicia. Among the products consumed from Asia Minor are Carian wine or olive oil, transported in LRA3 amphorae.

Apart from the olive oil presumably represented by the LRA1 amphorae, inhabitants of this city possibly consumed olive and sesame oil from Palestinian sources. As noted in relation to Paphos, the N. African amphorae imported to the Agora were possibly related to the consumption of olive oil, unless they also transported fish products. Interestingly, no other vessels can be safely associated with fish-based products, although these may have been the contents of the amphorae of unknown contents. Wine and olive oil consumed in the later part of the period were still local, and sparsely Aegean, as attested by the amphorae dating to this period (i.e.
Globular amphorae). According to the excavators, the Agora was abandoned in the 7th century (Flourentzos 2000, 45). However, the types dating to this period are generally lacking, possibly indicating an earlier decline of the market place. On the contrary, these are present in the Amathus P.L. site below.

**ii. Amathus Palaea Lemesos**

As also suggested by finds in the Agora, Amathusians predominantly consumed local wine or olive oil contained in LRA1 amphorae. Apart from these products, average-status consumers inhabiting this site also consumed imported wine from eastern sources; a trend observed throughout the Roman period (sections 9.1.2.2.ii, 9.1.3.2.ii). In particular, they mainly consumed wine from Palestine and Egypt (App. 6, table 20). Egyptian wine is better represented in relation to the Agora, possibly indicating the operation of alternative exchange mechanisms. Palestinian wine was also imported from alternative sources possibly existing in the broader Syria/Palestine region. Its frequency in both sites perhaps demonstrates a value accessible to most social groups. The tendency to consume local and eastern products is most likely represented by previously unknown amphorae, possibly containing wine, such as the ones from Egypt, Syria/Palestine. Possibly, these indicate less important production centres, manufacturing amphorae for less popular produce.

An assumption following this evidence is that the development of the hinterland increased options for consumption as exchange occurred more frequently in rural markets and fairs (section 8.4.5). The Agora, therefore, perhaps facilitated the needs of the rich and the urban elite. Indeed, the meagre quantity of products from areas such as Caria and the broader Aegean/Black Sea region, and the absence of products from Beirut at this settlement may point to a higher value of these products. Such a value could prevent their extensive consumption by ‘ordinary’ people.

The occurrence of LRA1 in a range of fabrics provisionally assigned to Cilicia, the Aegean, Syria, Egypt and the Black Sea also points to the consumption of products not obtained through the Agora, but by alternative means. Moreover, wine or olive oil were still consumed in the later part of the period. Evidence is provided by Globular amphorae, the Aegean, Cilician, and Egyptian origin of which demonstrates the continuation of the consumption of imports. Consumption of Egyptian products in this period is perhaps reinforced by another wine amphora
Chapter 9

(‘Egloff 177’) datable at least throughout the 7th century. LRA1 variants most likely dating to the later part of this period (apart from a single Cilician import) highlight the persistent importance of the consumption of local products.

Consumption of olive oil, apart from the afore-mentioned amphorae, is possibly also attested by imports from Cilicia and N. African regions. In any case, an assumption concerning the consumption of local olive oil, possibly stored in other containers (section 9.1.2.2), seems more viable considering the augmentation of centre-hinterland exchange relationships (section 8.4.4.1). As already noted, N. African vessels possibly signify consumption of fish products instead.

9.1.4.3. Kourion

As in the preceding periods, consumption at Kourion mainly involved local products (App. 6, table 21). Although imports were also consumed, their quantity in comparison to local produce was meagre. Contrary to Paphos and Amathus, products transported in Palestinian LRA4 amphorae, i.e. wine, olive oil or sesame oil, were the most frequently consumed imported commodities. However, Egyptian amphorae were the mostly demanded among the amphorae clearly relating to wine consumption. Interestingly, wine contained in ‘Palestinian’ amphorae, which was the most demanded import in the previous sites, was not as popular in this city. Although it was more popular than Lebanese and Aegean wine, it was still not particularly widespread. Possibly, the low quantity of ‘Palestinian’ amphorae is the result of the consumption chiefly of local wine at Kourion. The product, therefore, imported in significant quantities in LRA4 amphorae could have been oil instead. A possible local imitation of a Palestinian amphora provides tangible evidence concerning consumption of local wine.

