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**Regional Variation in the Ceramics of Neolithic
Cyprus:**

**Implications for the Socio-Economic and Cultural
Dynamics of a Prehistoric Island Society.**

Volume I - Text

Joanne Trudie Clarke

**Ph.D. Thesis
University of Edinburgh
1998**



DECLARATION

This thesis refers to previously published work by the author. Copies of this work are included in the back of this thesis and are cited in the accompanying bibliography.

I hereby certify that the composition, and the research undertaken in preparation of this thesis, is all my own work.

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ABSTRACT

The Ceramic Neolithic (SCU) period in Cyprus is unusual because of the island-wide uniformity observable in the material culture remains. It is only in the ceramic repertoire that regional variation can be detected, and this is most clearly evident in the surface decoration on the painted pottery.

Regional variation is common in prehistoric societies, where external elements can act upon social and economic structures and thereby contribute to diversity. In Cyprus, where there were no external influences, factors that contributed to diversity were internally circumscribed.

The predominant forces acting upon SCU Cyprus were economic. Subsistence strategies governed the ways in which early populations conducted their daily lives and interacted with others. The undertaking of seasonally related subsistence tasks would have directed the types of interaction that occurred between village groups and regions.

Looking specifically at the material culture of the SCU phase, and in particular the distribution of variation in the pottery, the socio-economic processes that contributed to regional diversity are defined. Ceramic variation in SCU Cyprus is predominantly stylistic, and style can appear in many guises. Moreover, it is stylistic variation that is the measurable extant element of social interaction.

This thesis argues that economic factors directed the types of social interactive processes that occurred during the SCU phase, and that this, in turn, is reflected as stylistic variation in the ceramics. Measuring variety against the backdrop of economic and subsistence models aids in the identification of the types of relationships which existed.

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This thesis is dedicated to Stuart and Valerie Clarke, with love.

J.T. Clarke

1998

ABBREVIATIONS

1. Pottery

BTW	- Black Topped Ware
BW	- Basket Ware
Cb	- Combed Ware
CWa	- Coarse Ware, Type A
CWb	- Coarse Ware, Type B
EChalc	- Early Chalcolithic
GBW	- Glossy Burnished Ware
LChalc	- Late Chalcolithic
MBW	- Monochrome Burnished Ware
MChalc	- Middle Chalcolithic
PCb	- Painted and Combed Ware
PW	- Plain White Ware
RW	- Red on White Ware
RMP	- Red Monochrome Painted Ware
RMP Var	- Red Monochrome Painted Ware Variant
RS	- Red Slip

2. Sites

Argakia	- Kalavasos <i>Argakia East</i>
Angastromeni	- Kalavasos <i>Angastromeni</i>
Ayious	- Kalavasos <i>Ayious</i>
Dhali	- Dhali <i>Agridhi</i>
Erimi	- Erimi <i>Pamboula</i>
Kafkalia II	- Kalavasos <i>Kafkalia II</i>
Kafkalia VI	- Kalavasos <i>Kafkalia VI</i>
Kala-A	- Kalavasos <i>Site A</i>
Kambanaris	- Kalavasos <i>Kambanaris</i>
Kandou	- Kandou <i>Koufovounos</i>
Khirokitia	- Khirokitia <i>Vounoi</i>
Kokkinoyia	- Kalavasos <i>Kokkinoyia</i>
Mari	- Mari <i>Paliambela</i>
Markotis	- Kalavasos <i>Markotis</i>
Nissia	- Paralimni <i>Nissia</i>
Orga	- Orga <i>Palialongia</i>
Pamboules	- Kalavasos <i>Pamboules</i>
Parakklisha	- Parakklisha <i>Shilloroukambos</i>
Philia	- Philia <i>Drakos A</i>
Sotira	- Sotira <i>Teppes</i>
Spilios	- Kalavasos <i>Spilios</i>
Tenta	- Kalavasos <i>Tenta</i>
Troulli	- Klepini <i>Troulli</i>
Vrysi	- Ayios Epiktitos <i>Vrysi</i>
Yirtomylos	- Kalavasos <i>Yirtomylos</i>
Zoulofidhes	- Kalavasos <i>Zoulofidhes</i>

3. Miscellaneous

b.c.	- uncalibrated before Christ
b.p.	- before present (1950)
B.C.	- calibrated before Christ
Birm	- Birmingham
BM	- British Museum
CAARI	- Cyprus American Archaeological Research Institute
cal.	- calibrated
carb.layer	- carbon layer
CPSP	- Canadian Palaepaphos Survey Project
demol.layer	- demolition layer
destr.	- destruction
ECU	- Erimi Culture
exc.	- excavation
GU	- Glasgow
KCU	- Khirokitia Culture
Ph	- Philadelphia
SCU	- Sotira Culture
VPC	- Vrysi/Philia Classification System
VVP	- Vasilikos Valley Project

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CHAPTER 1

INTRODUCTION

This thesis is a study of group social dynamics in an egalitarian¹, agro-pastoralist, closed society. Looking specifically at the material culture of Ceramic Neolithic Cyprus, and in particular the distribution and variation within the major surviving component of the material culture, the pottery, it attempts to define the processes which influenced regional variation. It is a major premise of this thesis that variation is evident in the pottery, and that it is stylistic variation resulting from a combination of economic and social interactive processes, which formed the basis of Ceramic Neolithic society. By comparing the economic and material culture evidence to a series of stylistic models, this thesis attempts to identify the various forms of style which reside in the ceramic assemblages, and to interpret these in terms of the systemic processes which might have characterised early Cypriot existence.

The Ceramic Neolithic, or Sotira Culture Phase (SCU), is unusual because of the island wide uniformity represented in all aspects of the material culture, subsistence strategies, and social structure. It is only at the level of ceramic design that variation is clearly evident, and this variation takes two broad forms, explicit differences in the application of design, and more subtle variation in the combination of similar designs. This mixture of explicit and implicit diversity suggests that a range of social and behavioural conditions influenced design variation in the SCU Phase. However, although some early work on SCU ceramic variation was undertaken by Peltenburg and others (Peltenburg 1978; Stanley Price 1979b), no explanative hypotheses were ever advanced.

Since the 1970's the study of regional variation, as an aspect of human interactive process, has peaked in popularity. The interpretative position, of giving meaning to material culture patterning, has been criticised for its circularity and subjectivity (Hodder 1989). Hodder says that;

most material objects of the types studied by archaeologists have a long duration, which means that the control of material symbols is an effective social strategy in the control of meaning and hence

¹ Egalitarian, in this context, is used to describe early prehistoric social structures, for which there is no evidence in the archaeological record of social ranking, craft specialisation, ritual or ideological differentiation, or any other aspect of social order.

society. Yet there is a concomitant danger...that the material object soon becomes divorced from its context of production and it can be taken into new contexts of use. The meanings of objects may change as they move into new contexts.

(Hodder 1989, 73)

We can't ever truly reconstruct the prehistoric past, no matter how rigorous our methodology, because we can never really know the full range of overlapping contexts within which human populations interacted and produced their material culture items. Even so, the study of regional variation continues to be a basic and fundamental component of processual archaeology (Binford 1982) and even in the modern world of more rigorous interpretation (Renfrew 1994), there remain many possible "right" explanations for specific material culture patterning. In the field of Early Prehistoric research, it is impossible to move far beyond the parameters of model building. However, this thesis has attempted to follow the more stringent rules of the post-processualists by matching the models to the data, rather than testing already preconceived models, as practised by the early processualists of North American archaeology (see Chapter's 5 and 6 for a discourse on the stylistic work of Deetz 1965, 1968; Longacre 1968, 1970; Sackett 1982, 1985; Wiessner 1989, and others).

Regional variation presents archaeologists with a range of interrelated questions about how early human populations interacted with each other and with their environment. There has been a number of studies undertaken on regional variation, both in Cyprus (Frankel 1974a), and the mainland (Braun 1996; Campbell 1992; Sackett 1973; Watson 1977), in Early Prehistoric contexts (Rollefson 1987) and in Later Prehistoric contexts (Gonen 1992). There are many material cultural items which can be imbued with stylistic variation, such as pottery, burial practices, chipped and ground stone assemblages, settlement plans and settlement location. There are also many different aspects of social and economic interaction which can influence variation, such as diffusion, acculturation, exchange, boundary maintenance and resource competition. Ultimately every aspect of material culture patterning presents the archaeologist with a different set of variables which must be assessed within their own particular contextual framework.

The study of stylistic variation was borrowed from anthropology and ethnography and adapted to archaeology by anthropologists working on early North American Indian sites (Binford 1963; Braun and Plog 1982; Deetz 1965; Longacre 1970; Plog 1978, 1980a, 1980b, 1983; Whallon 1968; Wobst 1977). It was later refined by Wiessner (Wiessner 1983, 1984, 1985) and Sackett

(Sackett 1985), and more rigorously applied to archaeological material culture by Graves (Graves 1981, 1991) and Neiman (Neiman 1995). It involves the study and identification of those formal attributes in the material culture record which covary in respect to all other formal attributes, and which represent non-verbal communication of ideas or association. In this respect the formal variation observable in SCU ceramic assemblages lends itself very well to stylistic studies, because there are so few factors, other than those that are internally constructed, which may have influenced cultural and material patterning.

Pottery forms the basis of this study because of its marked temporal and spatial variation within what is essentially an homogeneous island wide material culture. However, rather than being the prime focus of this thesis, it is used as a tool through which various theories about individual and group social dynamics are tested. Consequently, this is not a classic pottery thesis, and as such does not include many of the basic analytical typologies and catalogues usually associated with ceramic studies. A general review of morphology, fabric and design is included in Chapter 5, and fabrics are described in detail in Appendix 1, but the major component of this thesis is interpretative and the pottery is referred to when it directly relates to patterns of stylistic variation and human interactive processes.

Inconsistencies in excavator's retrieval methods, and a dearth of complete assemblages, limits the quality of information that can be extracted from the ceramics. However, there is an enormous quantity of sherds, from a number of good representative SCU sites, and from a wide geographical range, and as such, it is reckoned that the ceramic evidence is adequate for the purpose of this study. It is assumed therefore, that patterns of variation in the ceramic record indicate real variability rather than that created by sample bias and inconsistent spatial and temporal distribution.

In order to begin to understand the social dynamics of the SCU Phase it is necessary to put it into its wider cultural-historic perspective. In Chapter 2, the processes which led to its formation are reviewed. The SCU does not stand alone in early Cypriot prehistory, but is part of a set of events which culminated in the formation of a unique island culture, and of which the SCU is just one phase. However, the SCU forms a self-contained cultural unit within the Early Prehistoric Period. When it appears, fully developed, in the 5th millennium B.C., there is no evidence of a residual population of the preceding Aceramic (KCU) Phase, nor is there clearly defined continuity between the SCU and the succeeding Chalcolithic (ECU) Phase. Although the SCU/ECU

transition is important in its own right, it is only touched upon in this study where it strictly relates to the themes and concepts debated. The reason for this is that very little is known about the transitional phase, very few sites have been extensively studied and the processes which brought about the transition appear to be largely divergent from those which characterise the mainphase SCU.

Chapter 2 reviews the history of archaeological debate on the period. Traditionally, focus on the SCU has been from the perspective of temporal variation. Initial work by Dikaios (Dikaios 1952, 1961, 1962) at the type site Sotira *Teppes*, and a number of other sites in the north and south of the island, led to the development of an inflexible diachronic framework which explained variation in terms of different temporal sub-phases within the SCU Phase. Later work by Peltenburg (Peltenburg 1978, 1982) and Watkins (Watkins 1973), illustrated that this strict diachronic framework does not necessarily apply to all SCU sites. The evidence now points to marked regional differences in the pottery, but not, it would seem, in any other aspect of the material culture. Regional variation in the is now widely accepted but incompletely explained.

The archaeological sites which form the basis of this study are reviewed in Chapter 2 and again in Chapter 3. There exists only a handful of partly or extensively excavated and published sites. A number of these were excavated in the forties and fifties with only cursory publication, however, the material assemblages exist in the Museums of Cyprus in apparently complete form. Extensive excavation has taken place at two further sites, Ayios Epiktitos *Vrysi* and Philia *Drakos A*. Although both sites are of primary importance to this study, for various reasons the surviving cultural assemblages are either incomplete, incompletely published or inaccessible. However, the original data is available, and has been used in the analysis in Chapter 8. More recently, excavation is ongoing at two new sites (Paralimni *Nissia* and Kandou *Koufovounos*), but only limited information is, as yet, available (Flourentzos 1997; Mantzourane 1994, 1996).

The sites which have been excavated fall into four broad types based upon the material culture remains, and settlement plans. Some sites have produced large ceramic assemblages but very little evidence of architecture or cultural occupation (Khirokitia *Vounoi*, Kalavastos *Tenta*). Other sites have extensive Neolithic cultural remains accompanied by poorly understood architectural oddities, which are often assumed to belong to the later SCU-ECU transition (Kalavastos *Site A*, Kalavastos *Pamboules*). There are also the SCU type sites which are characterised by nucleated village settlements with rectilinear building plans (Ayios Epiktitos *Vrysi*, Klepini *Troulli*, Kandou

Koufovounos, *Paralimni Nissia*, and *Sotira Teppes*). Still others may combine both enigmatic subterranean and pit-like structures with classic settlement plans (*Philia Drakos A*). One aspect of this study is to elucidate whether different settlement plans do indeed indicate temporal variation in the SCU as originally suspected by Dikaios (Dikaios 1962).

The excavated sample is also augmented by the pottery assemblages from a number of survey sites and these are identified and summarised in the final section of Chapter 2.

An argument for regional variation requires that all sites in the corpus are shown to be broadly contemporaneous, and that where sites overlap chronologically, the relative phasing is matched as closely as possible. Although Dikaios' diachronic framework has been refuted, there is still a time-frame of some 400 years occupied by the SCU phase. The object is to make sure that within that 400 year time-frame, the relative chronological distance between sites is reduced to a minimum. Therefore, each site must be slotted into a broader chronological framework which will correlate contemporary phases at excavated sites, and indicate the chronological extent of survey sites. In order to achieve this, the absolute and relative dating sequence is reviewed in Chapter 3. It is shown that in terms of radiocarbon years, those sites which have primarily positive design traditions are contemporaneous with sites which have primarily negative design traditions, and that all sites included in this thesis fall within the accepted time range for the SCU. However, it is also pointed out that the radiocarbon sequence for the SCU is woefully inadequate, and that reliance on relative dating sequences has contributed to the early misinterpretations of the pottery sequence. Even so, using the more modern interpretations (Peltenburg 1982a), and up to date archaeological evidence, it is illustrated that sites with lengthy temporal sequences display similar stylistic development.

In Chapter 4, the methodology used in the analysis of the pottery is outlined. Pottery accounts for a large proportion of the cultural assemblage from archaeological excavations and surveys. Because it covaries both spatially and temporally, and is directly affected by cultural, and socio-economic factors, it is a useful tool for mapping patterns of interaction and evolution. The aim of the ceramic analysis undertaken in later chapters, is to identify patterns of temporal and spatial variation, other than that which occurs naturally in handmade traditions. In order to do this, the classification system established in Chapter 4 is attribute based. This enables greater freedom in the analyses, so that variation can be identified without recourse to the limiting structures of traditional typologies, which ignore more subtle variation in morphology and design.

The first part of Chapter 4 outlines the problems inherent in traditional ceramic methodology. Although attribute based analyses have been used in studies of Cypriot pottery assemblages previously (see Baird n.d.a., 1991; Frankel 1974a), this is the first time that the SCU pottery has been analysed in this way to any great extent (see earlier multi-variate approaches by Peltenburg 1978, 1982). The attributes which form the basis of the analysis have been shown, through previous studies and through careful observation, to covary in their attribute states. The classification is hierarchical, and draws substantially from a system established by Plog (Plog 1980), which presupposes that there is an order of cognitive decisions made by the ancient artisan when constructing a vessel. It is noted that not all attributes can be sorted hierarchically on the basis of Plog's model, in particular there are problems at the level of design attributes. For example, it is possible to infer that an ancient artisan will choose the shape of a vessel before the clay and temper used to make it, but it is not known whether an ancient artisan will paint a spot before a circle or vice versa.

The various pottery classes are reviewed in conjunction with the economic evidence in Chapter 5. It is an assumption of this thesis, that SCU ceramics were used primarily for the production, storage and consumption of food, therefore, ceramic form and function are imbedded within the wider economic strategies of the SCU populations. Accordingly, Chapter 5 addresses the two interrelated issues of ceramics and economy.

The first section summarises broad trends in morphology, surface treatment, fabric and technology. Because of the high level of uniformity across the island, the pottery is considered as a complete unit, and a general description of the major morphological classes is presented first. Following Plog's system, Chapter 5 begins with a summary of the higher level attributes, such as shape, component type and technological trends, and considers surface treatment last. This is contradictory to traditional Cypriot classifications of Early Prehistoric pottery which focus on ware type (ie, surface treatment) as the defining feature of classification (Bolger 1988, Guldager Bilde 1993). Furthermore, it is illustrated that the four major SCU ware types; Red on White Ware, Monochrome Painted Ware, Combed Ware and Painted and Combed Ware, are in fact all part of one coherent ceramic class, which I have called Decorated Fine Ware. It is argued, that although surface treatment might differ between each of the four wares, they are in fact, identical in all other higher level aspects of the manufacturing process. Therefore, the traditional ware/shape classification used by Cypriot scholars, is discarded in favour of a more broadly

defined classification, which better suits handmade ceramic traditions. Even so, ware based typologies are still used in Early Prehistoric Cypriot ceramic studies, and often demarcate temporal change from one cultural phase to another. Therefore, reference to ware type is also included in this thesis where it is important to do so, such as in Chapter 3, where the relative chronological sequence is summarised, and in Chapter 5, where each individual ware is described within the broader subset of the Decorated Fine Wares.

The Decorated Fine Wares form the basis of the analysis in later chapters because, essentially it is design that is the primary covarying attribute in Cypriot SCU ceramics. However, there are other functional classes of pottery which are also discussed in Chapter 5. Monochrome Burnished Ware, identified at *Philia Drakos A*, and *Dhali Agridhi* as a possible forerunner to the decorated classes, has its own set of contextual problems. However, as Monochrome Burnished Ware does not impinge directly upon the objectives of this thesis, it is only briefly summarised, where it is relevant to other ceramic classes. Another major ceramic functional class is Coarse Ware and this is described in more detail, as it is a ubiquitous pottery class found widely across the island, in similar proportions and in similar forms.

Only a general discussion of fabrics is given in Chapter 5, although a complete description of each fabric type is listed in Appendix 1. It is noted that fabrics appear to be site specific and carefully selected to match the function of the vessel. In contrast, tempering agents appear to be randomly selected from a variety of equally available choices. It appears that extensive experimentation with fabrics and tempers occurred at some sites while not at others, and the reasons for this dichotomy are touched upon in the context of specific case studies, such as the Kalavassos Region where patterns of fabric variation pose interesting questions about settlement patterns.

Before discussing aspects of ceramic function, the economic evidence from SCU Cyprus is reviewed, and some preliminary remarks are made on the possible structure of subsistence and economy in early societies. It is argued that settlement location is characteristic of Neolithic dry farming strategies where sites aggregate in areas of optimum agricultural land. SCU floral and faunal evidence indicates a mixed farming economy supplemented by the hunting and managing of deer. Contrary to Sherratt's model for the Secondary Products Revolution (Sherratt 1983, 1986), there is ample evidence that Early Prehistoric Cyprus exploited sheep and goats for milk products as well as meat products. This theory has been recently supported by Peltenburg (Peltenburg 1996). Economic and settlement evidence suggests that as villages grew beyond a certain size,

smaller populations “budded-off” from the parent community, establishing themselves within the same economic catchment area. This model for early prehistoric settlement evolution was proposed by Binford (Binford 1963) and Sherratt (Sherratt 1980), but is particularly appropriate to SCU Cyprus, where sites form clusters along river courses and around perennial springs. A number of different site types seem to form the basis of a cluster, suggesting that there may have been differential site function.

The reasons for this apparent settlement dislocation is not fully understood, but following models put forward by Cohen (Cohen 1977), Peltenburg argues that egalitarian societies are essentially unstable once a population grows beyond a certain carrying capacity (Peltenburg 1991b, 1996) and this, in turn, leads to settlement fragmentation.

Returning to the role of pottery in SCU Cyprus, the final section of Chapter 5 considers ceramic function. It is noted that the sheer quantity of SCU pottery indicates that food production and storage was presumably the primary function of ceramic vessels, however others have argued quite successfully (Vitelli 1989) that Early Prehistoric pottery, as a new, and therefore novel development, may have had both economic and social value above and beyond its primary subsistence role. In SCU Cyprus, the Decorated Fine Wares had some degree of value as there are many instances of mend holes (personal observation).

Having broadly defined the formal characteristics of SCU ceramics, and having placed them within a contextual background, Chapter 6 explains the stylistic framework within which the pottery is analysed in later chapters. It was previously stated that stylistic variation exists within and between ceramic assemblages. However, theories on style and stylistic behaviour are extremely complex. Chapter 6 concentrates on defining and contextualising style with reference to the SCU.

The first half of Chapter 6 summarises the various relevant themes on stylistic variation. Style is considered from a number of perspectives, beginning with the debates on meaning and definition of Wiessner and Sackett, and Wiessner's predictions as how to recognise style in the archaeological record (Sackett 1977, 1990; Wiessner 1983, 1984, 1985). Wiessner and Sackett describe three types of style which can reside in both ceramic form and design. These are, emblematic, symbolic, and isochrestic style. Emblematic style is defined as having a distinct referent and carries a clear message to a target population (Wiessner 1983, 257); symbolic style is

personally based and carries information supporting individual identity (Wiessner 1983, 258), and isochrestic style is that variation which ordinarily exists when individuals are confronted with a number of equally viable options for attaining any given end in the manufacturing process (Sackett 1990, 33). It is noted that all three forms of style reside in the SCU ceramics in varying degrees and in varying combinations.

Having defined style, it is necessary to consider the ways in which style can manifest itself as variation in the archaeological record. Therefore, Chapter 6 highlights a range of normative factors which contribute to material culture variation, such as subsistence/settlement systems, vessel shape and use, exchange systems, and temporal variability. Each is discussed in relation to the SCU ceramics and where possible any variation directly resulting from normative factors is identified and excluded from later analyses.