Consumption of wine or olive oil is again suggested by LRA1 amphorae, concerning local products and products imported from the Aegean, Cilicia, and the broader Cilicia/Syria region. The same products are also suggested by Carian LRA3 amphorae. Considering the fairly low level of consumption in all sites, it is possible that the products contained in these vessels were of a higher value. Furthermore, the scanty LRA1 variants and Globular amphorae confirm that consumption of these products extended to the later part of this period (section 9.1.4.2.ii). It principally involved local produce, but imports from Cilicia and the Aegean were still consumed. Consumption of olive oil is also attested by N. African vessels.
Nevertheless, they could have also contained fish products. As with the rest of the sites, fish-based products are not clearly manifested in this period. Hopefully, future research may reveal whether the last two products were among the commodities contained in the amphorae of unknown contents.

9.2. Diachronic socio-economic and ideological implications of consumption and the role of ‘value’

The comparative analysis of consumption patterns from different contexts, attempted above, has to an extent conveyed an idea concerning the broader value of some products, regardless of the lacuna in our knowledge (section 4.3.3). Thus, in the early Roman period the generally large proportion of western amphorae mainly containing wine, and to a lesser degree olive oil and fish sauces, particularly at the House of Orpheus and the Amathus Agora, reflects the desire for these products, stemming from their distinct value. Based on the low quantity of these products at Amathus P.L., I suggested that western imports at the Agora were probably destined for social groups of a higher status. Analysis however has shown that even certain eastern products may have been considered luxurious. An example is provided by the Carian wine amphorae identified predominantly at the House of Orpheus (section 9.1.2.1.i).

The impact of consuming products of distant origins on social structures has been discussed in the theoretical framework (section 4.3.3). Distance, apart from granting these products an exotic character, also resulted in a higher price, immediately making them ‘valuables’. Romanisation of the island on the other hand, and the transfer of ideas from the core could be responsible for developing a preference for western products (Arthur 1989, 79). The best documentation for this idea is provided by the unusually high quantity of Dressel 2-4 amphorae, originating at the centre of the empire, at the rich villa of the House of Orpheus. Their prevalence within such an elite context portrays their role as social markers. Access to these commodities could endorse the hierarchical status of these elites. Through dining events, in which wines transferred within these vessels were largely consumed, the elites could secure their social position (section 4.3.3).

The high value of these western products is also suggested by the wide variety of imitations circulating throughout the period (sections 6.2, 7.4.4). Wines stored and transported in such imitations were consumed by all social groups,
including the elites who could obtain the original products. This is not surprising, considering that the elites largely controlled their production and trade, either directly or indirectly (sections 4.3.1.4, 7.4.3). However, their consumption is particularly associated with the lower class, as evidenced particularly by data from the domestic context of the Amathus P.L. site (section 9.1.2.2.ii). Stimulants for such an extensive consumption may have been their symbolic associations. The significant quantity of such imitations at the Theatre also testifies in favour of a 'mundane' character. The few western wine amphorae, of a presumably high value, at the Theatre, were perhaps destined for the elite audience.

Imitations of other western amphorae, although consumed less regularly, are suggestive of the prestigious nature of commodities, other than the ones produced in the centre of the empire. Apart from wine amphorae, fish amphorae from the western part of the empire were probably of a higher value. Supporting evidence is provided by their consumption at the villa in Paphos. Furthermore, even though they were traded at the Agora of Amathus, they were not consumed at the Amathus P.L. site. This pattern suggests a value which constituted them unaffordable to consumers of an average and lower social status. On the contrary, at Amathus P.L. they mainly consumed fish products contained in eastern imitations. Again, the hidden factor for such a differentiation may have been the distant origin of western fish products.

Thus, the pattern described above corresponds to the description of the relationship between society and consumption given by Lo Cascio (2000a, 79). According to this author, "social differentiation...had an obvious impact on consumption patterns", while the elites imitated the lifestyle of Roman aristocracy. This lifestyle, however, was one characterised by intense competition for status. Consumption therefore offered the necessary means with which to achieve supremacy among the elite society. The role of Paphos as the seat of the administrators (section 3.1) explains the consumption of such highly valued products from the west in this city. Prestige amphorae distinguished elites from commoners, but imitations, through their symbolic insinuations, enabled the lower social group to identify themselves with the ideology and values of the empire, and legitimised their new identity. Despite the widespread consumption of imitations, the availability in the market of the original highly valued, predominantly western, commodities, could lead to changes in the social stratum (section 4.3.3). In all probability, the sparse
presence of such western amphorae at Amathus P.L. is the result of such accessibility.

Discussion thus far has substantiated the view that consumption was closely embedded within the ‘world empire’, as an important ‘medium’ for the transfer of ideological connotations that engendered social structures. As such, this economic component ‘served’ the new order that followed Roman conquest. The surprisingly low quantity of western products to Kourion possibly strengthens the idea that consumption was part of an organised system that regulated access to valuables (section 9.1.2.3). Considering the differential access to goods as reflected in the different contexts from the other cities, it seems reasonable to assume that these limited imports were strictly directed to the elites.

In view of the central role of Kourion in Cypriot production, a subsequent model highlighting the organised restriction in the consumption of valuables in order to maintain exploitation would seem logical. In other words, restricted access to prestige goods would increase the social distance of the elites, ultimately encouraging their control over producers. Moreover, the restricted circulation of such goods in the market would prevent the creation of social change through their consumption. The idea of controlled consumption of luxurious products is reinforced by the redistribution of eastern imports from the west and particularly from the east of the island, and the distribution of western and N. African fish products to levels similar to those of other cities.

Another aspect that may have affected consumption trends is the nature of the trade networks in which each city was involved. Thus, the inclination towards the consumption of eastern commodities in Amathus and Kourion may have also been triggered by the association of these cities with the eastern network. Moreover, the synthetic analysis of all available data has shown that consumption of prestige goods primarily involved coastal urban centres. This distinctiveness in consumption amplified the socio-economic distance between urban centres and their hinterland, and endorsed exploitation. The limited consumption of some valuable commodities occasionally observed in coastal rural centres reflects the free market of these products and the social hierarchy in rural areas, perhaps often encouraged by the elites in urban centres. In addition, the presence of these products in such contexts exposes the potential social change brought about by their consumption. Again, their restriction heralds a systematically organised form of consumption on the island,
tightly affiliated with exploitation strategies. The target was the maintenance of power, social distinctions, and ultimately the empire's economic development.

The socio-economic and ideological transformations of the empire during the middle and late Roman periods point to subsequent shifts in the value of products in each of these periods. As already noted (sections 7.2, 7.3, 8.3.5, 8.4.5), the respective change in the typology of the containers (sections 6.3, 6.4) may reflect the empire's changing economic and ideological structures. Consumption in the middle Roman period has not previously been adequately considered. This neglect partly derives from the association of this period with a broader decline. However, as I already argued (section 8.3.5), this period should be considered as a period of change rather than of decay. Trade did continue, and amphorae continued to be produced within a different, more regionalised, context.

The difficulties in currently adequately studying middle Roman consumption trends, because of the lack of ample chronologically comparable contexts, have been discussed in section 9.1.3. However, patterns mainly from the House of Orpheus reveal that early Roman values did not cease abruptly (section 9.1.3.1.i). Valued goods from Rome continued to be traded and consumed, until about the middle of this period. This evidence is solid proof for the existence of economic life, and it further highlights the links shared between provincial elites and the centre. Most importantly, it demonstrates the strength of imperial values in a time of economic instability at the centre and of increasing regionalisation of trade (section 8.3.5). The concentration of imperial products at this villa shows that these values still affected consumption and acted as social diacritics. Early Roman values were probably replaced gradually, affected by the regionalisation of trade, the instability of the empire caused by invasions, and eventually by the impact of the new core.