Finally, a selection of predictive models relating to style in material culture variation are introduced. These include, Social Interaction Theory (Deetz 1965; Longacre 1970), Social Boundary Theory (Wobst 1974), Evolutionary Theory (Shennan 1996) and Behavioural Theory (Schiffer 1997). There has been a considerable amount of criticism of the earlier models because of the inaccuracies in the inferential process. Plog (Plog 1978) and Hodder (Hodder 1982b) for example, have illustrated that broad generalisations cannot be applied to human behavioural patterns, because there are many unknown factors which also act upon human interaction spheres, and which cannot be measured in archaeological contexts. Therefore, they argue that in the process of archaeological interpretation it is not enough to assume that *all things being equal* a certain pattern can be predicted.

Because of the difficulty of dealing with different sampling criteria, and substantially divergent sample types, the analysis of the pottery is undertaken in two separate parts. In Chapter 7 the museum collections which were personally viewed and recorded, are analysed for patterns of variation in form and design. In Chapter 8, the original pottery counts, recorded by the excavators of Vrysi, Philia are analysed. As the two are vastly different recording systems, it was not possible to combine the data. The data from Chapter 7 are presented in Volume 2 of this thesis, and the data from Chapter 8 are presented at the end of that Chapter.

In Chapter 7 the various samples are divided into four categories of sample "integrity" based upon the nature of the sample:

- Category 1 - large/or complete excavation samples from stratigraphically phased contexts.
- Category 2 - large/or complete excavation samples from unphased contexts and large survey collections
- Category 3 - small survey collections
- Category 4 - biased museum samples comprised of diagnostics and representing a fraction of the original sample

Within these categories, the pottery samples are analysed on a coarse level by site using simple percentage frequencies of various attribute states, and combinations of attribute states, to delimit broad trends in variation between sites and between regions. On a finer level, the pottery from sites with clear archaeological phasing are analysed by phase, using the same techniques of percentage frequency counts of the various attributes and combination of attributes. In this way an overall picture of spatial and temporal attribute variation between regions and between sites is compiled.

Chapter 8 is a case study of the total excavated ceramic assemblages from *Philia Drakos A*, *Ayios Epiktitos Vrysi*, and *Klepini Troulli*. Given that the excavators of *Philia* and *Vrysi* used almost identical methods of pottery recording, the total pottery counts for both sites can be closely compared. The *Troulli* sample has been adapted to fit the recording system of the former two sites so that it can be included in the analysis. It is noted that the detailed recording of attributes, used in the analysis of the museum collections, cannot be undertaken on the excavated collections because the recording methods concentrated on design variation only. However, some very strong patterns of covariation are evident in design frequency between *Vrysi* and *Troulli* in particular.

The results from both chapters are compared against the different models set out in Chapter 6. On the basis of this comparison. A synthesis of the evidence is presented in Chapter 8. It is argued that all three forms of style are present in the SCU ceramics. Within site clusters, symbolic variation is the dominant form of style. At *Vrysi* and *Troulli*, especially, there is a marked divergence through time in the level of similarity between the two sites. Between regions, it is argued that the dominant form of style is emblematic. The fact that all sites share almost identical pottery traditions, and yet between the northern region and the south-central region, two different techniques of design application are employed, would suggest that very specific messaging is being sent to a target population that can understand and interpret this messaging. Had the pottery

traditions been significantly different in technological skill and function, then this might not be the case, but all other aspects of the pottery tradition are identical and therefore it is argued that the regional differences reflect the social behaviour of distant but related groups.

Finally, in Chapter 9, reasons for the stylistic patterning in the SCU ceramics are advanced. It is argued that sites form clusters around optimum areas of agricultural land and water supplies. This pattern of clustering is well attested throughout the Early Prehistoric period in Cyprus, but is equally well known as a characteristic of early farming communities in general. As villages grow outside the limits of their maximum carrying capacities, smaller populations break off from the parent community and establish themselves close to the parent population within the bounds of the original agricultural catchment area. In this way an expanding and fissioning population will exploit increasingly smaller areas of the best arable land. It is argued that this pattern of site fissioning and environmental exploitation would have created conflicting socio-economic influences which would have guided social interaction within village clusters. The combination of close kin ties established through village fissioning and social exogamy, coupled with increasing resource competition, would have determined the role of style in local and regional interactive processes. Through social exogamy and regular hunting and foraging forays, the various SCU populations would have come into regular contact with one another and these factors would also have contributed to long distance regional interactive processes.

Population maintenance is tied to information exchange. Both would have been crucial to the survival of the entire SCU population. Population levels would have been maintained through the inter-change of information and personnel. However, there are clear differences between the northern RW tradition and the southern Cb tradition, which are manifested as emblematic style in the ceramic assemblages. It is argued that these differences were predominantly a factor of the wider clan based social structure, rather than for the purpose of boundary maintenance. Closely proximate villages would have had stronger kin ties than very distant sites and differentiation in ceramic style would help to identify and differentiate sites with weaker familial relationships.

CHAPTER 2

THE CERAMIC NEOLITHIC PHASE: A REVIEW OF THEORY AND DEBATE

2.1 - Introduction

In order to understand the social dynamics of prehistoric Cyprus, of which the material culture of the Ceramic Neolithic Phase is a part, archaeologists must first take into account the processes by which the material culture was deposited. The Ceramic Neolithic Phase does not stand alone in Cypriot prehistory but is part of a series of events which led to the formation of a unique island culture. It is known that Early Prehistoric Cyprus underwent a series of visitations (Broodbank and Strasser 1990; Cherry 1985), and colonisation events (Held 1992c; Stanley Price 1977a), of which the Ceramic Neolithic appears to be the penultimate before the onset of the Bronze Age. Therefore, synthesising the processes which led up to the Ceramic Neolithic colonisation is an integral part of understanding the culture as a whole. As such, the present chapter is not a strict review of previous literature, but more a revision of the situation as a whole.

The first part will attempt to "set the scene" in terms of island specific cultural dynamics, addressing the general theories and debates that have taken place concerning the colonisation of Early Prehistoric Cyprus, outlining the ecological and economic factors which would have limited or encouraged the colonisation process. The second part briefly reviews the history of research into the Ceramic Neolithic Phase and looks at recent theories concerning isolation, involution and discontinuity (Held 1992c, 1993; Peltenburg 1996; Stanley Price 1977a). As relatively little work has taken place in relation to the period, this section summarises the debates of major Cypriot Neolithic researchers. The final part reviews the sites and critiques the conclusions and debates which have stemmed from more recent research.

The term colonisation in the context of island cultural development is a relatively new one, borrowed originally from the biological sciences, where it is used in reference to the dispersal of flora and fauna to new environments. It has been adopted by archaeologists and used to describe

the dispersal of people and cultural groups (Broodbank and Strasser 1990; Cherry 1985, 1990; Held 1992b; Stanley Price 1977a). Held describes colonisation in the latter context in the following way:

Traditional explanations of past immigration events on Cyprus postulate either the sudden arrival of population groups and a rapid manifestation of their culture traits, or the gradual influx of newcomers linked to an intensification of regional interaction among culture areas and countries fringing the East Mediterranean basin.

(Held 1992b, 104)

Therefore, colonisation in an island context refers to the influx of a new human population to a new environment, in this case Cyprus, but does not necessitate that the cultural groups colonising the island in the Early Prehistoric period represented political entities (as in the case of the colonisation of southern Italy and Sicily by the Greeks). However, this thesis does pre-suppose that the colonising events which took place on Cyprus brought new technology, cultural ideas and cultural groups, therefore influencing and altering the environment and the pre-existing populations.

The Early Prehistoric chronology of Cyprus tallies only marginally with that of the adjacent mainlands and for this reason some explanation of the periods of which it is comprised needs to be given. The most recent chronological scheme has been developed by Held (1992b, 105) and is favoured by more recent works (Knapp, Held and Manning 1994, 381). The major chronological divisions for the Early Prehistoric Phase are given below and the terms Akrotiri Phase, KCU, SCU and SCU/ECU transition will be adopted here for the purpose of convenience.

The Early Prehistoric Phase

The Akrotiri Phase	-	ca. 9500 cal. BC
<i>First lacuna in the archaeological record</i>		
The Khirokitia Culture (KCU) or Aceramic Neolithic Phase	-	7000/5700-5500 cal. BC
<i>Second lacuna in the archaeological record</i>		
The Sotira Culture (SCU) or Ceramic Neolithic Phase	-	4750/3900 cal. BC
The Sotira/Erimi transition (SCU/ECU) or Early Chalcolithic Phase	-	3900/3850 cal. BC

There has been very little recent excavation work pertaining to the SCU of Cyprus, especially when compared with the large volume of work which has been carried out on the ECU and Early Bronze Age transition (Frankel 1994; Peltenburg 1985b, 1996). The sites which have been excavated and fully published are frustratingly few. In cases where publication is comprehensive, this is further frustrated by access to the material, which is often stored out of reach in the north of the island. The sites for which there is a full and comprehensive publication, augmented by access to the material, amount to a handful, and these were excavated in the 1940's and 1950's when modern retrieval methods were only developing.

Within the last decade, work at three new SCU sites has been undertaken; Kandou *Koufovounos* (hereafter Kandou) (Mantzourane 1994, 1996), Paralimni *Nissia* (hereafter Nissia) (Flourentzos 1997) and the KCU/SCU site of Parakklisha *Shillourokambos* (hereafter Shillourokambos) (Guilaine et al. 1995). Work at these sites is in its early stages and more information is eagerly awaited from future publications.

Mantzourane has published preliminary reports on the first excavation seasons at Kandou. The site lies no more than 2km from Sotira *Teppes* (hereafter Sotira), and is identical in terms of topographic location and settlement type. Although slightly larger than Sotira, it is characterised by monocellular sub-rectangular structures with internal partitions and fixtures commonly found at other SCU sites. The pottery from the site has not yet been published and as such is not included in this thesis. However, the site is important for its proximity to Sotira and is therefore highly significant in terms of our understanding of settlement patterning during the SCU. Shillourokambos is primarily a KCU site but the discovery of an enigmatic pit, similar to the SCU site Kalavastos *Site A*, again flags the question concerning patterns of settlement and subsistence during the SCU. Therefore, although the pottery is not available for inclusion and analysis in the present study, mention will be made of the main features of these sites in the context of economic and subsistence patterning in the SCU in general.

2.2 - Setting the scene for colonisation

Cyprus is the third largest island in the Mediterranean. It is smaller than Sicily and Sardinia but marginally larger than Crete. It is an oceanic island which, even during the last Glacial Maximum, was surrounded by water distances of not less than 65km (Held 1992b, 109). The only other comparable distances separating Mediterranean land masses and islands are those between the

Maltese Islands and Sicily (Central Mediterranean), and in the West Mediterranean, between the Iberian Peninsula and the Pityusic islands, and the Pityusic islands and the Balearic islands (Held 1992b, 110).

Geographically, Cyprus can be divided into six main regions (Map 2.1): 1) the Northern [Kyrenia] Range, 2) the Karpass Peninsula, 3) the Central Lowlands, 4) the Southern [Troodos] Range, 5) the Southern Chalk Plateaus and 6) the Paphos District (Stanley Price 1979a, 5). The Karpass Peninsula, Kyrenia Range and the Paphos District would have comprised geographically remote locales for prehistoric populations, particularly those crossing overland on foot. The Kyrenia Range forms a physical barrier between the Central Lowlands (including the Morphou Bay area) and the North Coast. The Troodos Mountains in the West Central Region form a physical barrier between the north of the island, the Paphos District and the Southern Chalk Plateaus. Along the Southern Chalk Plateaus, extensive cliffs extend as far as the sea for part of the way between Limassol and Paphos, creating a physical barrier punctuated by low lying coastal gateways. For the purposes of this study, I will use the six regions outlined above to differentiate between areas of settlement activity and cross-regional human interaction. There are alternative schemes, based on vegetation (Osmond 1954), geology and land-use (Christodoulou 1959) and early prehistoric settlement patterns (Gjerstad 1926; Catling 1963), but I believe these fail to clearly demarcate geographical boundaries which are implicit in the understanding of social interaction in the Early Prehistoric Phase.

It is likely that Cyprus had a much denser vegetation cover in the eighth to fifth millennia B.C. than it does today, and much of the Mesaoria may well have been covered by forest (Catling 1966, 541). However, evidence from paleobotanical remains suggests that evergreen sclerophyllous forest or maquis covering large tracts of land was more likely than full forestation (Stanley Price 1979, 14). Based on inferences from geomorphological, paleobotanical and archaeological evidence, Cyprus appears to have had a climate similar to that of the present day, although evidence from river courses, where alternating phases of downcutting and aggradation is hypothesised, may suggest that rainfall may have been heavier, or unevenly distributed (for a summary see, Stanley Price 1979, 6-15). The evidence for greater forestation and heavier rainfall is not supported by settlement evidence. There are very few Early Prehistoric settlements in the Mesaoria, and almost all sites that are known through survey and excavation are centred on perennial springs, coastal areas and river valleys which, until very recently, were inundated during the winter months. Furthermore, Stanley Price (Stanley Price 1980, 9) notes that the relationship

between depositional/erosional cycles and climatic conditions is problematic, and it is difficult to reconstruct the early Holocene environment without creating circular arguments of cause and effect. It is perhaps sufficient to say that the Early Cypriot environment was not so different to that of modern times.

The human colonisation of Early Prehistoric Cyprus is unique in terms of island cultural development (Held 1992b, 1993). The first well documented colonisation episode, the KCU (Khirokitia) phase, took place around the mid. 7th millennium B.C., and lasted some 1000 years with a floruit taking place in the late 7th to early 6th millennia B.C. (Knapp, Held and Manning 1994, fig. 3, 384). The colonists, known as the Khirokitia Culture after the type site Khirokitia *Vouni*, (hereafter Khirokitia) probably reached Cyprus from an adjacent mainland¹ and brought with them a complete floral and faunal subsistence package, which included domesticated sheep and pigs, einkorn and emmer wheat, hulled barley, lentils, beans and peas (Davis 1987, 1993; Hansen 1987, 1993). In addition, the KCU population also hunted and managed deer (Croft 1991, 65-66) which may have been introduced to the island as a semi-domesticated, or possibly arrived via overwater dispersal as a wild species (Held 1992b, 132).

Until fairly recently, evidence for human occupation/presence on the island, prior to the KCU, took the form of single finds of chipped and groundstone tools which are typologically earlier than KCU assemblages. Recent excavations at the site of Akrotiri *Aetokremnos* (hereafter Akrotiri) (Held 1992b, 1993; Simmons 1988, 1989, 1991a, 1992), a small coastal rock-shelter on the southern Akrotiri peninsula, have substantially augmented these single finds. The four seasons of excavations at the site revealed large quantities of disarticulated burned and unburned bones of pygmy hippopotamus, pygmy elephant, birds, reptiles and sea bivalves. Archaeological deposits containing large numbers of typologically early chipped stone implements, including thumbnail scrapers, were also discovered and in some instances, apparently in association with pygmy hippopotamus bones. A total of 26 radiocarbon dates based on bone and shell collected from well sealed archaeological deposits has dated the rock shelter to the 9th Millennium B.C., (Simmons 1991, 13-14) some 2000 years earlier than the earliest dates from the KCU site of Kalavassos *Tenta* (hereafter Tenta). Akrotiri is not without its problems or critics however (Le Brun CAARI Workshop 1992; Bunimovitz & Barkai 1996). The evidence for human activity is located primarily in the upper deposit (Level 2) where hearths and casual burning areas have been shown

¹The origin of the KCU and SCU cultures is assumed to be the Anatolian, Syro-Cilician or Levantine coastal area. However, the exact locales have not been confirmed.

to be associated with shell beads and chipped stone implements, but less than 1% of the hippopotamus bones were collected from this level. In contrast, the lower stratum (Level 4) contained some 250,000 bone fragments. None of these bones could be shown unequivocally to have evidence of butchery marks on them (Simmons 1991, 8), and only a fraction of the chipped stone objects were collected from this level. Between the two strata (Levels 2 and 4) is a sterile layer of sand (Level 3) and it has been suggested by some that this represents a clear break between the presence of hippopotamus bones and human cultural activities. As the site is stratigraphically complex, and to date, only one section published (Simmons 1991b, Fig. 2), there is little evidence to confirm that some deposits were not contaminated during excavation. Bunimovitz & Barkai have recently analysed the published data and are of the opinion that:

As implied by the stratigraphic analysis and by the finds, Stratum 2 is the only stratum at the site where human activity is unequivocally indicated. It is in this stratum that 10 features (out of 12 defined by Simmons) were located.These features are mainly hearths, some of which cut into Stratum 4. Human activity in Stratum 2 also included the excavation of a bell-shaped pit In our opinion, the hearths and the pit caused direct contact between Strata 2 and 4, reciprocally contaminating them.

(Bunimovitz & Barkai 1996, 88)

If this reading of the data is correct, then the human activity in the rock shelter might not necessarily be associated with the pygmy hippopotamus and elephant stratum, and as such, the extinction of Cyprus' megafauna might not be attributed to human presence on the island. Irrespective of the contentious issue of cultural remains being associated with extinct animal bones, the radiocarbon dates for both strata would indicate that the human cultural layer does not date much later than, or is even coeval with, the bone bearing deposit. The presence of thumbnail scrapers further supports an early date for human activity on Cyprus (Simmons 1991b, 1992).

2.3 - The Aceramic Neolithic Period

After an hiatus of 1500-2000 years the KCU Phase appears in the archaeological record in the form of a fully evolved culture (for Khirokitia see, Dikaios 1953; Le Brun 1987, 1993; for Cape Andreas *Kastros* see, Le Brun 1981; for Tenta see, Todd 1987). Archaeologically, it exhibits a strong cultural and material uniformity, and has an island-wide distribution, with over 40 sites identified to date (Held 1992a). The KCU is primarily represented by four settlements; Cape

Andreas *Kastros*, Khirokitia *Vounoi* (hereafter Khirokitia), Troulli *Klepini* (hereafter Troulli), and Tenta, the last three of which have revealed SCU cultural deposits. A number of smaller “encampments” have been excavated, including Limnitis *Petra tou Limniti* (Gjerstad, et al. 1934, 1-12) and Kataliondas *Kourvellos* (Morrison and Watkins 1974; Watkins 1979). KCU sites generally exhibit similar characteristics, including circular stone structures, chipped and ground stone assemblages, intra-mural burials and a well developed and technologically impressive ground stone vessel tradition. The main sites, as with the succeeding SCU, are situated on coastal promontories or hills and spurs adjacent to good water supplies. Subsistence strategies were based primarily on agro-pastoralism, with domesticated sheep, goat, cereals and pulses forming the basis of the diet (Croft 1991; Hansen 1994). Hunting of deer was also practised by the KCU population. Differences that exist in the nature of settlement and subsistence strategies are probably due to functional and environmental differences, rather than real differences within the culture itself, for example, between large complex villages and smaller, seasonally occupied sites (Knapp, Held and Manning 1994, 404).

For reasons which are as yet unknown to archaeologists, but vigorously debated (Held 1992b, 1993; Stanley Price 1977a, 1977b), the KCU has no obvious progenitors on the adjacent mainlands, nor does it resemble any other contemporary Mediterranean island populations. Radiocarbon dates for the KCU are clustered around the 7th Millennium B.C. However, two 8th Millennium B.C. dates from the deepest levels at Tenta (P-2972 and P-2785), in deposits preceding the first stone structures (Todd 1987, 174), led the excavator to hypothesise that the KCU Phase began earlier at this site than at others, and that the main building phase may have been preceded by human activity associated with pits. However, P-2976, also a very early date, derives from an open area stratigraphically later than the first stone structures. At other sites, the problem of conservation ethics concerned with the removal of “later” structures precludes the exploration of deeper deposits (ie, at Khirokitia), therefore evidence for an earlier phase of the KCU, to that already established, cannot be discounted.

Debates concerning the early dates from Tenta remain inconclusive and discussions continue, particularly with regard to evidence for an intervening culture between the apparent end of the Akrotiri Phase, and the beginning of the KCU. However, new data from the site of Shillourokambos (Guilaine, et al. 1995) suggests that Todd’s original theory of an earlier KCU phase may be correct. Excavations at Shillourokambos have established that there are two phases to the KCU. In a sondage excavated in 1993 and 1994, a chipped stone tool assemblage was

identified to be of a different type to that usually found at classic KCU sites (Guilaine et al. 1995, 15). The assemblage includes a tanged point of similar type to that found at Byblos. Most interesting, was the association in these levels of bones from a robust animal which have been identified as bovine (Guilaine et al. 1995, 17). Prior to the excavations at Shillourokambos, there had been no report of cattle bones in the faunal assemblages of Early Prehistoric Cypriot sites. The presence of bovine remains at Shillourokambos could be interpreted as evidence for an early introduction of cattle to the island but that breeding was unsuccessful and herds soon died out, particularly when compared to the success of other faunal species such as caprines and deer. More evidence is required to confirm the early presence of cattle, but Shillourokambos has shown how incomplete the evidence really is. Shillourokambos does not solve the hiatus problem between the Akrotiri Phase and the KCU but it does test the validity of existing theories on the colonisation and settlement of Early Prehistoric Cyprus, and furthermore, highlights the very limited material base upon which those theories are based.

Due to a number of interrelated environmental, ecological and social factors, both hypothesised and in evidence, the mainphase KCU disappears from the archaeological record around 5700/5500 B.C. (Held 1992b, 105). Whether this disappearance is due to extinction (Stanley Price 1977a), cultural involution brought about by insularity (Held 1992b, 1993), or other reasons, is uncertain. However, one factor rules strongly against either cultural involution or extinction, there is absolutely no evidence in the final phase of occupation at the type site, Khirokitia, to support involution, catastrophic disturbance, or extinction (Le Brun 1994). Conversely, when Khirokitia ceases to be occupied, it is at the height of its economic and cultural development! Even so, for whatever reason, discontinuity of settlements occurs across the island at approximately the same time and given the current evidence, when the Ceramic Neolithic (Sotira Culture [SCU]), appears in the archaeological record there is no trace of a residual population on Cyprus.