In my view, it is wrong to assume the disentanglement of consumption with social division and social change because of the economic changes the system underwent. Contrary to previous beliefs, recent work has shown that general socio-economic structures remained the same (Cameron 1993, 83). Thus, consumption was accompanied by the same social expressions throughout the middle Roman period, i.e. from Rome's increasing problems to regionalisation of economic activities and the transfer of the centre to Constantinople. Other kinds of material culture, such as mosaics, also testify for the existence of a social hierarchy on the island during this period (section 8.3.5). The introduction of a new amphora typology documents the
introduction of different values concerning the goods they contained that, like the earlier ones, must have played an essential social role.

Nevertheless, a defining difference is the lack of the association with the centre at the same level as in the preceding period. On one hand, mainly in the 3rd century, the problems troubling the empire meant the disappearance of the peaceful environment that earlier promoted trade and the transfer of ideology to the provinces. On the other hand, Romanisation, i.e. the transfer of Roman values to the periphery, was not part of the policy of the new capital of the empire in the same way as it was under the early empire. In the early Roman period, for example, the variety of Dressel 2-4 imitations is indicative of the consumption of products with ideological and economic connotations to the centre of the empire, where this type was originally produced, following the Hellenistic tradition (App. 3.1.2.5). Although economy remained centrally controlled to the end of the Roman era and amphora types continued to be produced or imitated around the empire, production and consumption in the periphery were not based on prototypes from the centre. In addition, differences in the value could stem from the smaller distance separating the island with most of the exporting regions. A lower economic value probably signified a lower social value (section 4.3.3).

Among the prestigious products of the middle Roman period were presumably the products contained in Syrian amphorae (sections 9.1.3.1, 9.1.3.2). Their frequency at the Theatre, the Agora, and especially at Kourion, is rather indicative of a demanded and valued product. Their smaller quantity in contexts relating to everyday consumption shows that this product was not highly consumed on a daily basis. Palestinian wine, the containers of which are found in a larger quantity at sites relating to domestic consumption, was perhaps less valued than the Syrian. To confirm this hypothesis, and show that this pattern is not the result of later imports of Palestinian wine, it is crucial to conduct a detailed stratigraphic analysis. As noted elsewhere (section 9.1.3.2.i), products that were popular at the market place were probably primarily consumed by elites. Commoners could have obtained products by employing other exchange mechanisms (section 9.1.3.2.ii). Although this idea remains speculative until an elite context is recovered dating to the main part of this period, it is possible that regionalisation of trade assisted access of the lower class to valued goods.
Nevertheless, based on the probable imitations of the Dressel 30 olive oil container, it is possible to suggest that products of a distant origin still acquired a higher value. Unfortunately, the majority of types assigned to this period are newly identified and is therefore difficult to make assumptions regarding the trends involved in their consumption. These can be sufficiently studied once more data are identified within different contexts. Also, a detailed stratigraphic analysis will shed light to the important economic changes that followed the political adjustments of this period.

Another change in the value of products is implied by the typological change of the amphorae that occurred in the late Roman period. With the establishment of the new centre in the east, and especially with the introduction of the Church in the religious and ideological sphere, value of late Roman goods changed in relation to that of the preceding periods. As noted above, the lack of a range of amphorae imitating a type that was originally produced in the centre, as in the early Roman period, suggests that there was no attempt for an 'organised' Romanisation through consumption. Rather, a new ideology was transmitted within the changed religious landscape, which distanced itself from the earlier ideology. Despite the changes that led researchers in the past to proclaim the continuation of an economic decline that had began in the middle Roman period (Cameron 1993, 81-2), archaeological enquiry has revealed intense economic activity (sections 7.3, 8.4). Modern researchers instead advocate the existence of similar socio-economic structures, despite the superficial changes (Cameron ibid, 83-5; Kingsley and Decker 2001).

In any case, the largely similar distribution of local and imported products across the studied sites makes it difficult to obtain an insight concerning society and the potential value of products. Generally, Cypriots primarily consumed local produce, and to a lesser extent imports. Indeed, this broader homogeneity may be another indicator of a change in the value of commodities that occurred in this period. As already highlighted (sections 7.3, 8.4.4.1), one of the most significant changes in this period was the development of the hinterland and the increase of inland activity. Thus, the changing values in consumption must not be interpreted irrespective of the fundamental social changes that occurred in the urban-hinterland scheme. The potential role villages played in the distribution of imports to the cities (section 8.4.4.1), the development of rural markets and fairs, and regionalisation of
trade may have facilitated the acquisition of valued goods outside the urban centres, to an even greater extent than in the middle Roman period.

Social differentiation during the late Roman period was definite. In particular, literary evidence documenting reciprocal exchange between Romans of a high social status, for the establishment of liaisons, comes from this period (section 8.4.5). There was a great gap between the rich who grew richer, and the poor who mainly were the tenants that cultivated their land. As noted elsewhere, their social position was largely similar to slavery (section 4.3.2.1). According to the ancient writers, the poor lived in a world of fear of the rich (Whittaker and Gamsey 1998, 299). With the expansion of rural estates many rich landowners moved to the countryside. Unlike the western empire, however, where there is a general movement of the elites to rural estates, in the eastern part of the empire elites were associated with both their urban and rural duties (Whittaker and Gamsey 1998, 297). This tendency would undoubtedly bring more luxurious products in the countryside for consumption. Land was also owned by middle proprietors and peasants. Possibly, in Cyprus there was a growth of small proprietors, similar to Syria (Whittaker and Gamsey 1998, 198, 298). The availability of more valuable products, such as imports, in the countryside for the reasons outlined above, probably helped diminish the social distance between local urban centres and their peripheries.

Although no data are available from a clear elite context, the development of rural areas possibly implies the wide consumption of local produce also by the high class. One would expect that homogeneity in consumption trends would promote social change across the island, or even reflect social uniformity. However, despite the consumption of similar products by social groups of an average status, the elites continued to be powerful. It is not possible to assume that the distinct system of social differentiation characterising this period throughout the empire did not apply to Cyprus. It is therefore possible that in this period social status was not imparted from the consumption of everyday essentials to the same extent as in the early Roman period.

Prestige was perhaps conveyed through alternative means, such as land possession (Whittaker and Gamsey 1998, 300). As Banaji (2000, 96) points out, the character of the late Roman elite is different from that of the early Roman elite. The elite was now closely associated with the imperial system, while it secured its property by transmitting it complete from one generation to the other. Apart from the
importance of owning land (section 4.3.2.1), prestige was now associated with euergetism and benefactions, such as helping the poor or building churches (Hunt 1998, 257), to an even greater extent. Thus, despite that imported products were still demanded even in the troublesome end of the late Roman era (section 9.1.4.2), it is possible to assert that the social role that wine-consumption played earlier in the Roman empire changed with the new ideological and economic framework. To conclude, it is essential to underline once more the need for the study of assemblages for more contexts to elucidate these issues.
Chapter 10. Concluding remarks and plans for future research

10. Concluding remarks

To sum up, I hope that I have managed to demonstrate the great potential in the archaeological study of the amphorae, and the importance of this evidence for understanding aspects of the Roman economy. Despite the limitations imposed partly by the nature of the amphorae and partly by the lack of previous intensive research on the island and the eastern Mediterranean, it has become possible to address the objectives fruitfully. As observed throughout the analysis it was not always possible to provide answers, but the questions and hypotheses raised will hopefully form the ground for future research for a better understanding of these issues.