2.4 - The Ceramic Neolithic period: an overview

The SCU Phase emerges after a lacuna of roughly 700 years, at ca. 4750 cal B.C.² (Held 1992b, 105; Knapp, Held and Manning 1994, 407). As with the KCU, it too is fully developed, in this instance with an evolved pottery tradition based initially on monochrome, highly burnished wares, which develop into the well fired and elaborately decorated large bowls and bottles characteristic

²Held (1989b, 242) gives an estimate of the lacuna as between 300-700 calendar years.

of this phase. It is unrelated to the preceding KCU Phase in all aspects of its material culture (Stanley Price 1977, 34) and human physiognomy (Angel 1953, 1961). However, as with the KCU Phase, it exhibits a strong cultural uniformity, has an island wide demographic spread and has no apparent mainland precursors. This unusual set of phenomena have been the subject of intensive study and interest, not the least because the SCU Phase seems to have existed in isolation from the adjacent mainland (Held 1993; Knapp, Held and Manning 1994, 406; Stanley Price 1977).

As with the KCU population of Cyprus, the SCU culture is characterised by an agrarian, agropastoralist society that settled and built small villages on coastal promontories, or hill-tops and spurs in the ecotone zone (Knapp, Held and Manning 1994, 407; Peltenburg 1978, 68). A significant proportion of settlements were established at sites previously inhabited by the KCU population, although, very rarely is there utilisation of the pre-existing architecture (Khirokitia being the only tentative example, Dikaios 1953, 274). In some instances, there is evidence for a long break in occupation, for example, at Troulli, where 1 metre of sterile deposit separates the KCU from the SCU. In other instances, such as Sotira and Philia, settlement sites have no evidence of previous occupation.

The origins of the SCU population are uncertain. There are no imports to confirm a mainland derivation from either Anatolia or the Levant, nor are there characteristics in the material culture that can be traced to a mainland source. The imported material that does exist; some 100 pieces of obsidian, 40 carnelian beads and dentalium shells (Knapp, Held and Manning 1994, 404), might have found its way into SCU deposits either from preceding KCU deposits, through taphonomic action, or poor retrieval methods. The SCU population was large enough to sustain itself within the limits of an island environment, and for the settlements to thrive, often outgrowing village walls and ditches. Throughout some 400 years of settlement there is no conclusive material or cultural evidence for contact with the mainland.

The primary settlement sites (Map 2.2) for which data exists are: Ayios Epikritos *Vrysi* (hereafter *Vrysi*) and Troulli on the North Coast; Philia Drakos A (hereafter *Philia*) in the Morphou Bay area to the west of the island, and the type site, Sotira. There is also now Kandou in the south-central ecotone and Nissia on the south-eastern coast. There are a number of smaller, perhaps seasonally occupied sites, characterised by pits and insubstantial structures (*Kalavastos Site A*, perhaps *Tenta* and *Khirokitia*, however, erosion at many of these sites makes identifying

subsistence and settlement strategies extremely difficult. SCU sites generally form clusters, with a group of sites often located within a radius of not more than 5 km. Survey and excavation work has shown that within these clusters, there are a range of large and small sites varying in type (Clarke and Todd 1993; Held 1992a; Stanley Price 1977a; Todd 1985b, 1985c, 1989).

The SCU material culture is homogeneous throughout the island. Settlements are comprised of free-standing monocellular, rectilinear structures with stone foundations and mud brick superstructures (Peltenburg 1978, 56). House plans are also similar within and between sites. Partition walls, prominent off-centre hearths, pisé or stone benches and utensils embedded into floors are common to all sites (Peltenburg 1978, 58). Identical types of bone and stone objects are also found, including stone bowls, chipped stone implements, grinders, hammerstones, pestles and mortars, pierced discs, awls and hooked implements (Figure 2.1). What burial evidence we have suggests the SCU inhabitants practised primary interment outside their villages (Dikaios 1961b).

Pottery is identical in form and technology within and between sites. It is hand made, decorated in a monochrome or bichrome finish of red paint or the contrast of red and white, either in positive (Red on White Ware) or negative (Combed Ware) design. It comes in a limited range of shapes: large and small bowls, with or without spouts, tall necked bottles, holemouth jars and a range of small thumb pots. The only significant variation is in the surface treatment and the methods by which decoration is applied to the vessel. At a gross level of analysis, the south-central sites are characterised by red monochrome pottery or combed decoration, whereby the monochrome red surface is combed away using a multiple tool to highlight the pale surface underneath. In contrast, the SCU communities of the Southeast, Southwest and North preferred to apply a white slip and then decorate this with a range of red semi-geometric and free form motifs.

2.5 - Early research on the Neolithic of Cyprus

The history of research relating to the SCU Phase dates back to the 1920's with the work of Einer Gjerstad and the Swedish Cyprus Expedition (Gjerstad 1926), but very little was known until the work of Porphyrios Dikaios in the 1930's, 1940's and 1950's. Dikaios was the first to develop a relative chronological sequence for the Early Prehistoric period based on the seriation of pottery and other types of artefacts. From his excavations at Khirokitia (Dikaios 1953), Troulli (Dikaios 1962, 63-73), Sotira (Dikaios 1961b). Kalavassos A (Dikaios 1962, 106-112) and Erimi

Pamboules (Dikaios 1936) he argued for a diachronic sequence from the KCU Phase (or Neolithic IA) represented at Khirokitia through to the ECU Phase (or Chalcolithic I) represented at Erimi. His original sequence was simple, the KCU site of Khirokitia preceded the SCU sites of Kalavassos A, Sotira and Troulli. Continuity from the KCU to the SCU Phase was argued from the evidence at Troulli (Dikaios 1953, 313-326). Further excavation and a series of radiocarbon dates from Khirokitia, Sotira and Erimi, showed this sequence to be inadequate. Using a cross-seriation of sites, based upon observations of the material cultures (Dikaios 1961b, 216-217). Dikaios later refined his relative chronology to take into consideration a series of phases within each period. First, as the two earliest phases at Khirokitia were without pottery, Dikaios argued that these were representative of the Neolithic I. The presence of pottery at Sotira and the fact that both Khirokitia and Sotira fell within the bounds of the Neolithic tradition established Sotira as representative of Neolithic II. However, there was still no obvious relationship between the KCU site of Khirokitia and the SCU site of Sotira. Excavations in the north of the island, at Troulli, gave Dikaios what he believed to be evidence of a cultural phase which would fill the apparent gap. At this site, there was both KCU and SCU occupation, with an apparent uninterrupted sequence between the two (Dikaios 1961b, 63-72). The uppermost levels at Troulli brought to light painted pottery in identical shapes to that found at Sotira, but unlike the negative designs of Sotira, the pottery of Troulli bore boldly painted positive designs in red on a white ground. Dikaios surmised that the similar architectural features at Troulli, in association with small quantities of Combed Ware, supported his hypothesis that Troulli represented an intermediate phase between the KCU Phase and the SCU Phase. Dikaios therefore divided the Neolithic period into three diachronic phases. The Neolithic IA was represented by the KCU phases of Khirokitia and Troulli; the Neolithic IB was represented by the SCU Phase at Troulli in the North, (but at Dikaios' present stage of knowledge, a phase still unidentified in the South, creating a gap between Troulli ceramic and Sotira); the Neolithic II period was represented by Sotira (Dikaios 1961b, 216-217). The presence of Sotira pottery types (typically the negatively decorated ware known as Combed Ware), found in association with a tholos floor and in unstratified surface layers at Khirokitia (Dikaios 1953, 321 and 1961b, 209) led Dikaios to argue that SCU squatters established themselves in the ruins of the settlement after an unknown hiatus in occupation. He also argued that the topmost levels at Khirokitia post-dated Sotira and represented the last phase of the Neolithic II dating after abandonment of settlements. The ECU site of Erimi, he argued, was preceded by an earlier phase of the ECU represented at Kalavassos Site B (hereafter *Pamboules*). Here subterranean features were argued to be an intermediate architectural phase between the rectilinear structures of Sotira and the round houses of Erimi (Table 2.1).

5800 B.C.	Neolithic IA	Khirokitia. Aceramic
5675±100 B.C.		Troulli. Aceramic
5250 B.C.		Petra <i>tou Limniti</i> . Aceramic
5250 B.C.	Neolithic IB	Troulli. Ceramic
4950 B.C.		

Gap		

3700 B.C.	Neolithic II	Kalavassos A
3500±130 B.C.		Sotira
3190±130 B.C.		Khirokitia. Ceramic
3180±110 B.C.	Chalcolithic I	Kalavassos B
2670±80 B.C.		Erimi

Table 2.1 - Dikaios' final phasing of the Neolithic period (cf: 1961b, 216-217)

The Neolithic sequence established by Dikaios was widely accepted, and until the 1960's, there was no evidence to suggest that the diachronic relationship between the Neolithic I and II might not reflect an accurate relationship between sites in the north and south of the island. Writing in the early sixties, Catling was the first to suggest that this relationship might not be wholly correct. Of the Neolithic I and II he says:

In the absence of a carbon-14 date for Troulli, and without a full and stratified sequence in which the true relationship between the reserved ware of Neolithic Ib and the combed wares of Neolithic II could be observed, it is impossible to decide the merits of this proposal. Troulli may prove to be a contemporary of the Neolithic II...

(Catling 1966, 548)

It was not until the excavations at Philia (Watkins 1966, 1968, 1970a, 1970b, 1971, 1973), conducted in the 1960's and 1970's, that a different relationship between the various phases began to emerge. At Philia, Watkins found further evidence that Combed Ware and Red on White Ware were coeval. Unfortunately, his excavations were problematic. Extensive erosion of the site, combined with shallow deposits made relative dating of the stratigraphic sequences almost impossible. Watkins admitted that the only way he could establish the phasing of the site was by seriation of the pottery counts (Watkins 1969, 505). He divided the sequence into four phases based primarily on development in the pottery which he supported with limited relative sequencing from the stratigraphy. Because of the problems of stratigraphy and the paucity of Combed Ware

at Philia, he was still not completely convinced that the two decorative traditions overlapped. Writing in the 1970's he stated:

It might be thought that the painted pottery neolithic and the combed ware neolithic should be considered as regional variants occupying different parts of Cyprus at broadly the same time. This is an idea which does not recommend itself to the present writer for a number of reasons

(Watkins 1973, 51)

Watkins argued that as very little survey work had been conducted in the south of the island, further painted pottery sites could still await discovery and as such, might also confirm an earlier SCU horizon in the South. Watkins (Watkins 1981, 11) later revised his thinking in light of the excavations undertaken by Peltenburg at Vrysi (Peltenburg 1982b). At the latter site, a clear stratigraphic sequence, very little erosion, and a series of tightly dated radiocarbon assays, enabled the excavator to establish a secure relative sequence for the pottery found there. The evidence of an overlap between the painted pottery in the North and the combed tradition in the South became irrefutable. Peltenburg (Peltenburg 1982b) found that the common mode of decoration at Vrysi was Red on White, but that Combed Ware appeared in small quantities from the Middle Phase onwards. The results from Vrysi supported the hypothesis that positive designs were predominantly a northern tradition and negative designs were predominantly a southern tradition, and on the basis of this evidence, Peltenburg argued for spatial variation rather than temporal variation between the north and south of the island (for a summary see, Peltenburg 1978, 1979 and 1982a). In order to check his findings at Vrysi, Peltenburg undertook a re-analysis of the pottery from Troulli and discovered a hiatus between the KCU levels and the SCU levels marked by a sterile layer up to half a metre thick between the two horizons (Peltenburg 1979), and furthermore, small quantities of Combed Ware in association with a predominantly Red on White Ware tradition. Consequently, the evidence now supported two culturally distinct phases, a KCU Phase and a SCU Phase. Radiocarbon dates confirmed a separation between the two periods of some 700 years, and moreover, the SCU Phase showed distinct regional variation between the north and south, east and west of the island.

Meanwhile, at Philia, Watkins had recognised an earlier phase in the SCU pottery sequence. A highly burnished monochrome ware unrelated to the red monochrome and painted wares of other Neolithic II sites was found in small quantities in the lowest levels of the site. This pottery he

called Dark Faced Burnished Ware because of its similarities to the dark faced burnished pottery found at sites in Turkey and Syro-Cilicia (Braidwood & Braidwood 1960; Garstang 1953; Goldman 1956). He later re-named this ware type Monochrome Burnished Ware, so as to avoid confusion with the mainland wares which, after further analysis, showed little relationship to the indigenous Cypriot type (Watkins n.d.). The evidence from Vrysi, combined with that of Philia, convinced Watkins that the Neolithic II represented one cultural phase with distinct regional variation between the north and south of the island, and that the fully developed painted wares were preceded by Monochrome Burnished Ware which might partly fill the gap between the KCU and the SCU (Watkins 1981, 11). What is even more interesting is that Watkins had discovered a hybrid ware, which combined Red and White designs on a Monochrome Burnished Ware fabric indicating that, at Philia at least, there was development in the pottery sequence.

The work of Peltenburg and Watkins on the SCU has altered the way in which scholars view the Neolithic period as a whole. The shift from a chronological interpretation, to one based predominantly upon regional variation has now gained widespread acceptance. Recent work at Kandou (Mantzourane 1994, 1996) and Nissia (Flourentzos 1997) has shown that the two decorative techniques do indeed belong to the same cultural tradition. However, the exact chronological relationship between Red on White Ware and Combed Ware is still unclear. Survey work in the west of the island (Baird 1985; Clarke 1992) has demonstrated the existence of a predominantly positive design tradition, and it would seem that the negative design tradition is confined to an enclave in the South Central Region.

2.6 - Current theoretical studies

The concept of regional diversity is not a new one to studies concerning prehistoric Cyprus. Debate concerning the contemporaneity and ultimately the political and social dynamics, which contributed to divergences in the material cultures of the Late Chalcolithic period in the Southwest and the so-called 'Philia Culture' is ongoing (Herscher 1980, 1981; Knapp 1993; Manning 1993; Peltenburg 1993a, 1996; Swiny 1985). Although the problems are different, the methodological approach is the same. The concept of regionalism can now be considered as a sub-set of studies, which focus upon the way in which early populations adapted to environmental constraints, an area of research which Held has aptly described as:

..islands as laboratories of culture change in which a number of socio-political, economic, demographic, technological, and symbolic trends

can be more readily observed than on the mainland, or in which these trends display a noticeable divergence from the process of culture change found in those continental regions with which the island in question ought to have the most in common.

(Held 1992c, 1)

Recently, studies on the Early Prehistoric Phase have focused on the phenomena of settlement discontinuity and occupation hiatuses, particularly the theoretical viewpoints of Stanley Price (colonisation models, 1977a), Held (cultural involution, 1993) and Peltenburg (settlement discontinuity, 1993a). The Early Prehistoric period is marked by a series of occupation phases, followed by discontinuity and/or settlement drift. Unlike the Mediterranean Levant, almost all Early Prehistoric sites on Cyprus are single phase (*Kissonerga Mosphilia* being the notable exception), and never does one find the large tell sites characteristic of the mainland. The reasons why settlement discontinuity and occupational hiatuses occur are not yet clear, and parallel examples are absent from other Mediterranean island contexts which boast similar geographical and environmental resource bases to Cyprus (for a comparison with Crete see, Broodbank and Strasser 1990; and Cherry 1985). For this reason, Peltenburg is sceptical of Held's theory of cultural involution, which presupposes that the occupation hiatus between the KCU and the SCU is attributable to environmental degradation by an expanding human population.

Held's involution theory represents the culmination of a detailed elaboration of the original colonisation model advanced by Stanley Price (Stanley Price 1977a). Stanley Price's colonisation model considered the effects of island insularity on founding populations and the need for radical adaptation to a bio-geographically constrained environment. His model was based upon two premises. First, that in view of the lack of evidence for pre-seventh millennium B.C. occupation of the island, the KCU inhabitants were the first to successfully colonise Cyprus, and that the absence of a definitive mainland progenitor for the KCU could be explained in the following manner:

The lack of strong material culture parallels with contemporary mainland sites is perhaps to be expected if the need for radical adaptation to a new environment and new resources is taken into account.....The highly distinctive physical characteristics of the Khirokitia inhabitants can be explained by reference to operation of the founder effect without recourse to a hypothetical earlier population in the island.

(Stanley Price 1977a, 33)

The founder principle was later expanded by Cherry (Cherry 1985, 26) to explain cultural retardation on other Mediterranean islands:

These features suggest the operation of what geneticists call the "founder principle"- that is, if the founding members of an island population are merely a few individuals drawn from a much larger parent population, they bring with them only a small sample of the entire gene pool. If isolation from further contact occurs, genetic re-adaptation and selective fertility result in rapid phenotypic divergence between the two groups and the creation of a local island population with its own physical peculiarities.....Arguments of this kind have been used effectively by archaeologists in other areas toaccount for bizarre cultural developments in places such as Malta or Easter Island.

(Cherry 1985, 26-27)

Stanley Price's second premise was that the combined effects of island insularity and environmental constraints had a negative effect on the KCU population, which resulted in the:

growth, climax and decline in the initial colonization phase but no complete abandonment of the island.

(Stanley Price 1977a, 35).

He also postulated that a second colonisation episode around c. 4000 B.C. accounted for the SCU.

Held, drawing substantially on the work of Stanley Price (Stanley Price 1977a), used the Founder Principle and insularity to argue his case for cultural involution on Cyprus (Knapp, Held and Manning 1994, 406). Held's hypothesis stated that settlement/population discontinuity during the KCU/SCU transition could be attributed to a combination of environmental, ecological and biological factors which brought about a period of cultural involution. He proposed that the very dry environmental conditions stemming from the onset of the postglacial Climatic Optimum (about 5600 B.C.) may have had a negative impact on the sedentary, agro-pastoral subsistence strategies of the KCU communities, resulting in crop failures and/or famines (Held 1994, 408). Held's model presupposes that there is either community fissioning or the KCU inhabitants very nearly die out rather than become invisible in the archaeological record, and that a 'booster immigration' of the SCU inhabitants subsumes the remnant population.

Unlike Held's cultural involution theory, which was basically an elaboration of earlier environmental models, Peltenburg's model for settlement discontinuity (Peltenburg 1993a) introduced a new way of looking at the problem. Peltenburg used his work at Vrysi to suggest a different scenario to that advanced by Stanley Price and Held. Arguing from a socio-cultural perspective, Peltenburg examined evidence from the sites of Vrysi and Sotira in order to explain the pattern of apparent settlement dislocation and abandonment which took place at the end of the SCU Phase. Using the density of *in situ* finds on hut floors, and the pattern of intra-site spatial expansion over time, he suggested that Vrysi provided evidence for an increasingly smaller proportion of the population retaining control of privileges within an expanding community and that this contributed to differential "wealth" within that community (Peltenburg 1993, 12-13). This in turn would have contributed to the instability and fragmentation of the settlement. Peltenburg further postulated that the expansion of the Sotira settlement proceeded at a faster rate than first proposed by Dikaios, and that this rapid expansion prior to abandonment closely modelled the pattern of settlement expansion and abandonment which took place at Vrysi. Peltenburg's theory of settlement dislocation looks likely in light of the evidence for settlement expansion at the end of the occupation of Khirokitia.

The hypotheses of Held and Peltenburg explain the patterns of settlement growth and decline leading up to two distinct transitional phases, but both incorporate almost identical settlement and subsistence traits such as introduced floral and faunal species, similar environmental habitation zones and rapid settlement expansion followed by abandonment. Moreover, as Held points out (Held 1992b, 137), remove the clear material differences between the two phases and you are left with two archaeologically indistinct entities characterised by sedentary agro-pastoralists, occupying and settling very similar habitats. The KCU/SCU transition is marked by a temporal hiatus of ca. 700 years, during which time a number of the species of plants and animals introduced by the KCU inhabitants probably died out or reverted to undomesticated forms. Other introduced species, such as Persian Fallow Deer, adapted quickly to the Cypriot environment (Croft 1991) and may have increased in numbers during the hiatus. In combination with this, the introduction of new species at the beginning of both colonisation episodes would have had an impact upon the native floral and faunal species causing some to die out or shift habitat due to competition for resources. Therefore, although the two episodes are chronologically distinct, it cannot be assumed that the causes of rapid settlement expansion and decline in both periods are not factored by common stimuli. In fact, it seems more likely that when the theoretical arguments advanced by Held and Peltenburg are combined they contribute to our understanding of both the

disappearance of the KCU, and the shifting pattern of settlement observable in the later SCU/ECU transition.

2.7 - The excavated sites (Map 2.2)

To date, a total of twelve SCU sites have been excavated in Cyprus. Troulli (Dikaios 1962) and Vrysi (Peltenburg 1982b) in the North, Philia (Watkins n.d.) and Dhenia *Kafkalla* (Karageorghis 1962) in the Morphou Bay region, Kandou (Mantzourane 1994,1996), Sotira (Dikaios 1961b), Kalavastos A (Dikaios 1962), Tenta (Todd 1987), Pamboules (Dikaios 1962, 134-140) and Khirokitia (Dikaios 1953; Le Brun 1987, 1993; Stanley Price 1973) in the South-Central region, Dhali *Agridhi* (hereafter Dhali) in the Mesaoria, (Lehavy 1974, 1989) and Nissia (Flourentzos 1997) in the East.

2.7.1 - Dhali-Agridhi

Dhali is situated in the Central Eastern Plain, or Mesaoria, close to the modern village of Dhali, on the southern bank of the Yalias River. The site was surveyed by Dikaios in the 1930's (Dikaios 1953, 3), and again in 1972 by Stanley Price (Stanley Price 1977b). The American Expedition to Idalion in Cyprus undertook excavations close the site in 1972, 1974 and 1976 (Lehavy 1974, 1989), however, excavation at the original location was impossible as the site was by then owned by the Waqf (Lehavy 1974, 95).

Originally, a 5m x 5m area was excavated in the 1972 season. Due to the complex stratigraphy and the lack of architecture, this area was extended to the north and east in 1974, and a further four new areas were opened in 1976 to increase the horizontal exposure of the site.

The exact nature of the deposits at Dhali have never been fully understood. There is no clear stratigraphic sequence at the site, and the deposit containing cultural remains was excavated in arbitrary spits of 2.5-3cm in depth (Lehavy 1974, 96). Moreover, no recorded section has ever been published. However, the excavator did report two discrete horizontal concentrations of cultural deposit in the main exposure. These he labelled Concentration A and Concentration B, with Concentration A comprised of SCU cultural material and Concentration B comprised of KCU cultural material (Figure 2.2). The excavator supported the cultural separation of the two concentrations with a series of radiocarbon dates. The radiocarbon assays from Concentration B appeared to fall within acceptable ranges for the KCU period, while two assays from

Concentration A dated to the SCU phase, one falling squarely in the middle and one date falling at the very beginning of the period³. However, there is some doubt concerning the reliability of these dates (Held 1989, 239-241), and it is not certain whether the ceramic concentration at Dhali, as was suggested by the excavator (Lehavy 1989, 203), does indeed represent an earlier phase in the SCU.

In the culture bearing deposits, pottery was found exclusively in the north-east quadrant of the exposure, with chipped stone, animal bone (including Persian Fallow Deer, and smaller quantities of pig, sheep and goat) and floral remains (including lentils, hulled barley, grape and olive). The pottery is uncharacteristic for an SCU site. The assemblage is homogenous, consisting entirely of Monochrome Burnished Ware, identical to that found in the lowest layers of Philia, and ubiquitous Coarse Wares (Type A), identical with that found on all SCU sites. On the basis of seriation with the pottery from other sites, and the early radiocarbon assay discussed above, the excavator ascribed the ceramic concentration of Dhali to the very beginning of SCU (Lehavy 1989, 203).

In addition to the unusual nature of the pottery assemblage and the problem concerning its dating, the site raises a number of other important questions which have yet to be fully explored. Assuming that the site does, in fact, represent occupation during both the KCU and SCU phases, the absence of architectural remains for either of those phases at Dhali is unique and rather enigmatic. The most acceptable hypothesis is that the site of Dhali constitutes a temporary or seasonal camp which had intermittent use over an extended period of time. In contrast, Lehavy (Lehavy 1989, 207) argues that the KCU occupation of the site represents more than simply hunter activities due to the high proportion of stone bowls and other stone implements found there. However, the unusually high percentage of bones of Persian Fallow Deer (often to the exclusion of other fauna) in both concentrations, suggest that the site may have been specifically associated with the hunting of deer. Although no specific figures are given, the list of identified bone fragments (Schwartz 1974, 104-117) indicates that *Dama Mesopotamica* averaged well over 80% of the sample and has led the excavator to the conclusion that the prehistoric inhabitants may have been managing deer (Lehavy 1974, 100), a conclusion also reached by Croft (Croft 1991, 66).

It has been suggested that the site may represent the only example of occupation on the island which dates to the lacuna between the KCU and SCU phases. Although unreliable, the

³ The radiocarbon dates are analysed in Chapter 3.

radiocarbon assay - GX2847A from Dhali II, is regularly cited as supporting evidence (Knapp, Held and Manning 1994, 385; Stanley Price 1977a, 34). Whether we accept the latter date or not, the pottery from Dhali is typologically early if we accept the evidence from Philia.

2.7.2 - *Philia-Drakos A*

Crucial to the understanding of the SCU is the site of Philia. Excavated by Watkins and Gelling in 1965 and 1967, and by Watkins as sole director from 1968 to 1970, the site lies in the Ovgos Valley between Ierolakkos and the Bay of Morphou.

The site is situated on the slopes of the Ovgos Valley, which rise to a scarp in the south and descends to the Ovgos River in the north. The landscape has been substantially modified since ancient times, and the excavator notes that extensive erosion and ploughing of the site has destroyed large portions of the stratigraphy in some areas (Watkins 1966, n.d.). The latter has contributed to a rather piecemeal picture of the site and in very few areas is there an uninterrupted stratigraphic sequence continuing from one phase to another.

Watkins established a four phase sequence at Philia, based on seriation of the pottery with that from the well-stratified site of Vrysi. Using pottery counts and limited stratigraphic evidence, Watkins proposed a linear development from predominantly Monochrome Burnished Ware in the lower strata, to Red on White Ware in the upper strata (Watkins 1969, 504). This development was characterised by a sharp distinction between the basal deposits (Phase 1), where Monochrome Burnished Ware occurred on its own with Coarse Ware, and the later phases where Monochrome Burnished Ware was found in decreasing association with Red on White Ware (Watkins, n.d.). The two middle phases (Phases 2 and 3) were defined on the basis of developments in Red on White Ware, and the presence in Phase 2 only of a hybrid ware which combined painted designs on a Monochrome Burnished Ware fabric (Watkins 1969, 504). Phase 4, was distinguished from Phase 3 on the basis of an intervening sterile layer. Therefore, the linear development visible in the pottery counts was partly supported by the stratigraphy, and this enabled Watkins to postulate that Monochrome Burnished Ware was earlier than Red on White Ware and decreased in frequency over time.

Very little can be said about Philia apart from that which has been published in relation to the pottery. There are a number of interim reports in *Bulletin Correspondence Hellenique* which give some stratigraphic information, and to date, one plan of the site has been published (Watkins

1969, Fig. 141c). However, the lack of published sections and a proper summary of the phasing makes it difficult to evaluate the excavations at Philia in relation to other SCU sites. It is even more perplexing when one considers the unusual ceramic assemblage, which includes pottery types not seen at other SCU sites (see Chapter 5), and for which we have no information concerning spatial and temporal distribution. Therefore, only a brief description of the settlement will be given, and only limited reference to phasing within the architectural sequence will be attempted. The bulk of the review will concentrate on the ceramic sequence established by the excavator.

Due to extensive erosion, the excavations at Philia uncovered very few structures (Figure 2.3). The earliest structures utilised the natural slope of the hill, were irregular in shape and of flimsy construction. Dwelling 4, located just below Dwelling 3, was built in a hollow in the bedrock. It had a plaster floor with two small postholes. The walls were thin and friable, and built of lime mixed with crushed earth. The excavator suggests that Dwelling 4 represents the earliest form of building at the site, and that a number of other walls without architectural form, might also represent other examples of this architectural phase. A later phase in building construction appears to be represented by Dwellings 1, 2, 3, 5 and 6. The latter are more substantial structures and built on the classic Sotira plan of monocellular sub-rectangular forms with stone foundation walls and plaster floors. Very few internal fixtures were noted, although the excavator suggests that an internal fixture in Dwelling 5 might have served as a bathroom (Watkins 1969, 510). The final building phase at the site is represented by a series of subterranean structures comprised of a series of interconnecting tunnels and pits. Within these structures were found large quantities of pottery similar in type to that found in the Middle and Late Phase at Vrysi. The purpose of the subterranean features is uncertain and the only other known example of similar architecture is at the ECU site of Kalavassos *Ayious*.

Four unpublished stratigraphic sections exist for Philia⁴ (Figure 2.4). The two sections which can be clearly identified are indicated in red and blue on the plan (Figure 2.3). The first is a long north-south line cutting through the north wall of Dwelling 1, the subterranean Structure 84.3, the retaining Wall 1, and the edge of a pit to the north of the ditch. The second is situated to the east of the first section, and is a continuation running north-south through Wall 2 and ending at the ditch. The first section through Building 1 and Wall 1 provides the most stratigraphic information,

⁴ I would like to thank the excavator, Dr T. Watkins (University of Edinburgh, Department of Archaeology) for permission to include the unpublished plans and sections in this thesis.

however, the relationship between various features is difficult to interpret due to the severe disturbance which has taken place at the site. The interpretation of this section is also made more difficult by the fact that the excavator has tried to reconcile the first and second sections. Even so, some statements can be made. First, the subterranean feature, 84.3 clearly cuts through Dwelling 1, destroying part of its south wall and obscuring the relationship between Dwelling 1 and Wall 1. Therefore, the subterranean feature is clearly the latest in the sequence because it cuts through the uppermost stratigraphic levels. Wall 1 is built on natural deposits and the excavator has clearly indicated that the stratigraphic levels to either side of this feature were excavated down to natural deposits and that they abut up to the wall. However, only the upper most courses of the retaining wall have been shaded, indicating that the lower section of the wall is not fully understood, not drawn, or was never there. The fact that the levels on either side of the wall are shown to abut it would suggest that the excavator interpreted the wall as being constructed early in the sequence. The north wall of Dwelling 1 is built on natural deposits. There are two floors; the uppermost is shown to peter-out towards the north wall, a feature common to many Early Prehistoric sites, and probably due to an absence of activity near such walls. A pit south of Wall 1 and the baulk cuts through levels abutting the wall, and therefore, is later than the wall. The second section runs south through Wall 2 alongside the ditch, but does not cut the ditch itself and therefore, the relationship between the ditch and Walls 1 and 2 is not shown. There is also no indication on the section that the ditch does in fact lie just outside the extent of the section. It could have been that one of the other two sections shown on the inset might have provided more information. However, it is not clear that these sections actually relate to the highlighted areas, and without full publication of the site, further interpretation cannot be attempted.

Because of the problems with the stratigraphy, Watkins (Watkins 1972) bases his phasing on the ceramic evidence with only limited reference to the architectural phases. *Philia* is a predominantly positive-painted design tradition in the style of *Vrysi* and *Troulli*. Red on White is the most common decorative technique and other wares, such as Monochrome Red Ware and Combed Ware, only appear in small quantities. The combination of a positive-painted design tradition similar to that of *Vrysi* and *Troulli*, with the presence of small quantities of Combed Ware, places *Philia* in the SCU tradition as defined by Peltenburg (Peltenburg 1978, 66-68; 1982a, 18-50). Even so, *Philia*'s 'precocious' ceramic assemblage (which includes fabric types and surface finishes absent at all other SCU sites) and its varied and often enigmatic architectural features, raises the question of where the site fits into the SCU tradition, and how the unusual and characteristically "later" features can be explained in terms of their chronological context.

The earliest ceramic phase at Philia (Phase 1) occurs in only a few areas of the site, always overlying sterile soil and below Phase 2 and Phase 3 deposits, or both. The poor representation of Phase 1 appears to be due to site erosion rather than selective excavation. It is characterised by a dearth of architectural features, and only in a few areas can it be associated with living floors constructed in shallow pits or hollows. It can therefore be assumed that this phase is earlier than the first architectural phase at the site. Watkins assigns the ditch to Phase 1 and indicates that it might have been a defensive feature built early in the site's development and in the fashion of the ditch found at Vrysi (Watkins n.d.). The most distinguishing feature of Phase 1 is the absence of painted pottery and a preponderance of Monochrome Burnished Ware of the same character to that found at Dhali.

Phase 2 is distinguishable from Phase 1 deposits by the appearance of Red on White motifs, at first painted onto Monochrome Burnished Ware, and later, appearing in its better known form as Red on White Ware. Monochrome Burnished Ware is still more common, but declines slowly during Phases 2 and 3. Phase 2 deposits overlay Phase 1, where they occur together, and also underlay Phase 3 deposits, or both. However, the distinction between the Phase 2 and Phase 3 is less clear, although the excavator records that where Phase 3 deposits occur, they either overlay Phase 1 or, more rarely, Phase 2 deposits, and are always stratified below those of Phase 4. In terms of the pottery, the sequence from Phase 2 to Phase 3 is more continuous but in using statistical quantification of the pottery ware types and decorative motifs, the excavator has been able to show that Phase 3 is distinct from Phase 2 by the absence of the hybrid Monochrome Burnished Ware with Red on White motifs, and a general shift away from curvilinear designs to multiple brush techniques. Ceramic Phases 2 and 3 at Philia would therefore encompass Building Phases 1 and 2 at the site.

Watkins' ceramic Phase 4 equates with the last building phase, which is separated from the earlier phases by a sterile layer of marl, suggesting the site was abandoned for a period of time. Although the ceramics still fall within the general SCU repertoire, Phase 4 is distinct from the previous phases because of its unique architectural features and a predominance of ripple design, the latter which appears late in the ceramic sequence at Vrysi. During Phase 4, the inhabitants of the site occupied partly sunken pits and hollows similar to those found at Pamboules. In addition, Philia also revealed a series of fully subterranean shafts and chambers which can only be compared with similar features found at the ECU site of Kalavassos *Ayiou* (Todd 1996, 327).

The evidence from Philia suggests that the site was intermittently occupied over a long period of time, from the beginning, and perhaps to the very end of the SCU. The presence of Monochrome Burnished Ware in basal deposits, and its absence at all other sites in any quantity⁵ except Dhali, suggests that this particular ware might represent an early stage of the SCU. The transition of Monochrome Burnished Ware to Red on White Ware, represented by the hybrid ware with Red on White motifs on a monochrome burnished fabric, supports the latter. Phases 2 and 3 are more problematic. Certainly, the ceramic tradition fits with that of other northern SCU sites, but there is little evidence to suggest that the two periods extend over a protracted length of time, and the presence of pottery types unknown at other SCU sites highlights the problems associated with making temporal and spatial comparisons. The extensive erosion that has taken place at Philia also makes interpretation of the phases difficult. The subterranean features parallel closely with those at other sites known to have pottery typologically dated to the ECU in the South, but at Philia, the pottery associated with these features falls within the SCU tradition. The presence of a sterile deposit between Phase 3 and Phase 4 hints at some hiatus and re-occupation by people using very different architectural techniques from the previous phases, therefore, association with the ECU site of Kalavassos *Ayious* cannot be completely ruled out. Again, the strong regional diversity that exists between northern and the southern sites brings into question the temporal relationship of sites in different regions.

2.7.3 - *Sotira-Teppes*

Sotira (Figure 2.5) was discovered, along with the sites of Khirokitia and Erimi, by Porphyrios Dikaios in 1934 (Dikaios 1936, 63-64; 1961a, 1). The site is situated on a flat hill top and lower slopes at the southern end of a long spur of higher ground running north-east between two branches of the Symboulas River. In 1936, Dikaios excavated a number of test pits at the site (Dikaios 1936) from where he collected samples of pottery, but no evidence for architecture. His main excavations were undertaken between 1947 and 1952 (Dikaios 1961b) and in total he opened five areas (Figure 2.6). The largest and most extensively excavated, Area V, was located on the top of the hill, and the four smaller areas on the gentle slopes to the south-east. The steep slopes to the west, north and north-east made building activity unlikely, however in contrast, in Areas I, III and IV to the south-east, Dikaios uncovered remains of architecture (Dikaios 1948). Furthermore, in Area II, on the steeper slopes directly to the East, Dikaios unearthed:

⁵Examples of Monochrome Burnished Ware sherds have been identified by the writer at Troulli (2 sherds) and at Yeroskipos *Chouflijin tis Yermaninis A* in the Dhiarizos Valley (5 sherds). However, the quantities are so low that no definitive statements can be made concerning their presence at these sites.

much pottery which appeared to be from destroyed dwellings and which had been washed down or spread during recent terracing.

(Dikaios 1961b, 3)

With the opening up of Area V, excavation in the test areas I-IV was halted, and none of the features found in the 1947 season were excavated beyond the latest building phases (Stanley Price 1979).

Dikaios recorded some 40 structures from his excavations in Area V, which he classified as either huts or annexes, in addition to eleven complete and partially excavated buildings from Areas I to IV further down the slopes. In Area I, Dikaios also uncovered a number of oblong pit graves, with the bodies lying in a contracted position, head facing east, and covered with stones.⁶

The buildings are, in the main, single cell, dry stone, curvilinear and rectilinear structures with wattle and daub super-structures and, in some instances, annexes. Almost all of the larger structures exhibit identical internal features. The latter include off-centre raised hearths, benches or grinding areas flush against the walls, a number of post-holes either running in a straight line obliquely through the building or circumventing the walls. Also, identical material cultural assemblages found on the floors of the houses, including pottery bowls and jugs, ground stone querns and tool-kits of chipped and ground stone. Although Dikaios identifies four distinct building phases for the site, none of the features listed above exhibit any obvious chronological phasing.

In the 1961 final report, Dikaios ascribes each of the structures to one of his four stratigraphic building phases (numbered in Roman numerals I to IV). Dikaios assigns a whole structure with all of its floors to one phase, although he does concede that chronological subdivisions within the main phases probably existed, and that evidence for individual building use from one phase to another was possible. Dikaios' precise methods of excavation, recording and collection of associated material, enabled Stanley Price (Stanley Price 1979) to re-analyse the Sotira excavations and re-phase the structures which he based on the stratigraphic relationship of the floors within each building to the surfaces outside. It is this revised phasing which has been used in the analysis of the ceramics for the present study.

⁶The only exception to this rule occurred in Grave 2, where the body was found facing West.

In order to differentiate between Dikaios' original phasing of the site and his own, Stanley Price uses the Arabic numerals 1 to 3 to denote his three main phases. Within his phasing he subdivides Phase 1 into two overlapping sub-phases, 'a' and 'b', which equate roughly with Dikaios' Phase I. His Phase 2 equates with Dikaios' Phases II and III, and Phase 3 equates with Dikaios' Phase IV (Table 2.2).

Stanley Price makes a number of additions and subtractions to each of Dikaios' original phases, primarily ascribing separate floors within each building to different phases, and more precisely, phasing floors located outside of structures. The earliest phase (Phase 1) is sealed by a layer of ash and debris which, in many of the structures, is also associated with burning. It can therefore be clearly differentiated from Phase 2. Conversely, Stanley Price's sub-phases within Phase 1 are relatively fluid, with an uninterrupted stratigraphic development from the earliest levels to the destruction level. The distinction between Phases 1a and 1b, has been disregarded in the present study in order to ensure a clear chronological separation in the pottery sequence. Phase 2 is clearly separated from Phase 1 by both the destruction level, and by the method of building construction. In Phase 2, the entire plateau is built upon, and rather than large monocellular structures which are typical of Phase 1, there is a predominance of smaller multi-cellular units and partition walls. The end of Phase 2 is marked by a major destruction level which, both the excavator and Stanley Price, attribute to an earthquake (Dikaios 1961b, 206; Stanley Price 1979, 65). To Phase 3 (Dikaios' Phase IV), can be ascribed the retaining wall at the north end of the site and a substantial increase in the occurrence of post-holes in association with insubstantial building activity, and which have been interpreted as evidence for short-lived re-use of the plateau.

Hut	Phase 1	Phase 2	Phase 3
1	B-F III. FIII	F III-II. II. II-I	F I. I-S
1A		F II. II-I	
2		F II. II-I	F I. I-S
3	F-F III	F III. III-II. II. II-I	F I. I-S
4		F II. II-I	F I-S
5	B-F III	F III-II. II-I	F I
6		F III. III-II. II. II-I	F I. I-S
7	FIII	F III-II. II. II-I	F I-S
8	B-F II	F II. II-I	F I-S
8A	F III	F III-II	F I
9	B-F II	F II-I. I. I-S	
10		F II	F I-S
11	B-F II	F II. II-I	F I. I-S
12	B-F II	F II. F II-I	F I-S
13	F III-II (1.2)	F II. IIP. II-I	F I
13A	B-F III. III	F II-I	F I
14		F IIP. II. II-I	F I. I-S
15		F II-I	
16	White under F II	F II. II-I	F I-S
17	F III. II-III	F II-I	
18		F IIP. II. II-I	F IP. I
19	B-F II	F II-I	
20		F III-II. II. II-I	F I
21	B-F II	F II-I	
22		F II	
23		F I	
24	B-F II	F II-I	
25		F II-II. II. II-I	F I
27		F II	F I
28		FII. FIII	FIP
29	Pre-F III. III. IIP. III-II		
30	B-F II	F II. II-I	F I
31	B-F III	F III-II. II-I	
31A		F II. II-I	
32	B-F II	F II. II-I	
33	F III. III-II	F II. II-I	
34	"F III". III-II	F II-I	
34A	B-F III	F III. III-II	
35		F II. II-I	
36	F IV. III. III-H.15		
37	F III. B-H14		
38	B-F IV. IV-III. demol. layer		
39	F IV-III. III. ext. Fill B. A. carb.layer (1.2). demol. layer.		
40	F III. destr. under H27. H28		

Abbreviations: B = Bedrock. F = Floor. P = Pit. S = Surface⁷

Table 2.2 - Sotira phasing

2.7.4 - Ayios Epiktitos-Vrysi

Vrysi was excavated by Professor E.J. Peltenburg between 1969-1973 (Peltenburg 1982b). The site is situated on a coastal promontory on the North Coast of Cyprus, 4km west of Troulli and

⁷ c.f., Stanley Price. 1979. 82.

approximately 40km north-east of Philia (Figure 2.7). Following the excavation of Philia, confusion arose concerning the relative pottery sequence for the SCU of Cyprus. It was hoped that excavations at Vrysi would shed light upon the relationship between the painted pottery of the north, and the Combed pottery of south of the island.

Vrysi's relative pottery chronology is based on a clearly defined stratigraphic sequence made possible mainly by the unusual topographic features at the site. The architectural units were constructed into two human modified hollows, measuring up to 6m in depth, and at least 20m square. The hollows were separated by a natural central ridge, and each contained up to ten part- and whole structures. The virtually subterranean nature of the site protected against horizontal erosion, resulting in an almost uninterrupted stratigraphic sequence. Peltenburg established a three phase sequence for the Vrysi ceramics, based on their morphological and decorative development, and the stratigraphic phasing of the building episodes within the two hollows (or sectors). The Early and Middle Phases were totally subterranean, and each successive floor level was superimposed on the previous floor. The Late Phase, in contrast, was built mostly above ground level and therefore less of it survived. The pottery sequence for Vrysi has both advantages and disadvantages. Vrysi continues to have the most reliable pottery sequence for SCU, which can be used as a benchmark to date the stylistic sequences of other northern sites. However, the events of 1974 curtailed any further, comprehensive study of the ceramics, and the published data is the only source available for study at the present time.

The Early Phase is characterised by a paucity of architectural features and associated finds (for a summary see, Peltenburg 1975, 1982a). In the North Sector, the Early Phase is sealed by a destruction level which clearly distinguishes it from the subsequent Middle Phase. It is characterised by thin sloping lenses of material, contrasting with the slightly dished floors of the Middle Phase, and only in a few areas are there any defined floor levels (Peltenburg 1975, 22). The abundance of post holes and lack of any stratigraphically associated walls suggests that the Early Phase is characterised by insubstantial wooden structures used for both activity areas and habitation units (Peltenburg 1982b, 38-39). Finds dating to the Early Phase include relatively large quantities of pottery, stone lamps, bone needles and a plaster basin set into Floor 2 of House 7. In the South Sector, the Early Phase is less clearly defined and only the deep ditch, immediately to the South of the Central Ridge, could be positively attributed to this phase. It is likely that the ditch, which contained House 4a of the Middle Phase, was initially built as part of a barrier

between the Early Phase occupants of the North Sector and the interior of the island (Peltenburg 1975, 23).