There are several salient points that I would like to highlight in this concluding chapter, but perhaps the most important are the centrality of Cyprus in eastern Mediterranean networks and the complexity characterising the economy of the island and the eastern part of the empire, throughout the Roman period. As it has become apparent, complexity extends from the establishment of typologies and the production of amphorae, to the exchange mechanisms. Concerning the amphorae, this research has demonstrated the existence of an extended typology associated with the early, middle, and late Roman periods. Most importantly, it has highlighted that previous ideas concerning the restriction of circulation of certain types to the western Mediterranean merely reflects the lack of intensive research in the eastern part of the empire. The two parts of the Mediterranean were linked economically and socially throughout the Roman period. It remains with future research to understand the character of these connections in each period. The great range of local and eastern Mediterranean types from throughout the study period, many of which were classified as ‘unknown’, shows our limited knowledge and the need to establish a more concrete typology of eastern Mediterranean amphorae, parallel to that existing for the western Mediterranean. It has also been revealed that phenomena characterising the production of western amphorae were ‘universal’. The phenomenon of imitation for example, was far more prominent in the eastern provinces than hitherto assumed. Moreover, imitation was not confined to western prototypes, as they also imitated more popular eastern types.
Most difficulties were encountered in the study of production. Although I have attempted to show the complexity and underline the possible existence of a number of processes responsible for what is observed in the data patterning, the lack of petrographic analyses hindered the establishment of more concrete inferences. Due to these limitations and the difficulties in the archaeologial study of production, the intention was to provide alternative means, based on statistical techniques, in order to build hypotheses and understand this economic process based on the available information. The existence of similar sources throughout the island suggested in the analysis corresponds to assertions put forward by other researchers (Rautman 2003, 170) and underlines the difficulties in the analysis of production. Nevertheless, it has been possible to observe that local production was integrated within the broader socio-economic and ideological conditions existing in each period. In the early Roman period analysis has suggested the unparalleled expansion of production centres, highlighted by the intricacy in the identification of modes of production. The change observed in the middle Roman period is in accord with the broader changes that occurred throughout the empire. Although the scale of production is limited in relation to the preceding period, analysis has shown that production did not decline, as hitherto believed, reflecting the gaps in our knowledge concerning the archaeology and the economics of this period. Integration within the broader system is again reflected in relation to late Roman production, which increased as the hinterland developed.

Complexity is better attested in the study of distribution, characterised by the concurrent existence of exchange mechanisms. A central feature observed is that different parts of the island were associated with different maritime networks throughout the Roman period. This was largely formed by geographical factors, but also by each period’s prevailing politico-economic conditions. A number of ideas have been put forward concerning the diachronic character of distribution patterns, associated with each city under study, based on the available data and statistical analysis. Hopefully, these ideas will be further developed once more data become available. Moreover, considering the complexity characterising the Roman economy, it is important to bear in mind that, apart from the trade routes suggested, a number of other mechanisms may have operated, but perhaps less frequently. Another important identification concerns the similarities observed in the trends of intra-regional trade and exchange with those from other parts of the empire. For example,
in the early period it was mainly restricted between urban centres and their peripheries, and between urban centres. The centres generally supplied their hinterland with imports, whereas the rural areas supplied the centres with local produce. This situation changed in the late Roman period, with rural centres also supplying imports to their urban centres, and also acting as mediators between the cities. In brief, this economic process was also integrated within the broader context and the empire’s changing conditions.

The main obstacle in the study of consumption is the lack of knowledge concerning the contents of the various amphora types. This is particularly evident in the newly identified types. Despite these limitations, I have attempted to show the significance of a study based on contextual evidence for understanding issues, such as the value of products and the social dimensions of consumption. It was therefore revealed that such an approach is most informative, especially when a number of different contexts are available in order to draw comparisons.

I hope that with this thesis I have managed to demonstrate the need to apply a concrete theoretical and methodological framework to the study of the amphorae in order to reconstruct the diachronic character of trade and exchange and of other economic processes. Due to the integration of the economic activities within the broader socio-economic and ideological context characterising each period, and the diachronic changes, it is necessary to adopt a contextual approach in their study. It has been demonstrated that the World Systems Theory and concepts developed in economic anthropology and neo-Marxism provide such a model and, hopefully, their appropriateness has been proven. Most of the changes observed in the patterns were responses to the pressure and the wider demands as imposed by the core of the ‘world system’, with major social consequences.