The Middle Phase represents the most significant building phase at Vrysi,⁸ and most of the subterranean architecture later than the Early Phase has been attributed to it. In the North and South Sectors, up to ten part-and whole structures with sequential rebuilding phases were found in situ (for a complete summary see, Peltenburg 1975, 24-32 and 1982b). The Middle Phase is characterised by monocellular sub-rectangular structures with off-centre raised hearths, pisé or stone benches against walls, and often a semi-circular partition wall demarcating a small corner area (Peltenburg 1978, 58). Evidence for roofs would suggest that two main types existed, lean-to or conical roofs, and flat roofs supported by timber posts. The artefact assemblage includes stone bowls, ground and chipped stone tool kits, bone tools, and rare items such as multiple pierced beads, clay studs, toggles and hooks of identical type to those found at Sotira.

Due to substantial erosion, only traces of sequential structures dating to the Middle Phase to Late Phase survive. However, evidence from Area VD-E would suggest a prolonged occupation during the Late Phase (Peltenburg 1975, 32). From the limited remains, it would appear that the Late Phase carries on uninterrupted from the Middle Phase, with small but distinguishing differences in the architectural features. In contrast to the Middle Phase, where high stone walls were in evidence, during the Late Phase, buildings are now above ground and have low stone socles with pisé super-structures in the same fashion as at Philia and Sotira. Raised hearths are missing and in two instances, Houses 4B and 16, the fourth, easterly wall was either open or was constructed of light materials (Peltenburg 1975, 32).

2.7.5 - *Klepini-Troulli*

Troulli was first reported by Dikaios in 1935. The site is located on the north coast of the island on a conical promontory which juts out into the sea (Figure 2.8). In 1941, Dikaios opened two small soundings (Pits A and B) on the southern slopes of the promontory and a large exposure, which he called Area C, on the summit. Although Troulli is best known for its KCU remains, Dikaios encountered substantial traces of occupation dating to the SCU Phase in the upper-most levels of the site. Dikaios excavated Troulli in 20cm spits. In Pit A, he uncovered the remains of both KCU and SCU occupation. The depth of deposit measured in excess of 5m with KCU

⁸The extent of the Middle Phase, and indeed the earlier and later phases, are defined by, and dependent upon the limited extent of excavation work.

occupation occurring between 5.40m and 3.60m and SCU material occurring between 3.60m and ground level (Dikaios 1962, 63). Area C was the only area with architecture dating to the SCU Phase. Here, Dikaios uncovered the remains of four buildings and a passageway. The most substantial of the buildings, although partly destroyed by looting, showed strong affinities with the building methods at Sotira. The preserved remains had an elongated ground plan of sandstone boulders with a rounded short wall and internal posts along the longitudinal axis. The superstructure did not survive, but there is no evidence that it was made of stone and the excavator suggests it was most likely made of wattle and daub (Dikaios 1962, 64).

The evidence from Troulli for an intervening phase between the KCU and the SCU was questioned in 1979, when Peltenburg, following the conclusions reached by Watkins from his excavations at Philia, and Peltenburg's own at Vrysi, undertook a re-analysis of the Troulli material stored in the Cyprus Museum. Peltenburg was able to show that KCU and SCU Troulli were not contiguous, but instead, were separated by a sterile layer in Pit A at depths ranging between 3.40m and 4.40/4.60m (Peltenburg 1979, 21-23). From this evidence, Peltenburg concluded that the SCU occupation at Troulli occurred after a hiatus. Peltenburg based his conclusions not only on the presence of a sterile layer between the two phases, but also, on the strong affinities between the pottery traditions of Vrysi and Troulli. The pottery from Troulli, like Vrysi, is characterised by a painted tradition of positive design motifs in red on a white ground. Moreover, using quantitative and qualitative analysis, Peltenburg noted developments in the decoration like that of Vrysi and Philia. Between 3.20m and 1.60m the SCU Phase of Troulli corresponded with the Early Phase at Vrysi due to the propensity of curvilinear motifs and an absence of later motifs. After 1.60m changes in decoration occur and circular motifs give way to thin lines and multiple brush techniques, such as the ripple design and thin multiple wavy lines which correspond to those of the Vrysi Middle/Late Phase (Peltenburg 1979, 27).

2.7.6 - Khirokitia-Vouni

Khirokitia is situated on the slopes of a steep hill about 6km north-east of Tenta. Like Tenta, it is predominantly a KCU site, best known for its curvilinear architecture and substantial retaining wall both of which are characteristic of the KCU as a whole. The site was first excavated by Dikaios in the 1940s (Dikaios 1953, 1962, 5-62) where he found pottery in secondary deposits and surface levels on the top of the hill. In one instance, pottery was found lying on the uppermost floor inside one of the KCU tholoi (Dikaios 1953, 274), however, it is not clear whether the KCU architecture was re-used during the SCU phase. The site was excavated again in the 1970s by

Stanley Price who undertook a small sounding in the KCU levels (Stanley Price 1977b). No pottery was reported from his excavations. In the late 1970's Alain Le Brun, who had co-directed the excavations with Stanley Price, took over the site as sole director. Excavations at Khirokitia continue under the auspices of Le Brun and are funded by the Centre National de la Recherche Scientifique (Le Brun 1984, 1989, 1994).

Le Brun's excavations at Khirokitia have recently revealed features belonging to the SCU Phase. Although not yet published, these features are summarised briefly here with the permission of the excavators⁹. The fragmentary nature of these features indicates that the site has suffered extensive erosion, but at one time, probably sustained a small SCU population. Features belonging to the SCU Phase are indicated on the overlay on Figures 2.9 and 2.10. Abutting the western limit of the village, in a level above the KCU entrance and Wall 284, was found a line of "standing stones" (Figure 2.9). These stones were situated in a ceramic deposit which overlaid the KCU levels (Figure 2.11). The stones are enigmatic, but apparently, do not belong to structures. However, they do appear to be lining the upper levels of a natural ditch (next to Wall 284) which was found to contain large quantities of pottery in its upper deposits. Peltenburg has confirmed that similar "standing stones" were found at Vrysi lining the sides of the ditch separating the North Sector from the South Sector of the site (E.J. Peltenburg, personal communication).

In 1995, the remains of a stone Wall 911 were discovered lying on top of the KCU structures 146 and 106 in association with pottery (Figure 2.10). The wall runs continuously for over 5m, suggesting that it was not part of a SCU dwelling. Too little remains of the wall to postulate its purpose, but its presence clearly indicates substantial erosion of the upper deposits at Khirokitia.

The majority of the pottery was found in the natural ditch between the western limit of the KCU village and an outcrop of natural kafkalla. The stratigraphy associated with the KCU deposits suggests this area was used as a midden. Extensive erosion is evident in a series of thin wash layers which have accumulated to over 3m in height, and which contain quantities of cultural material, but no evidence of work surfaces. Above this, and to the west, is located the erosional gully associated with the SCU occupation of the site. The SCU gully does not follow exactly the line of the KCU deposits. In places, it overlays the kafkalla outcrop, and in others, it overlays the KCU midden deposits. The SCU deposits within the ditch can be divided into a Northern and

⁹ My thanks go to Alain and Odile Le Brun (CNRS) who have generously permitted me to use unpublished data from Khirokitia in this thesis.

Southern Sector by the natural line of the kafkalla limestone which rises in the middle separating the two sectors. Because of this, it is difficult to relate the deposits in the northern half of the ditch with those in the southern half. In the Southern Sector, there appears to be two primary SCU layers overlying the KCU deposits. The earliest is associated with the destruction of the KCU village and its reoccupation during the SCU Phase. The second is an ashy deposit containing quantities of pottery with artifacts horizontally stratified suggesting work surfaces. This layer corresponds with an ashy layer in the Northern Sector. Therefore, the formation of the gully can be interpreted in the following manner. The ditch existed during the KCU Phase and was formed by a combination of water action and human agency. Cultural build-up resulted in the latest levels (Niveau 1b and 1c) rising to a height of 3m above the natural bedrock. After the abandonment of the village, further heavy rains resulted in the ditch re-cutting into the KCU deposits. The ditch was in use during the SCU occupation, probably as a midden, indicated by the mixed nature of the pottery. However, traces of work surfaces and horizontally stratified artifacts might suggest that the ditch was used at times for other purposes. It is not clear whether cultural material was washed into the ditch following the abandonment of the ceramic phase, however, the heavy concretion on the surface of many sherds would suggest this to be the case.

The nature of the SCU occupation at Khirokitia is enigmatic. Prior to the discovery of SCU architectural remains at Khirokitia, some scholars suggested that the re-use of the site by SCU inhabitants might date to the post Phase 2 destruction at Sotira when insubstantial architecture comes into use, and to which Kalavastos A and the SCU occupation at Tenta have been attributed. However, the discovery of the SCU wall overlying KCU deposits would indicate that the paucity of architecture is more likely to be the result of continued erosion. The discovery of large quantities of pottery in a ditch which was utilised during the KCU occupation of the site raises a series of interesting questions regarding subsistence/settlement patterns. It cannot be assumed from the presence of one wall and a series of standing stones that the settlement at Khirokitia was similar in type to Sotira or Vrysi. Other SCU sites indicate that variation existed in subsistence strategies and/or settlement patterns. The re-use of KCU occupation horizons is also known at Troulli and Tenta. Like Khirokitia, at these sites there is clear stratigraphic evidence for a break in occupation between the KCU Phase and later SCU re-use. At Khirokitia and Tenta, re-use of the sites during in the SCU Phase is marked by a paucity of architectural features with pottery located predominantly in surface deposits and the presence of a large pit or ditch. At both sites, there is some evidence from work surfaces associated with the pit/ditch (Baird n.d.a.; O. Le Brun, personal communication). At Troulli, however, the SCU occupation is more substantial with the

presence of above ground habitation units on similar lines to those found at Sotira. In addition to the three sites where re-use of existing KCU occupation horizons has occurred, there are also other sites which are located on virgin soil, but are not characterised by above ground architecture, for example, Kalavastos A. The question remains whether the variation in site types during the SCU Phase is due to temporal factors, subsistence strategies, or a combination of both.

2.7.7 - *Kalavastos-Tenta*

Tenta is situated on a lens-shaped hill on the western side of the Vasilikos Valley roughly 2km north-west of Kalavastos *Kokkinoyia* (hereafter Kokkinoyia) and Pamboules (Figure 2.12). Brief excavations were undertaken at the site by Dikaios in 1947 (Todd 1987, 14), but no final report was ever published and only passing mention is made of the site in other publications (Dikaios 1953, 232-235; 1961b, 212 and 216; 1962, 14, 29 and 177 [for a summary see, Todd 1987, 14]). A survey and excavation of the site also took place in the summer of 1976 under the auspices of the Vasilikos Valley Project, led by Dr I.A.Todd.

The site is primarily a KCU site but on the eroded south-east side of the hill, and the lower slopes to the north-west and south-west, ceramics dating to the SCU Phase and SCU/ECU transition were found in a series of pits and deep hollows (Todd 1987, 25-26). Further scatters of pottery were also found in the topsoil overlying the KCU occupation on the top of the hill. Although no clear stratigraphic sequence for the Tenta pottery exists, in a large pit in area 016B, Baird (Baird n.d.a.) was able to show that the two earliest deposits belonged to the SCU Phase with later SCU/ECU material deposited in the alluvial wash levels above.

Most of the ceramic assemblage from Tenta belongs to the SCU/ECU transition and therefore, the site's inclusion in the present study must be explained. First, only the SCU ceramics from Tenta are included, as the later pottery would skew the results. Secondly, Baird (n.d.a.) in his study of the ceramics, surmised that the re-use of Tenta during the SCU and the SCU/ECU Phases was not continuous, but rather, was characterised by multiple episodes of discontinuity and settlement drift away from the slopes of Tenta to the nearby SCU/ECU site of Kalavastos *Ayious*. Therefore, the SCU and SCU/ECU pottery from Tenta represents non-continuous phases with an intermediate phase between the two SCU/ECU transitional phases at Tenta and present at Ayious. This pattern of settlement discontinuity is also apparent between the SCU site of Kokkinoyia and the mostly ECU site of Pamboules, approximately 2km to the south-east of Tenta. The sites of Kokkinoyia (originally called Site A, see below) and Pamboules were excavated by Dikaios in 1947, and later

surveyed by Todd as part of the Vasilikos Valley Project. Debate concerning the relationship between Kokkinoyia and Pamboules is still on-going (see Clarke and Todd 1993). The sites are so close together that it is argued that they are, in fact, one large site which was occupied continuously from the SCU to the Late ECU period, but with regular shifts in occupation from one part of the site to another. Furthermore, Ayious appears to be a northern extension of the Kokkinoyia/Pamboules Plateau (Todd 1996, 326) and may also form part of the hypothesised large site, noted above. The relationship between Kokkinoyia, Pamboules, Tenta and Ayious is therefore fundamental to our understanding of the nature of settlement patterns during the SCU to SCU/ECU transition in the Vasilikos Valley. As the present study is concerned with variability in the SCU ceramics of Cyprus, the SCU/ECU pottery from Ayious, Tenta and Pamboules have not been included, although future studies on the phenomenon of settlement discontinuity in the Vasilikos Valley may go some way to clarifying the arguments put forward by Held and Peltenburg (Section 2.4, above).

The SCU deposits at Tenta were associated with pits cut into the lower slopes of the hill which represented later utilisation of the site. In Area 016B (Figure 2.12), a large pit measuring up to 3.7m in depth was visible on the eroded face of the south-east slope. The pit lay wholly within the confines of square 016B, but due to dense tree growth in the vicinity, only a 2m x 2m area was opened, and the edges of the pit were never excavated. The pit lacked KCU deposits, but contained a number of alluvial lenses within which were large quantities of pottery dating to the SCU and SCU/ECU Phases. On the lower western slopes, a number of other areas turned up Early Prehistoric ceramics, but no architecture. Only in one area, square K7, was pottery found in stratigraphic relationship with surfaces. Here, there was a truncated pit containing three possible floors, with ceramics found in association with each floor (Kromholz 1981, 18). Furthermore, in Area D11D/EIIC, ceramics were found in association with ground stone tools probably representing a working area (Todd 1987, 18).

2.7.8 - Kalavastos Site A (Kokkinoyia)

The site of Kalavastos A (hereafter Kokkinoyia), was first reported by Dikaios in his summary of known prehistoric sites contained in the publication of his excavations at Erimi *Pamboula* (Dikaios 1936, 78). Excavation of the site was undertaken in 1947, in conjunction with excavations at the contiguous Early Prehistoric site of Kalavastos Site B (*Pamboules*) (Dikaios 1962, 106-112). Nothing remains of Dikaios' excavations today, and the exact location of the site is uncertain, although Dikaios recorded that it is situated between the Maroniou and Vasilikos

rivers. As a result of later survey work undertaken by Stanley Price and the Vasilikos Valley Project (Stanley Price 1979a; Todd 1993), the site is now known to lie just south of Tenta, about 5km to the west of Khirokitia, and 20km to the east of Sotira.

Kokkinoyia belongs to the southern Monochrome/Combed pottery tradition. Like Troulli, Dikaios excavated the site in 20cm spits (Dikaios 1962, 106), except where floors were in evidence, and then excavation took place by individual floor level. Dikaios recorded three types of habitation unit at the site: Type 1 are circular or elongated constructions with sunken floors occupying a shallow pit, and central post holes suggesting a superstructure of some kind. Type 2 are cave shaped constructions, and Type 3 are circular constructions with a central post and peripheral post-holes suggesting a light superstructure (Dikaios 1962, 106). Only Type 1 had any evidence for successive occupation, and in one example (Dwelling XI), six floors of either tamped soil or *havara* were recorded (Dikaios 1962, 108). Internal features include dry rubble benches along the face of the pits and hearths, although Dikaios does not record whether the hearths were raised and off-centre.

Although not closely related to the classic rectilinear forms of architecture recorded at Vrysi, Sotira and Philia, this type of partly subterranean structure is known from Philia and a number of sites now known to date to the SCU/ECU Phase, including Ayious, Maa *Paleokastro* and Kissonerga *Mylothkia* in the West. The pottery is distinctly SCU in form and decoration, but it has been proposed by Dikaios (Dikaios 1962, 111) that the overwhelming presence of Red Monochrome Wares at Kokkinoyia (between 71-79% in Dwelling XI), and the relatively small percentage of other wares, particularly Combed Ware, may place the site slightly later than Sotira and Khirokitia.

2.7.9 - Kalavastos Site B (*Pamboules*)

The contiguous site of Kalavastos *Pamboules* (hereafter *Pamboules*) was excavated by Dikaios in 1939 and 1947 (Dikaios 1953, 319; 1962, 133-140). It is characterised by a series of eleven partly sunken dwellings, 2-3m in diameter with light, wattle and daub superstructures placed on central or peripheral posts. The site is primarily ECU but in Pit VIII, a series of floors were uncovered from which quantities of SCU Combed and Painted and Combed Ware were uncovered (Figure 2.13).

Internal features in the buildings resemble Kokkinoyia. Floors are either tamped earth, or in one case (Floor 3 of Pit VIII), paved with flagstones. Benches occurred in Pit II and Pit VIII. Most buildings had grinding installations and clay vessels, and stone bowls and flint implements were found *in situ* on the floors of a number of dwellings.

Excavations at Pamboules were too scanty to fully understand the relationship between Pit VIII and other dwellings at the site, and nowhere does Dikaios mention any differentiation between the material found in Pit VIII and other dwellings. He does, however, give a relative frequency of ware types on each floor in Pit VIII, which shows that there is mixing with later pottery types. On floor III, for example, he lists Red and Black Lustrous Ware as accounting for 1.2% of the sample (Dikaios 1962, 139), a ware type characteristic of the Late ECU period. He also illustrates a number of Red Lustrous vessels which he notes do not occur at Erimi (Dikaios 1962, 136, Fig. XLIII, 2,3). These vessels are known from the survey material and seriation with other sites, and also date to the Late ECU Phase.

Like Kokkinoyia, Ayious and Khirokitia, it would appear that the early floors in Pit VIII at Pamboules date to the end of the SCU Phase. Moreover, the insubstantial architectural features are likely attributable to activity surfaces rather than to true dwelling places. The fact that Pamboules survives into the ECU Phase is evident from the pottery. However, the relationship between the two phases at the site is unclear. The absence of true architecture, in the style of Erimi is an enigma, given that the surface scatter indicates an extended life into the Late ECU and large quantities of Erimi type Middle ECU pottery are found at the site (Clarke and Todd 1993). Peltenburg questions the relationship between sites such as Kokkinoyia and Pamboules, and sites with true architecture like Sotira. He suggests these sites may represent contemporaneous examples of differing functional/subsistence activities (Peltenburg 1978, 68).

2.8 - The survey sites

Our knowledge of settlement patterns for the SCU Phase has been substantially augmented by a number of survey projects. Some of these have been undertaken by individual members of excavation teams working with larger projects (see; Le Brun 1971; Peltenburg 1985a), while others have been undertaken by individuals researching Early Prehistoric settlement patterns (Held 1992; Stanley Price 1979a). Others, including the Cyprus Survey, are systematic survey projects

encompassing Cypriot occupation of all periods (Rupp 1993; Todd 1977b, 1978b, 1979b, 1981, 1982a, 1986a). The amount of pottery collected from surface scatters is usually very small, numbering no more than a few diagnostic sherds. Therefore, only those sites with relatively large ceramic assemblages have been included in the present analysis. Stanley Price (Stanley Price 1979a) and Held (Held 1992) have undertaken a thorough study of the distribution of Early Prehistoric Survey sites in Cyprus and it is unnecessary to recount their work in any detail in this thesis. However, the resulting gazetteer of sites of the SCU Phase is impressive. Over a period spanning approximately 400 years, the SCU Culture spread throughout the island settling along the coastal littoral in the north and west of the island, and along the coastal river valleys and up into the foothills of the Troodos Mountains in the south of the island. The picture gained is one of extensive occupation characterised by clusters of sites in areas of favourable environmental and climatic conditions. This particular pattern of settlement is not unique in Cypriot prehistory, as site clustering in the ECU Phase is also known. For the SCU Phase, it raises important questions concerning subsistence strategies, social interaction and patterns of material variation across both sites and regions where site clusters possibly form demographic units. These patterns will be discussed in later chapters.

The survey sites which are included in this study number but a few of the total SCU sites recorded. The criteria for such inclusion required that a pottery assemblage had a significant percentage of unabraded sherds which would be statistically useful for quantification and pattern analyses. It was decided that only sites with more than fifty diagnostic sherds fitted this requirement. Many other survey sites are mentioned in relation to subsistence patterns later in this thesis but an analysis of the sherd material has not been undertaken due to the small quantity and poor quality of the sherdage. Other well known SCU sites include, Alekhthora *Laoni tou Kotsiri* (Held 1989b, 349; Rupp 1987, 5), Dhenia *Kafkalla* (Stanley Price 1979a, 92), Mari *Moutsounin* (Held 1989b, 327; Held 1992, 99; Todd 1979a, 285-286) Peyia *Elia tou Vatani* (Baird 1985, 342-343), Kalavastos *Kambanaris* (Held 1989b, 329; Todd 1978b, 185) Koloni *Sirmintirin* (Clarke 1992b, 296) and Yeroskipos *Chouflijin tis Yermaninis A* (Clarke 1992b, 294), Pissouri *Ayia Eleni* (Fox 1987, 19; Held 1989b, 350-351; Held 1992; Rupp 1987, 5; Stanley Price 1979a). The distribution of survey material used in the sample is uneven. Most of the samples come from the Kalavastos region due to intensive survey undertaken in the area by the Vasilikos Valley Project. Contrastingly, even with extensive survey in the west of the island (Baird 1985, Rupp 1983, 1984, 1987) there is a much smaller proportion of known SCU sites to the South-

Central Region. The CPSP has recorded a scattering of SCU sites (Guldager Bilde 1993, 3) but only small representational pottery samples were collected.

There are three omissions from the survey record which should be highlighted. First, there is a large number of SCU sites in the north of the island, concentrated around the west and central areas, (for a complete list see, Held 1992a; Stanley Price 1979) which are not included because the number of diagnostic sherds in the samples were too small. There are also a number of sites in the west of the island which have been excluded, primarily due to the condition of the material. Peyia Elia tou Vatani I, published by Baird (Baird 1985), did not have a large enough sample of diagnostic patterned sherds for inclusion, and the earlier levels of Kissonerga *Mosphilia* are still in the process of being published (Peltenburg, et al. 1998).

2.8.1- Orga-Palialonia/Ambellia (WE 028126)

One site in the North which has been well published, and for which there is a good pottery sample, is *Orga Palialonia/Ambellia* (hereafter *Orga*) (Peltenburg 1985, 101-102; Held 1992, 88). The site is located on a saddle-shaped plateau between two crags. It was surveyed during the 1973 field season at Vrysi and subsequently published by Peltenburg (Peltenburg 1985, 101-102). Three hundred and eighty Red on White sherds and one Combed Ware sherd were recovered. The sample included nine spouts and one neck. The pottery from Peltenburg's survey is stored in Kyrenia Castle, and could not be used in the data, although examples of this sample are illustrated in Peltenburg (Peltenburg 1985, 111, fig. 10). The primary data sample used in this thesis derives from the Cyprus Survey. The sample is comprised of 129 sherds from the Cyprus Survey and 36 sherds from the collections in the Cyprus American Archaeological Research Institute (CAARI). Of this, 78 sherds are from Red on White vessels, one Combed Ware sherd, seven Coarse Ware sherds, 76 unknown sherds and three Monochrome Painted sherds.

2.8.2 - The Kalavassos survey sites

The majority of survey sites included in this study are located within the Vasilikos Valley survey catchment area. In 1991 and 1992, I was privileged to be able to study this material for inclusion in this thesis¹⁰. A preliminary report on Kokkinoyia has resulted from this research (Clarke & Todd 1993), and it is envisaged that upon the completion of this thesis the final results of the

¹⁰ I wish to thank Dr I.A. Todd for allowing me to use the unpublished ceramics and survey report of the Vasilikos Valley Project in this thesis.

ceramic analysis from the other sites will be published as part of the Vasilikos Valley Project Survey Report (Todd n.d.). In the interim, the nature of the sites included in this study will be briefly reviewed. It is important to note that only some of the sites with an SCU component are included here as many had too few diagnostic sherds to warrant further review (for a full review of the Vasilikos Valley Survey see, Todd n.d.).

2.8.2.1 - Kalavastos *Angastromeni* (Angastromeni)

Angastromeni is situated on the highest hill immediately above and to the west of Kalavastos Village, 600m west of the Vasilikos River and 130m above. The slopes of the hill upon which it is situated are very steep and therefore Angastromeni was strategically well placed but the distance from water sources must have worked against the population. Most of the material remains are located on the upper north and west slopes. The site is mainly SCU with a Middle Bronze Age component, although the uppermost part of the hill is predominantly SCU. Todd (Todd n.d.) notes that all of the lower Vasilikos Valley SCU sites were visible from Angastromeni as is Markotis in the northern part of the Valley. Todd suspects that the distance of Angastromeni from a good water supply and its inaccessibility might suggest the site was used more for its strategic value during the SCU than as a settlement site (Todd, n.d.).

2.8.2.2 - Kalavastos *Kafkalia VI* (Kafkalia VI)

Kafkalia VI forms part of the Kafkalia complex of sites on the west side of the Vasilikos Valley adjacent to Kafkalia V on a small saddle shaped hill. The site is badly eroded but sherds dating to the SCU and SCU/ECU transition were collected. The site is small but easily accessible from the larger sites of Tenta, Ayious and Pamboules.

2.8.2.3 - Kalavastos *Markotis* (Markotis)

Markotis, like most of the Vasilikos Valley sites, is multi-phase. The SCU material is located predominantly on the west end of a prominent hill with a flattish top and steeply sloping sides, 3.25km north-west of Kalavastos Village. The site represents the most northerly known occurrence of an SCU site in the Vasilikos Valley region. There is no water source near the site so its purpose is uncertain.

2.8.2.4 - Kalavastos *Spilios* (Spilios)

Spilios is located on the west side of the Vasilikos Valley, 3km north-west of Kalavastos Village. Parts of the site are adjacent to a drainage of the Vasilikos River. The site is situated on gentle to

steep slopes with some deep eroded gullies in the hilly region to the west. The site is primarily Middle Bronze Age, Late Bronze Age, Archaic and Roman and there is evidence that extensive metallurgical activity was carried out in the region during these periods (Todd n.d.). The SCU occupation is small but it is interesting that Spilios and Markotis, located so far north, have SCU components.

2.8.2.5 - Kalavastos *Yirtomylos* (Yirtomylos)

Yirtomylos is located on the west side of the Vasilikos Valley at the north end of Kalavastos Village on a bend in the Vasilikos River. It is situated on gently sloping ground above a steep slope and cliffs down to the river which limit the site on its north and east sides. The site is primarily a Middle Bronze Age settlement but a small spread of SCU sherds were revealed by quarrying beneath present ground surface. Todd records (Todd n.d.) that a considerable number of SCU sherds were found in association with an ashy patch containing some stones and burnt pisé-like material.

2.8.2.6 - Kalavastos *Zoulofididhes* (Zoulofididhes)

Zoulofididhes is located on the west side of the Vasilikos Valley, immediately adjacent to the east of the limestone quarry. The site lies on the north-east side of a seasonal drainage and comprises an elongated band of settlement, on the north-east side of a very steep-sided gully. The site has a substantial SCU component but Middle Bronze Age, Late Bronze Age, Archaic and Roman pottery is also present. Most of the SCU sherds were found half way down the slopes indicating that they were probably washed down from the plateau above (Todd n.d.).

2.8.2.7 - Mari *Paliambela* (Mari)

Mari is located on the west side of the Vasilikos Valley, 850m from the centre of the modern village of Mari. The site lies on the edge of a terrace, on gently sloping ground, overlooking the Vasilikos River to the east (Todd n.d.). Dikaïos excavated Mari briefly in the 1930's (Dikaïos 1953) and the ceramics from this excavation are housed in the Cyprus Museum. Dikaïos (Dikaïos 1953, 319) mentions a dwelling type, partly sunk in the bedrock, with a light superstructure of the same type found at Kokkinoyia. The Vasilikos Valley Survey included SCU, Middle Bronze Age, Late Bronze Age Archaic, Hellenistic-Roman and Mediaeval sherds. The SCU settlement was disturbed by the cutting of Archaic tombs.



2.9 - The integrity of the assemblages

The sites have been divided into four categories based upon the reliability of the information which can be extracted from the pottery evidence. Excavated sites with clear stratigraphic phasing form the basis of Category 1. Excavated sites with no clear stratigraphic phasing and large survey sites form the basis of Category 2. Small survey collections form the basis of Category 3, and biased or unrepresentative museum samples form the basis of Category 4. Each category is self contained and the sherds are analysed independently. Therefore, the pottery from sites which fall into Category 1 can be analysed by phase. This means that variation in the ceramics of Category 1 can be analysed for convergence/divergence over space and time. For Categories 2 and 3 and 4, the total assemblage is analysed as a complete entity. The categories are listed in Table 2.3 below.

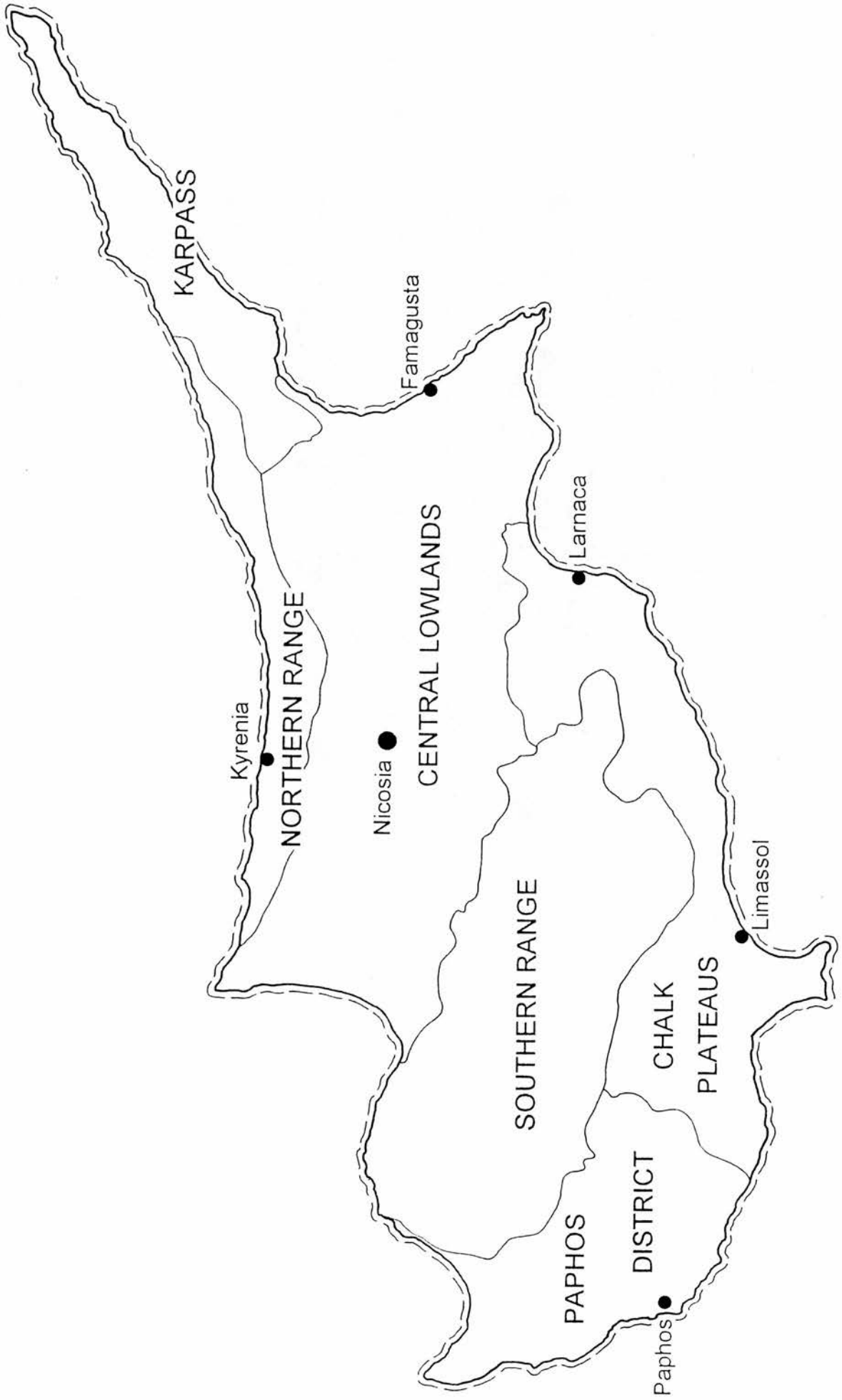
Category 1	Category 2	Category 3	Category 4
<i>Ayios Epiktitos Vrysi</i>	<i>Kalavastos Kokkinoyia</i>	<i>Alekhthora Laoni tou Kotsiri</i>	<i>Dhali Agridhi</i>
<i>Klepini Troulli</i>	<i>Kalavastos Pamboules</i>	<i>Ayia Eleni Paphos Road</i>	<i>Philia Drakos A (Museum)</i>
<i>Philia Drakos A (excavation)</i>	<i>Kalavastos Tenta (excavation)</i>	<i>Kalavastos Angastromeni</i>	
<i>Sotira Teppes</i>	<i>Khirokitia Vouni</i>	<i>Kalavastos Kafkalia VI</i>	
<i>Kalavastos Site A</i>	<i>Orga Paliatonia</i>	<i>Kalavastos Markotis</i>	
		<i>Kalavastos Spilios</i>	
		<i>Kalavastos Yirtomylos</i>	
		<i>Kalavastos Zoulofididhes</i>	
		<i>Kandou Koufovounos</i>	
		<i>Mari Paliambela</i>	

Table 2.3 - Survey sites listed by categories

2.10 - Discussion

In summary, evidence for the SCU Phase is well attested throughout the island. Although there currently appears to be little evidence for settlement in the east of the island, the new excavations at Nissia indicate that this is due to lack of systematic and intensive survey in the East and Southeast. In contrast, although the Western Central Plains around Morphou Bay were settled during the SCU, survey in the eastern and central Mesaoria has not produced any real evidence for SCU settlement. Dhali, being the only exception, and situated almost in the centre of the

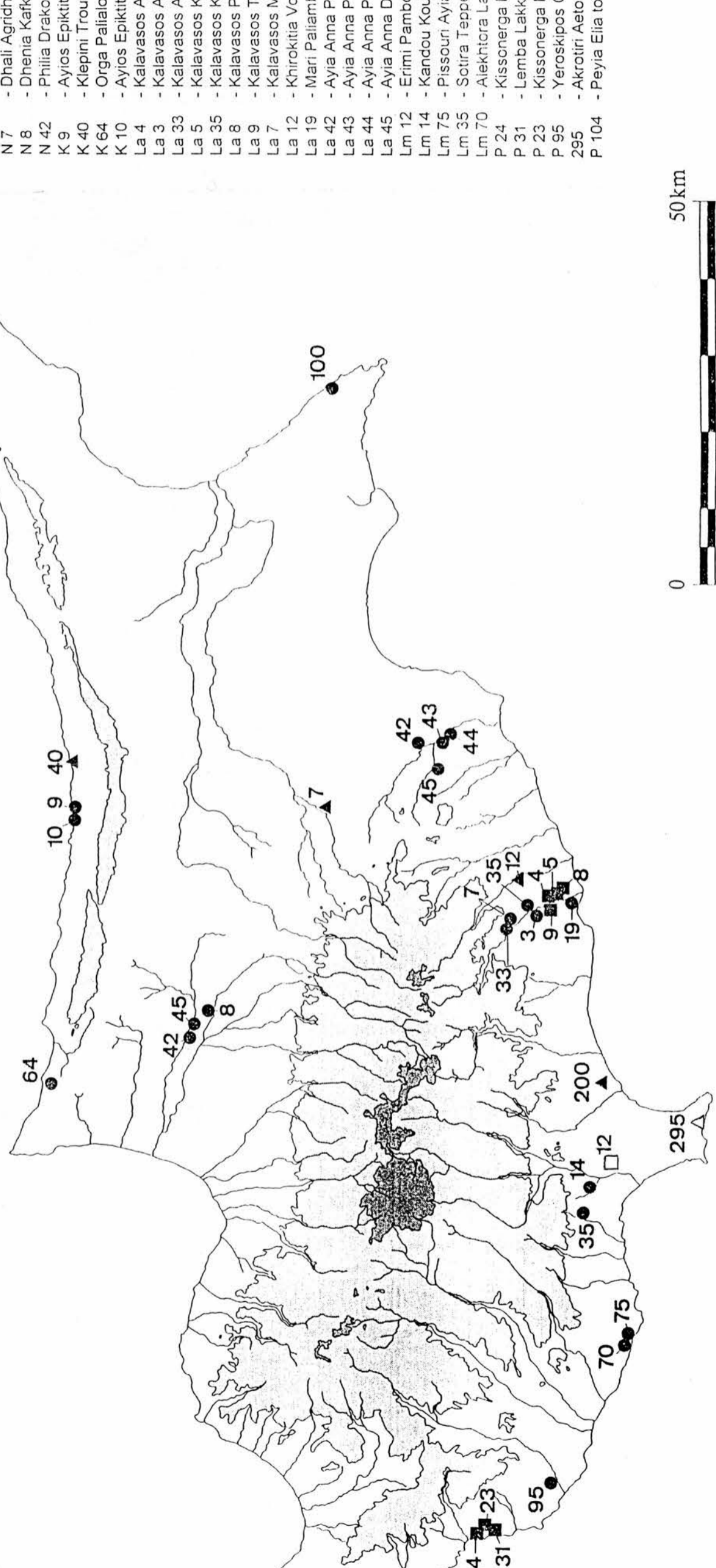
island, would have experienced more extreme climatic conditions than settlement on the coast. The evidence from settlement patterns shows a strong correlation between optimum environmental zones and a high density of human habitation. The coastal littoral and lowland river valleys were well-watered by an abundance of perennial springs. Water flow along the river valleys during the winter months would have ensured enough water all year round to support a substantial population. Even so, the pattern of settlement clustering during the SCU and into the later ECU cannot be explained by optimum environmental conditions alone. Therefore, socio-economic reasons for settlement clustering will be explored in later chapters. Furthermore, the nature of SCU settlement, characterised by a variety of settlement types, may not have been wholly due to temporal factors. Sites which display atypical architecture and settlement patterns, have traditionally been explained as belonging to the later, post Sotira, "Earthquake Phase". It would appear that this is too simplistic a view, and that settlement differentiation may be due to a combination of economic and subsistence factors which will be discussed in later chapters.



Map 2.1 - The Geographic Regions of Cyprus
54

- △ Akrotiri Phase site
- ▲ KCU/SCU site
- SCU site
- SCU/ECU site
- ECU site

- Lm 200 - Parakkishta Shillouroukambos
- F 100 - Paralimni Klissha
- N 45 - Philia Kafkalla tou Koundourou
- N 7 - Dhali Agridhi
- N 8 - Dhenia Kafkalla
- N 42 - Philia Drakos A
- K 9 - Ayios Epiktos Vrysi
- K 40 - Klepini Troulli
- K 64 - Orga Paliatonia / Ambellia
- K 10 - Ayios Epiktos Xylomandra
- La 4 - Kalavassos Ayious
- La 3 - Kalavassos Arkhangelos
- La 33 - Kalavassos Angastromeni
- La 5 - Kalavassos Kokkinoyia
- La 35 - Kalavassos Kafkalla
- La 8 - Kalavassos Pamboules
- La 9 - Kalavassos Tenta
- La 7 - Kalavassos Markotis
- La 12 - Khirokitia Vounoi
- La 19 - Mari Paliambeia
- La 42 - Ayia Anna Phramena 2
- La 43 - Ayia Anna Phramena 4
- La 44 - Ayia Anna Phramena 5
- La 45 - Ayia Anna Dhimna
- Lm 12 - Erimi Pamboules
- Lm 14 - Kandou Koufovounos
- Lm 75 - Pissouri Ayia Eleni
- Lm 35 - Sotira Teppes
- Lm 70 - Alekhtora Laoni tou Kotsiri
- P 24 - Kissonerga Miyiouthkia
- P 31 - Lemba Lakkous
- P 23 - Kissonerga Mosphilia
- P 95 - Yeroskipos Chouvljin tis Yermaninis A
- 295 - Akrotiri Aetokremnos
- P 104 - Peyia Elia tou Vatani 1



Map 2.2 - Major Early Prehistoric sites in Cyprus*

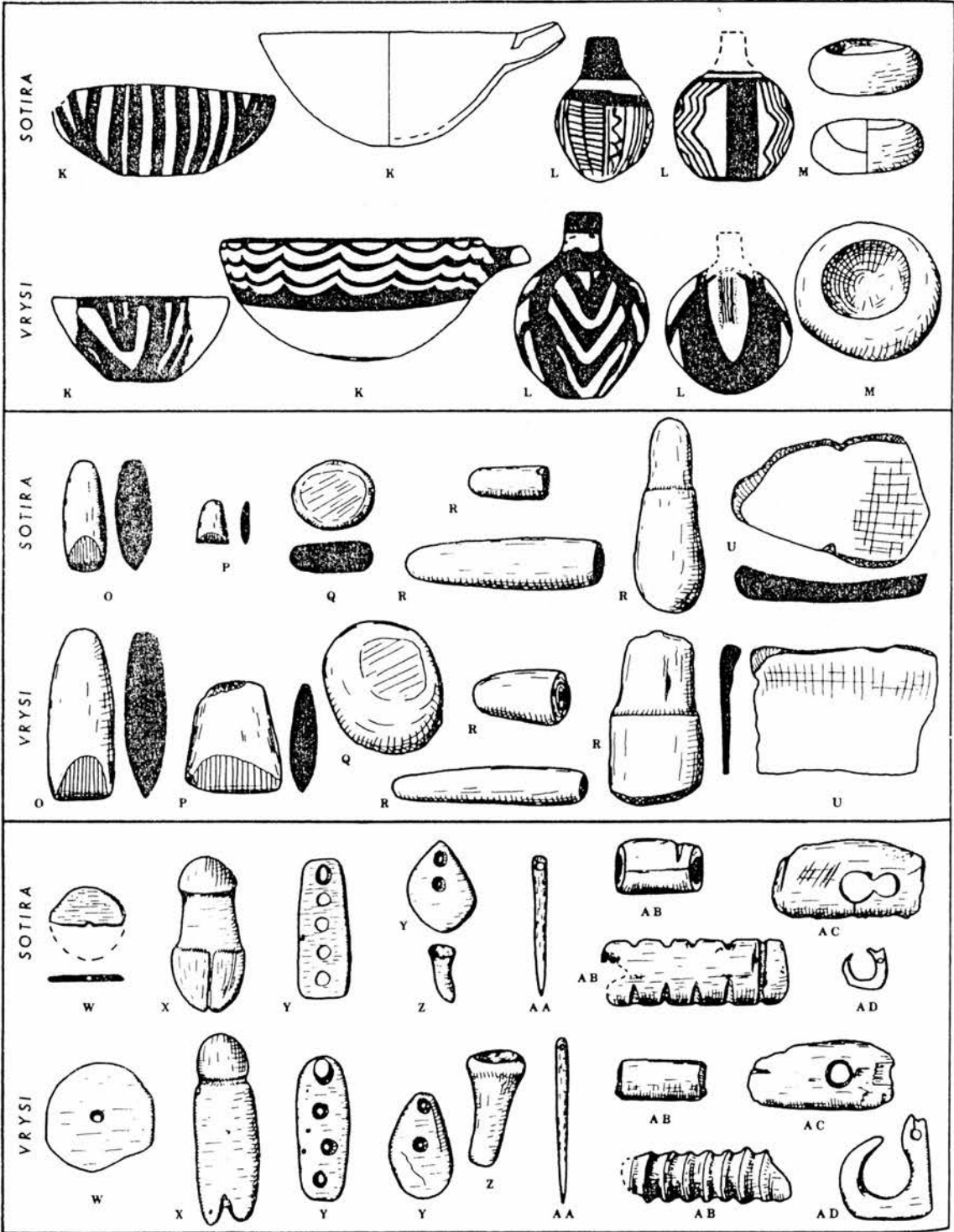


Figure 2.1 - Material culture items from Sotira and Vrysi, showing similarities

(cf: Peltenburg 1978, Figure 3. 60)