I also hope that I have demonstrated the significance of a synthetic analysis of data for the reconstruction of trade and exchange operating throughout the Mediterranean. To accomplish this, it is imperative to adopt a common methodology in the analysis of amphorae, and the use of sampling and quantification techniques. Frequently, our limited knowledge on various issues is the result of a problematic methodology. Many difficulties stem from the different methods of analysis and publication, which ultimately prevent the use of all data for comparative purposes. The application of a common methodology is particularly important in amphora studies; unlike other kinds of pottery, it is difficult to adopt more elaborate statistical
tools in quantification, because of the great diversity and complex morphology of amphora forms. Further problems are imposed by the lack of contextual evidence from a number of sites which prevents the dating of new amphora types. As seen in the analysis, such a problem is particularly evident in the establishment of a typology of middle Roman amphorae and the study of the circulation dates of types dating to the end of the late Roman period. Hopefully, the future establishment of more concrete typologies from eastern Mediterranean regions will provide a better insight into eastern distribution networks and enable the investigation of exportation to the western Mediterranean.

Finally, my intention was to show the pertinent role of model-building and statistical analysis in the study of amphorae. Despite the limitations, this method enables the synthesis of the data and the theory in order to develop and test ideas concerning the character of distribution. As a concluding remark, I would like to stress that the application of a solid theoretical and methodological framework will enable the 'reconstruction' of trade and exchange networks and of Roman economics. It will also become possible to elucidate economic and non-economic issues, such as the role of the forces of supply and demand, value, imitation, the desire for private profit, the role of decision-making, and the social implications. Most importantly, such a framework will help move the amphora studies beyond the descriptive sphere for a holistic understanding of trade and exchange in the Mediterranean.

10.1. Plans for future research

The main task in the future is to apply the methodological framework proposed and used in the PhD thesis for the synthesis of more data from the eastern Mediterranean, as part of a post-Doc research. The intention is to elucidate further the complex trade and exchange networks between eastern Mediterranean areas, and also within the entire Mediterranean. This implies the use of published (quantifiable) data as well as the collection and identification of types from a number of regions from Greece and the Levant. One of the aims is to develop the eastern Mediterranean typology that emerged from the analysis of amphorae from Cyprus and provide a corpus that will facilitate future research.

The underlying objective will be to address the questions often raised in the PhD thesis, and conduct an in-depth analysis of the theoretical issues relating to the
diachronic economic processes and the social consequences within a 'world-systems' perspective. It will be intriguing to investigate the degree in which production and distribution structures and consumption trends, identified in relation to Cyprus from the early to the late Roman periods, apply to other eastern regions, and also to compare the economic organisation of the western and eastern empire. Key components of future research will be the detailed consideration of issues relating to interaction promoted by amphora exchange, the value of amphorae, and imitation and stylistic choices. Central in this study will be the development of a more advanced research design and the application of further statistical tools for the investigation of large amounts of ceramics. The chief intention will be to tackle more complex issues relating to distribution models, such as the relationship between production centres, markets, and distribution points. The collection of a significant corpus of ethnographic data from Cyprus and the eastern Mediterranean will hopefully provide important evidence for a better understanding of these issues.

Another major task for the immediate future is the publication of all the material analysed as part of the PhD thesis. To this end, I have obtained permission from the excavators of each site. Thus, with the detailed examination of the stratigraphy, I intend to move beyond the broad chronological boundaries investigated in the PhD, and conduct an elaborate analysis of trade patterns in each period. For a better understanding of the character of amphora distribution, and for the achievement of a contextual analysis, other kinds of archaeological evidence will also be taken into account, such as other kinds of ceramics, as well as evidence from shipwrecks.

Much attention will be put on the investigation of production centres and kiln sites on Cyprus, in areas such as the Akamas peninsula and Zygi. Having obtained a research grant from the Leventis Foundation, I, together with Dr. S. Gabrieli and Mr. S. Borowitcz, will begin in the summer a study of production centres and local fabric wares from Paphos. A related objective is the conduct of petrographic analysis on the large number of fabric groups developed in the PhD thesis, in order to source the various types and eventually, to establish a fabric reference catalogue for Cyprus and the eastern Mediterranean. This will hopefully provide more evidence concerning the provenance of western and eastern imports identified in the present thesis. To this end, a large number of samples have already been transported to laboratories of the Institute of Archaeology, UCL.


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