DHALI-AGRIDHI:

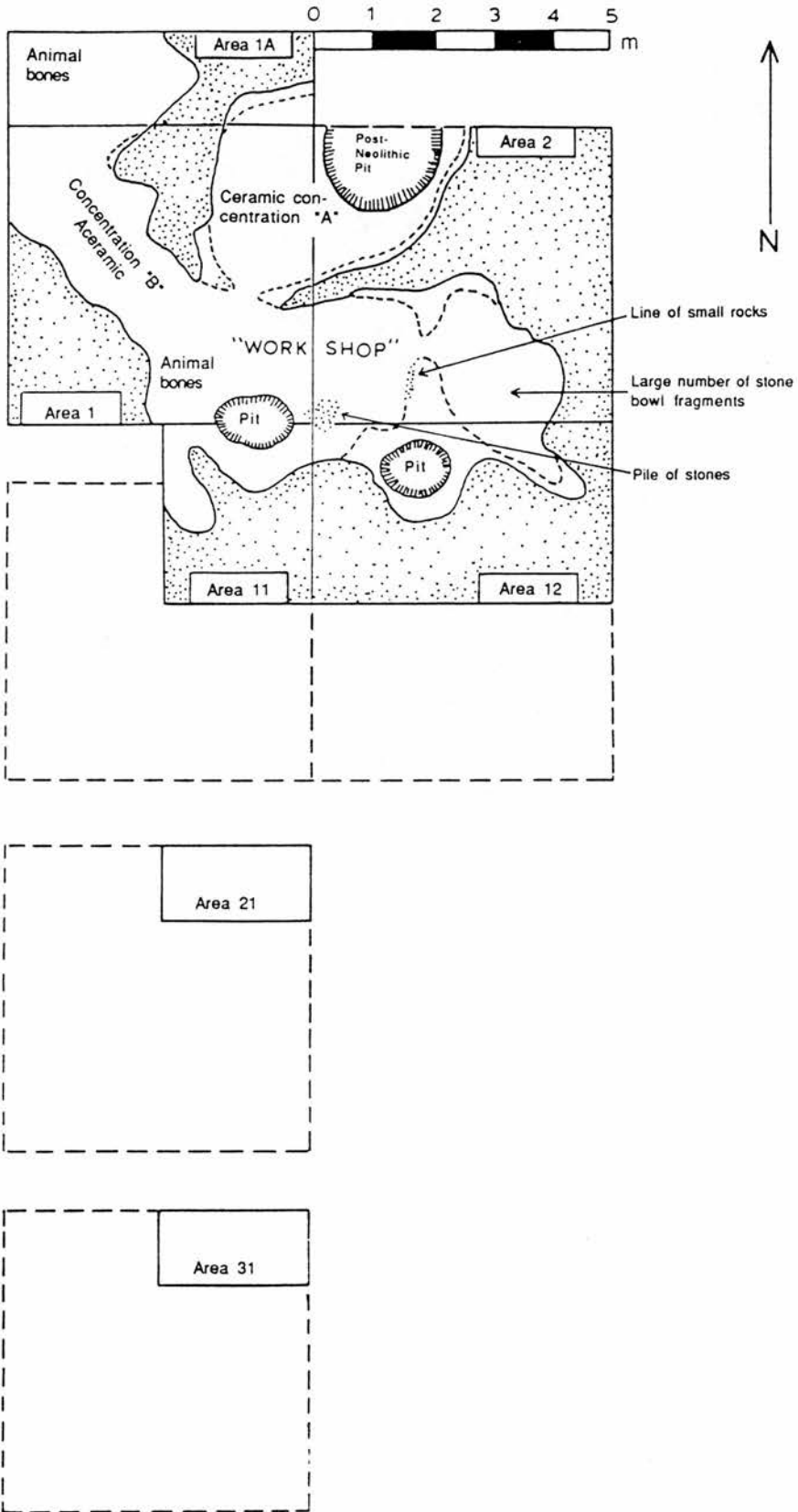
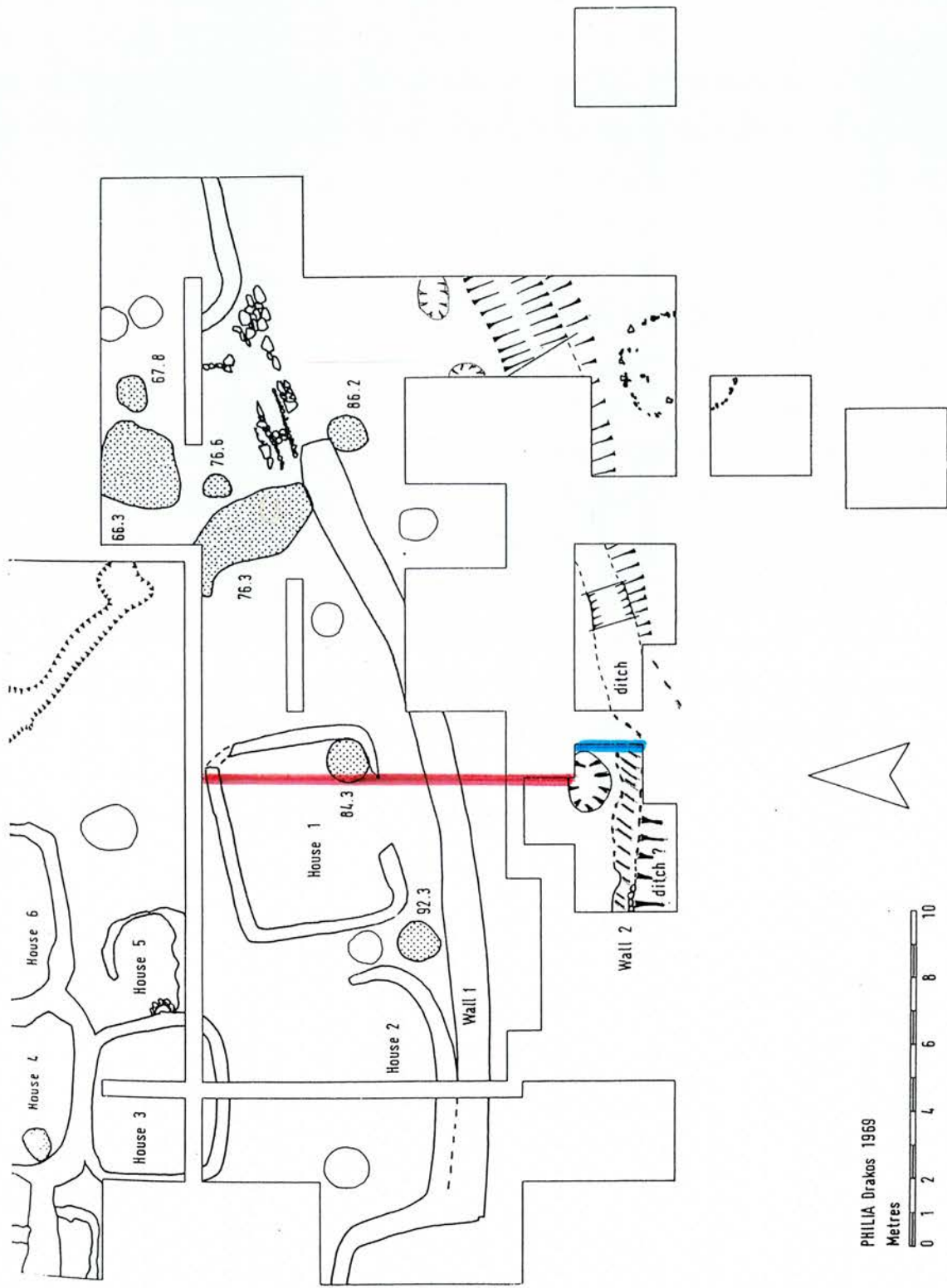


Figure 2.2 - Dhali-Agridhi, Final Top Plan; Seasons 1972, 1974, and 1976. Concentrations A and B, 1972, Areas 1A and 2, 1974; Areas 11, 12, 21, and 31, 1976.



PHILIA Drakos 1969
Metres
0 1 2 4 6 8 10

Figure 2.3 - Plan of *Philia Drakos A*, showing in red and blue, the two main sections illustrated in Figure 2.4
(cf. Watkins n.d.)

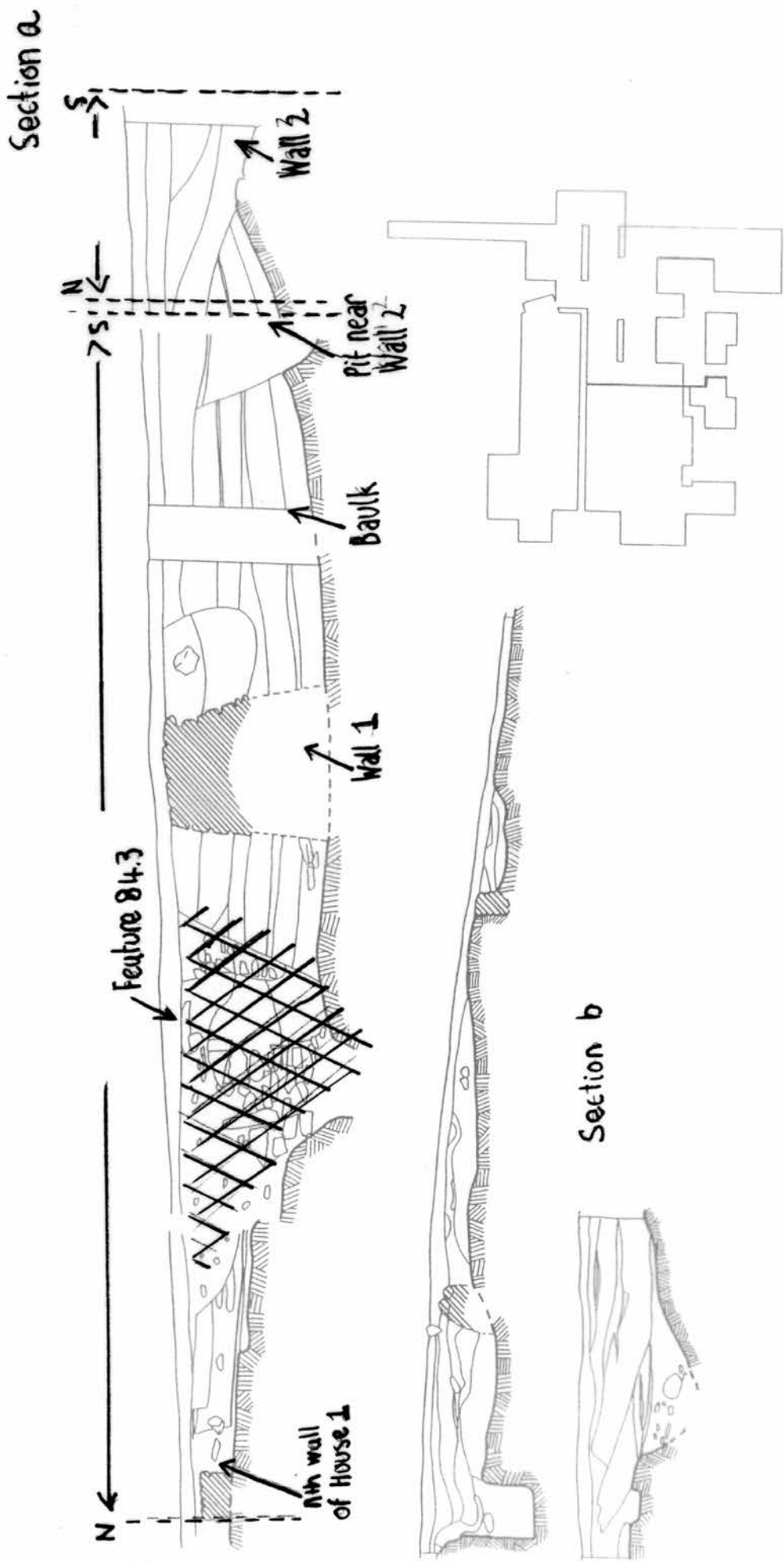


Figure 2.4 - Sections through the site of Philia Drakos A (a and b marked on the overlay = the sections marked in red and blue in Figure 2.3 respectively)

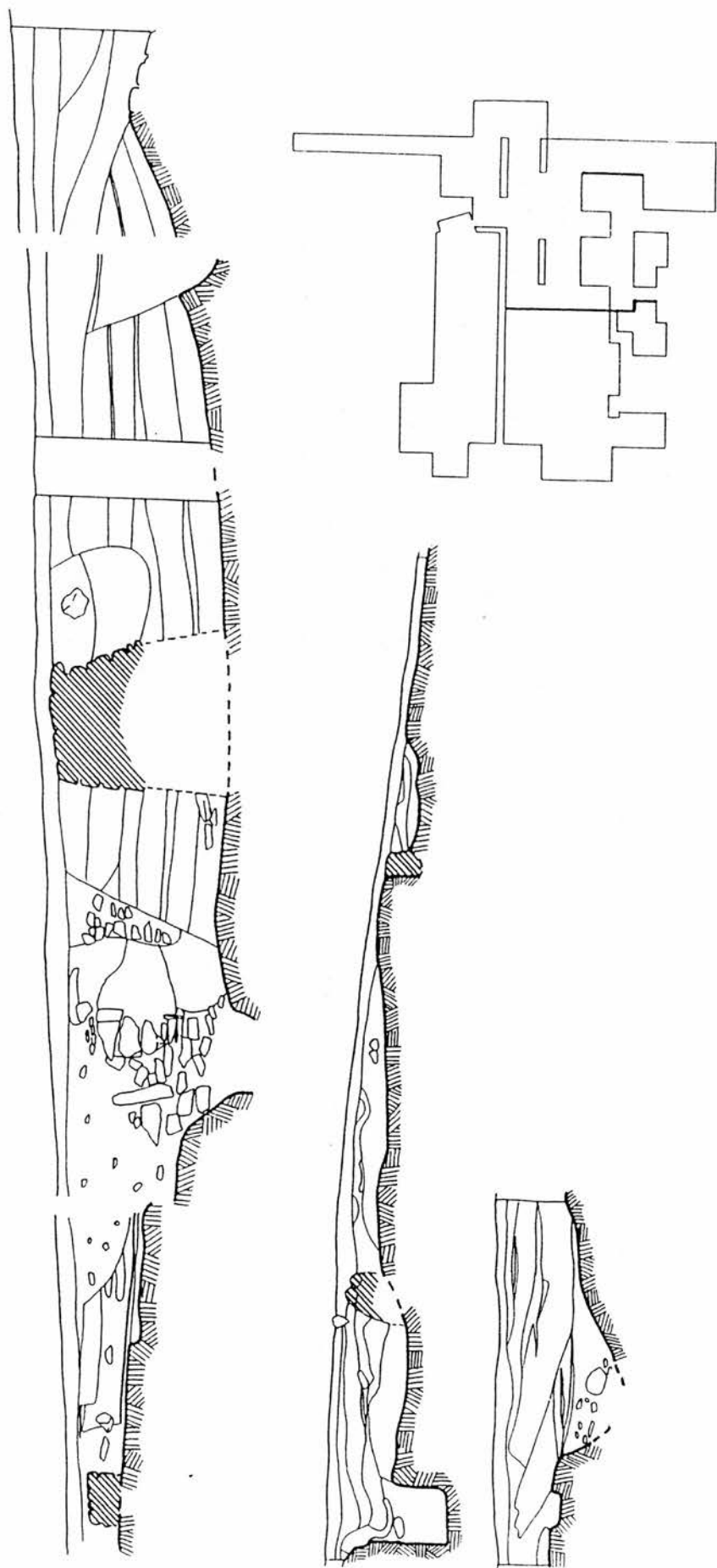


Figure 2.4 - Sections through the site of Philia Drakos A (a and b marked on the overlay = the sections marked in red and blue in Figure 2.3 respectively)

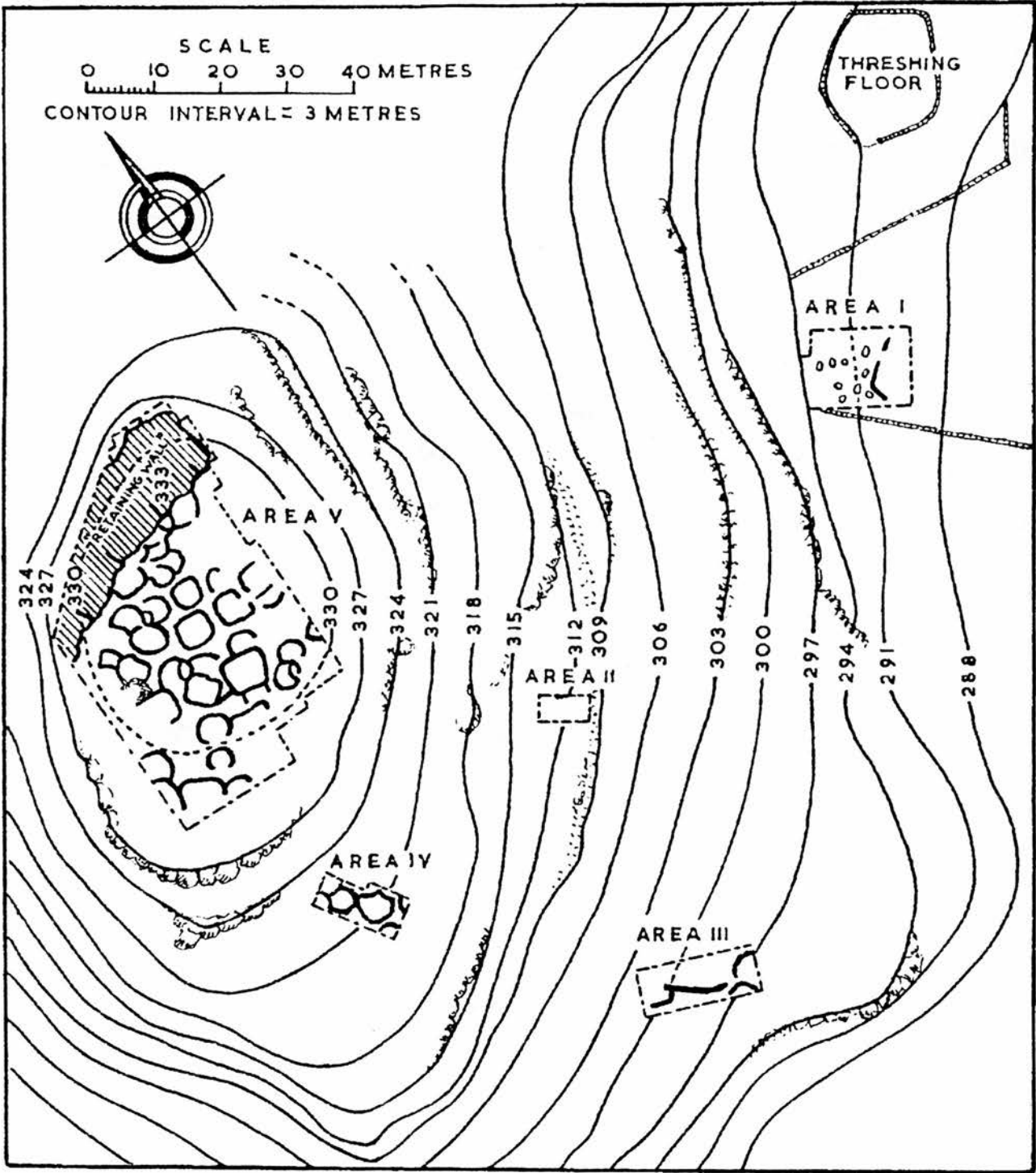


Figure 2.5 - Plan of Sotira Teppes, Area's I, II, III, IV, and V

(cf. Dikaios 1961. Plate 4)

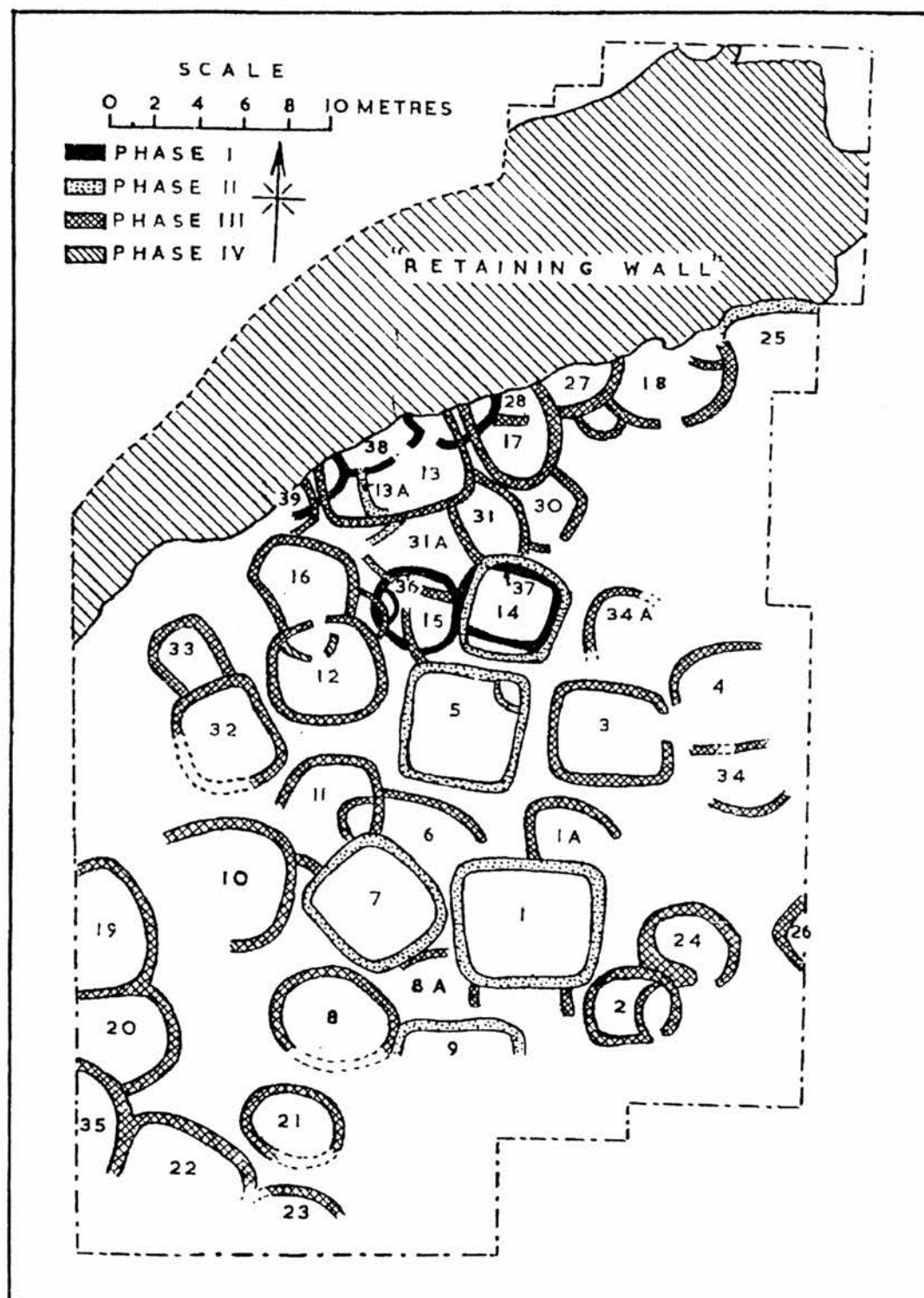


Figure 2.6 - Plan of Area V at Sotira *Teppes*, showing the major building phases

(cf: Dikaios 1961, Plate 8)

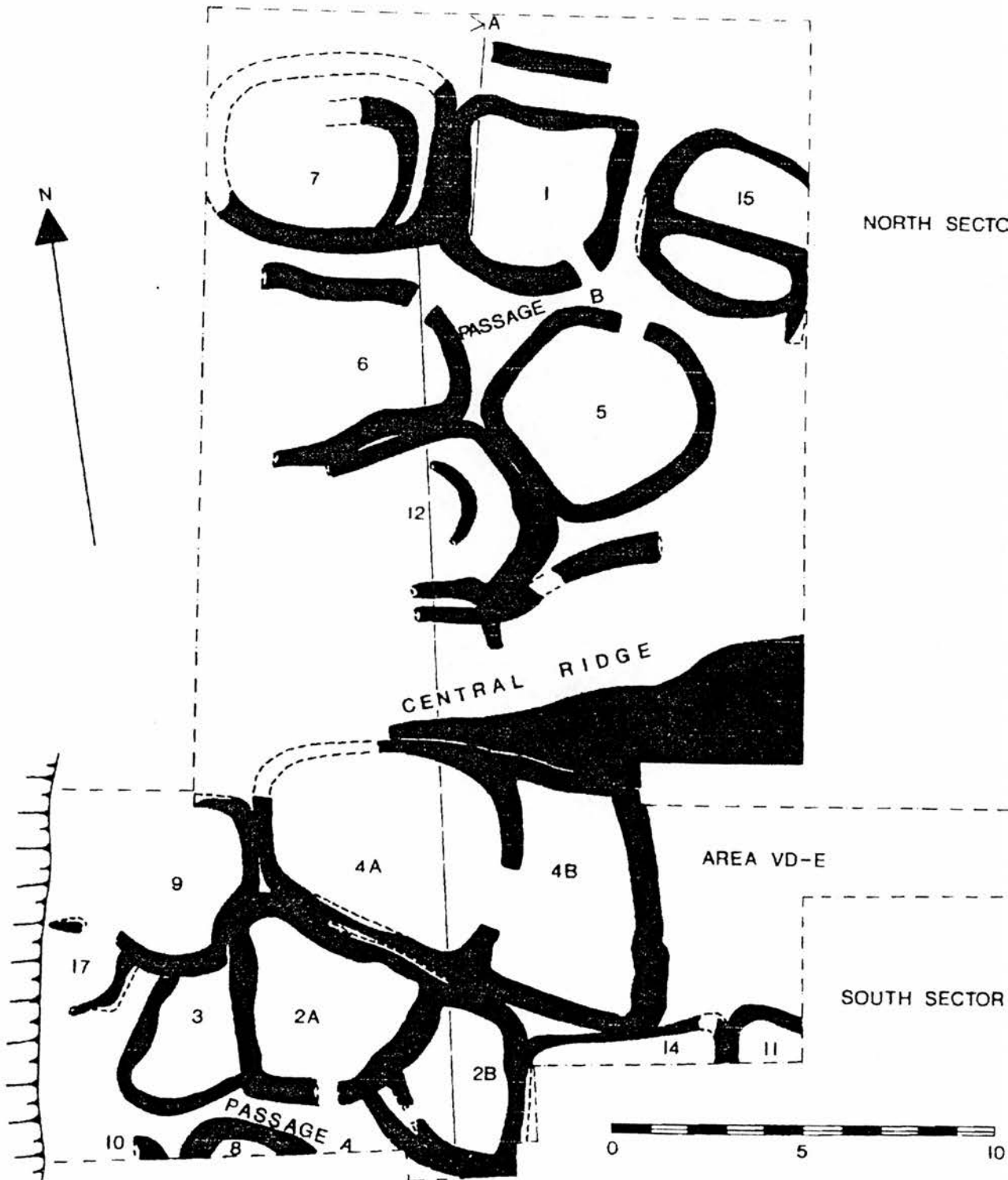


Figure 2.7 - Plan of Ayios Epiktitos Vrysi, North and South Sectors

(cf. Peltenburg 1982b. Figure 2)

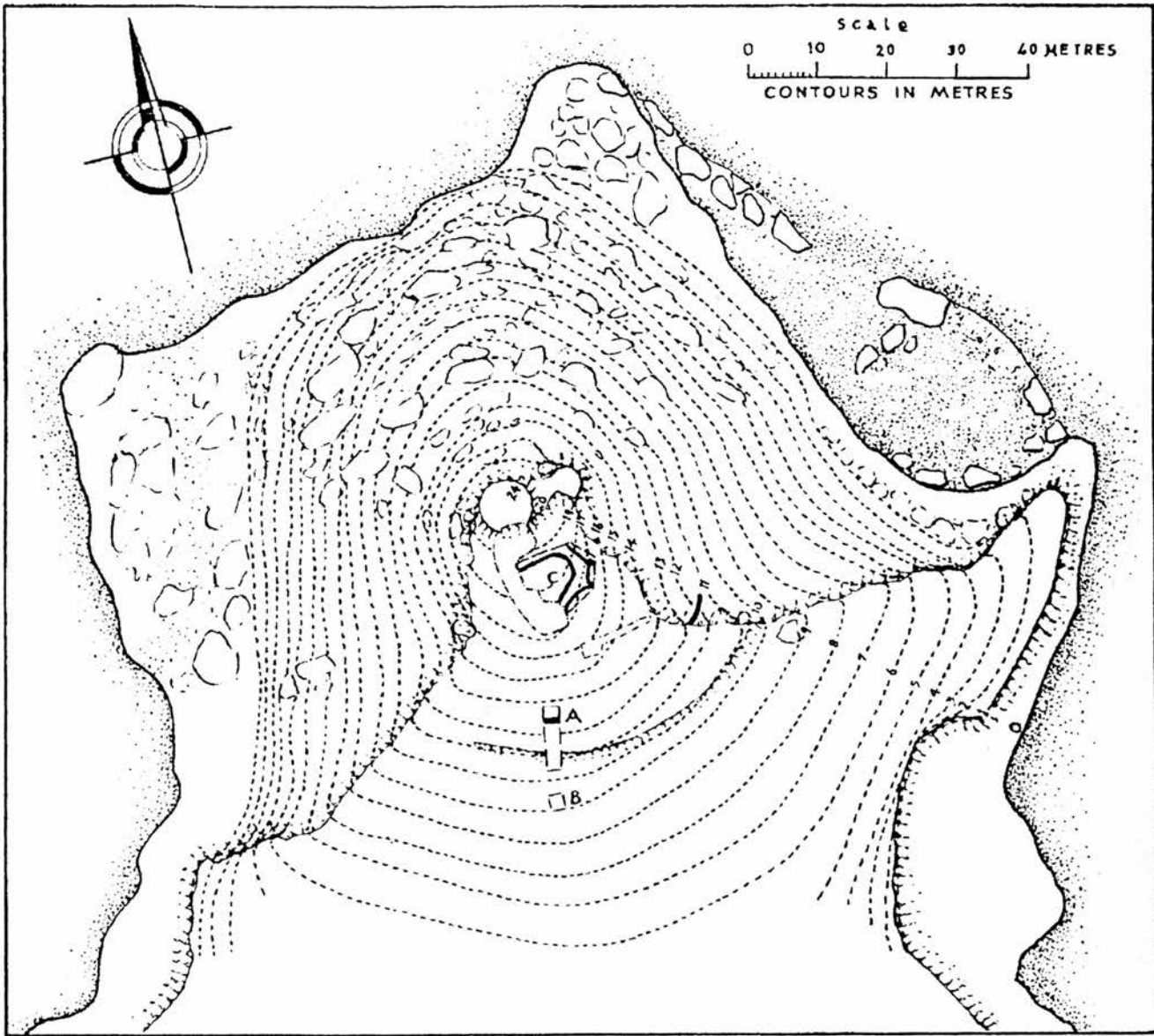


Figure 2.8 - Klepini Troulli, site and environs

(cf. Dikaios 1962, Figure 32, 64)

KHIROKITIA 1977-1981

Niveau Ic



276
"standing" stones →

"standing" stones →
282

↑
"standing" stones
(see Figure 2.11)

Khirokitia 1977-1981. Plan du niveau Ic.

Figure 10. Khirokitia Vounoi: the overlay marks the line of standing stones dating to the SCU

(cf. LeBrun 1981, Figure 11, 20)

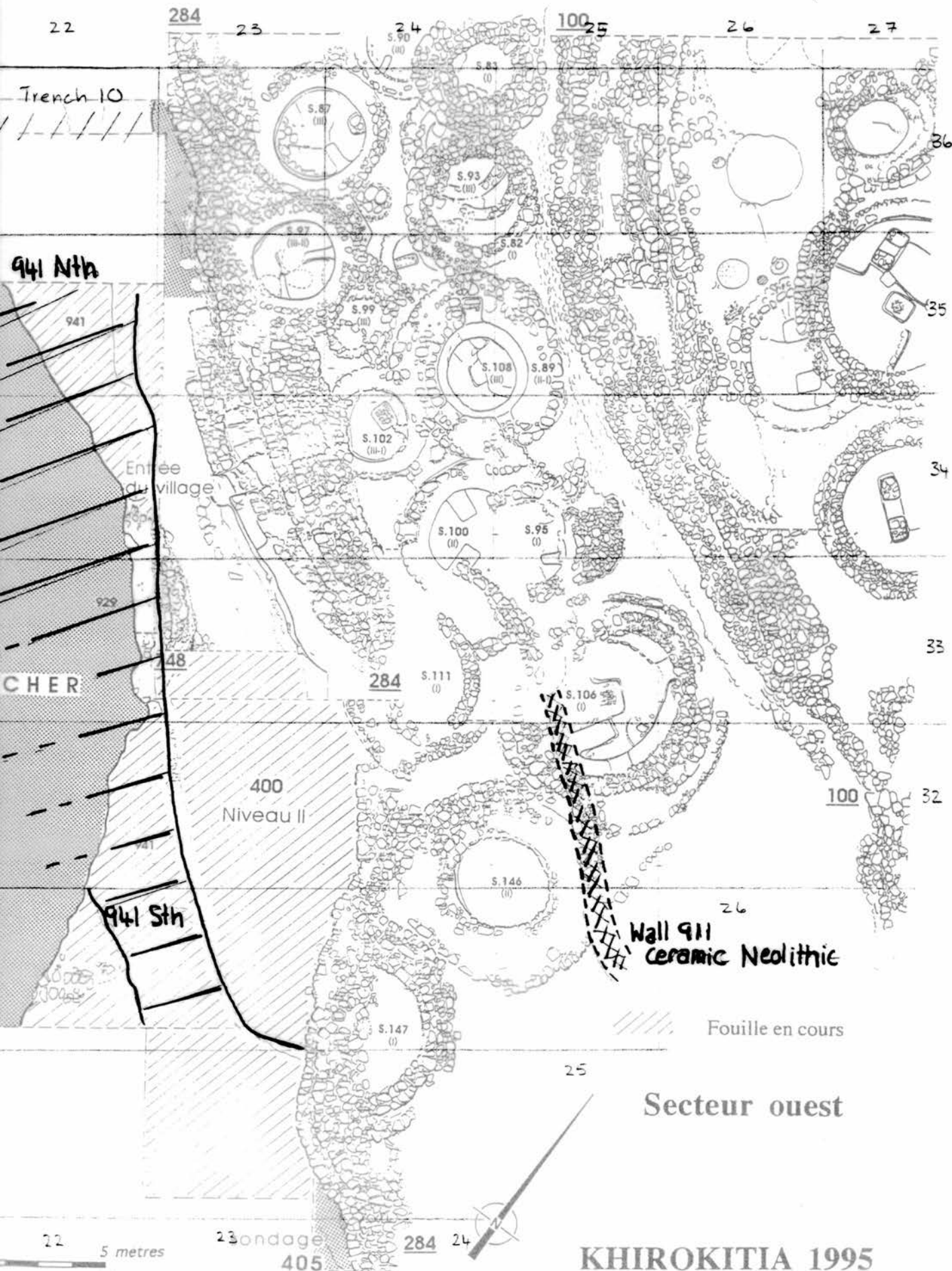


Figure 2.10 - Khrokitia Vounoi: overlay shows line of SCU wall and the ditch where most of the ceramics were found

(with the courtesy of A. and O. Le Brun)

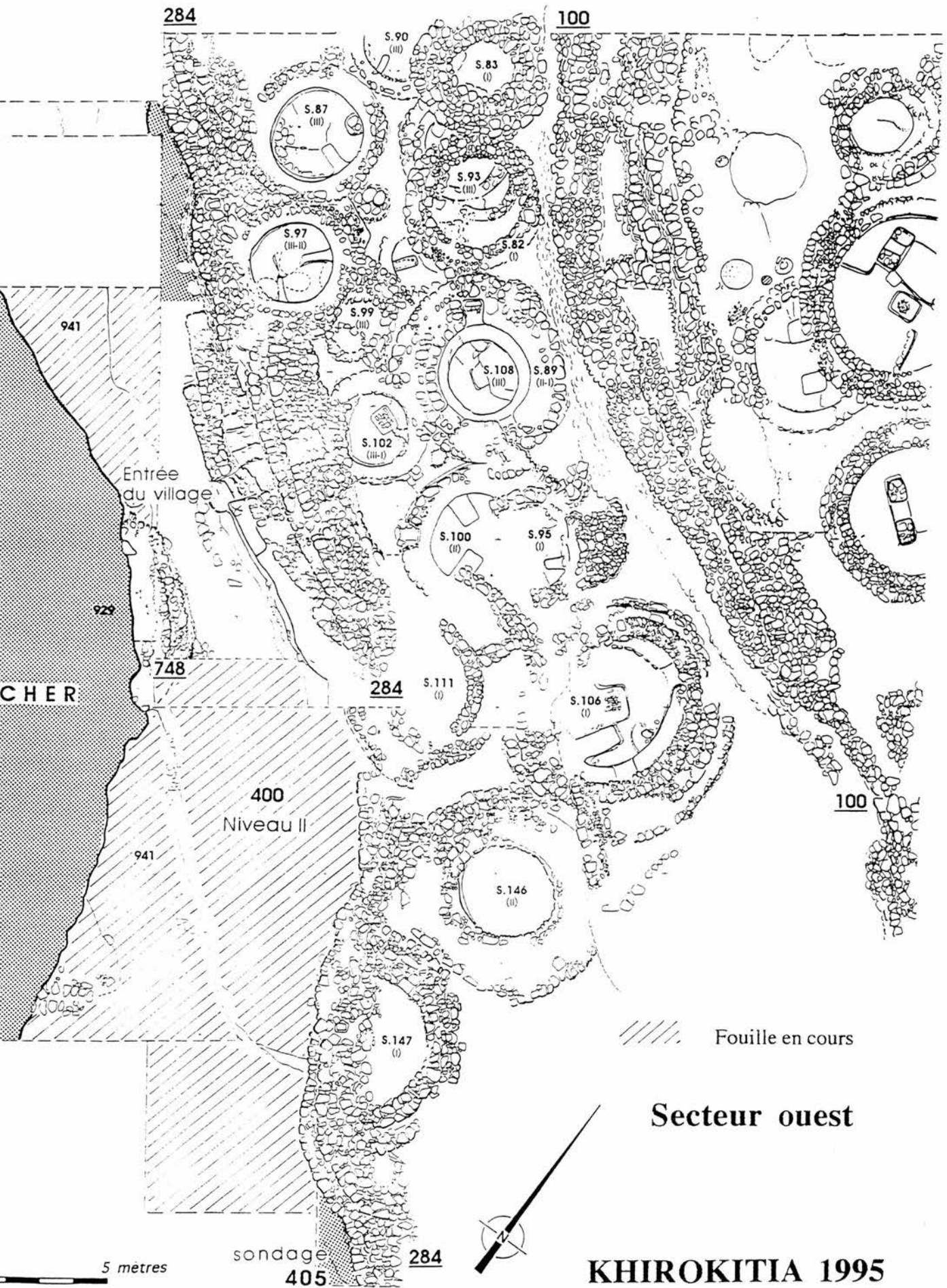


Figure 2.10 - Khirokitia Vounoi: overlay shows line of SCU wall and the ditch where most of the ceramics were found

(with the courtesy of A. and O. Le Brun)

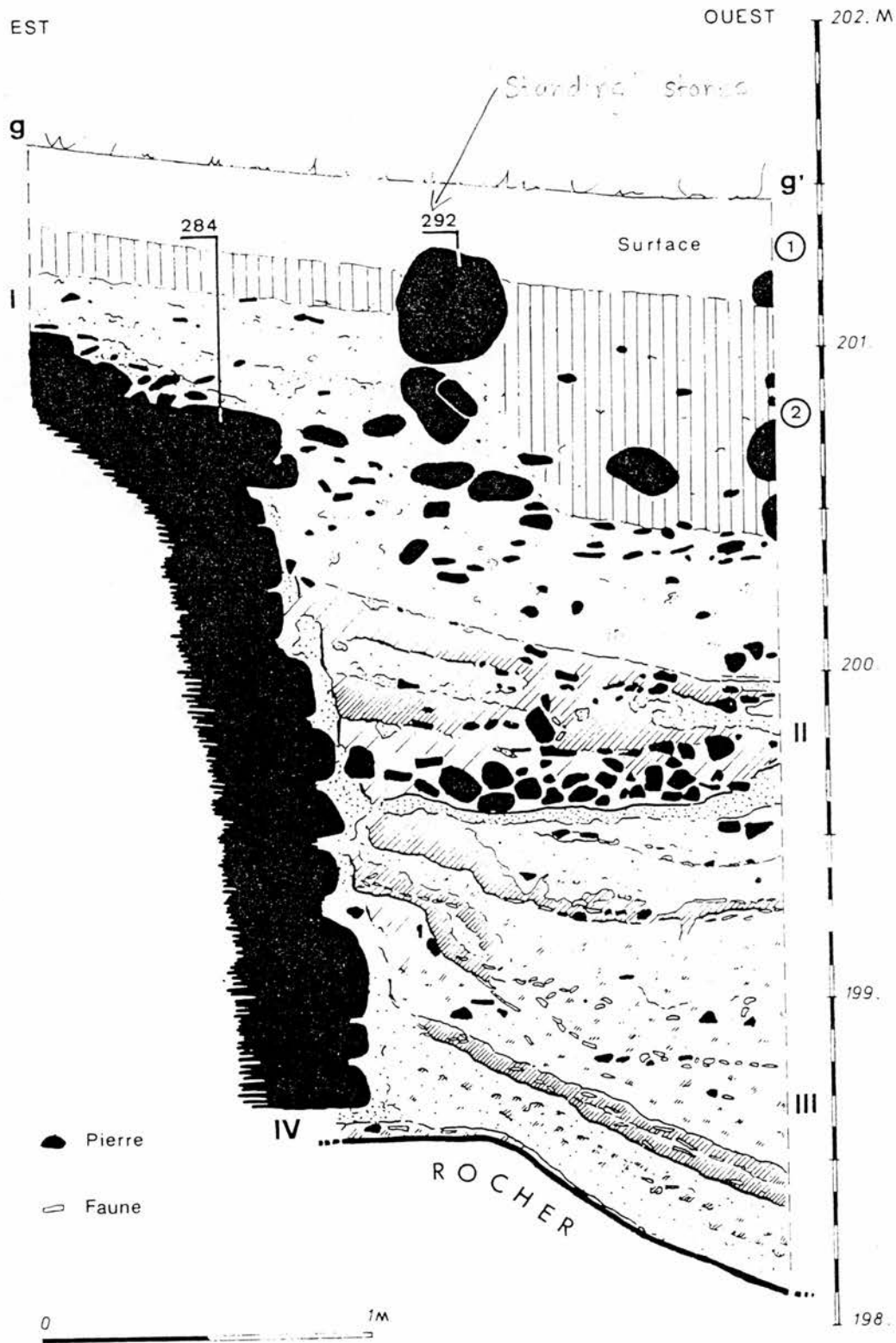


Figure 2.11 - Khirokitia Vounoi: section showing "standing" stone 292 (see Fig. 2.9)

(cf. Le Brun 1981, Figure 12. 44)

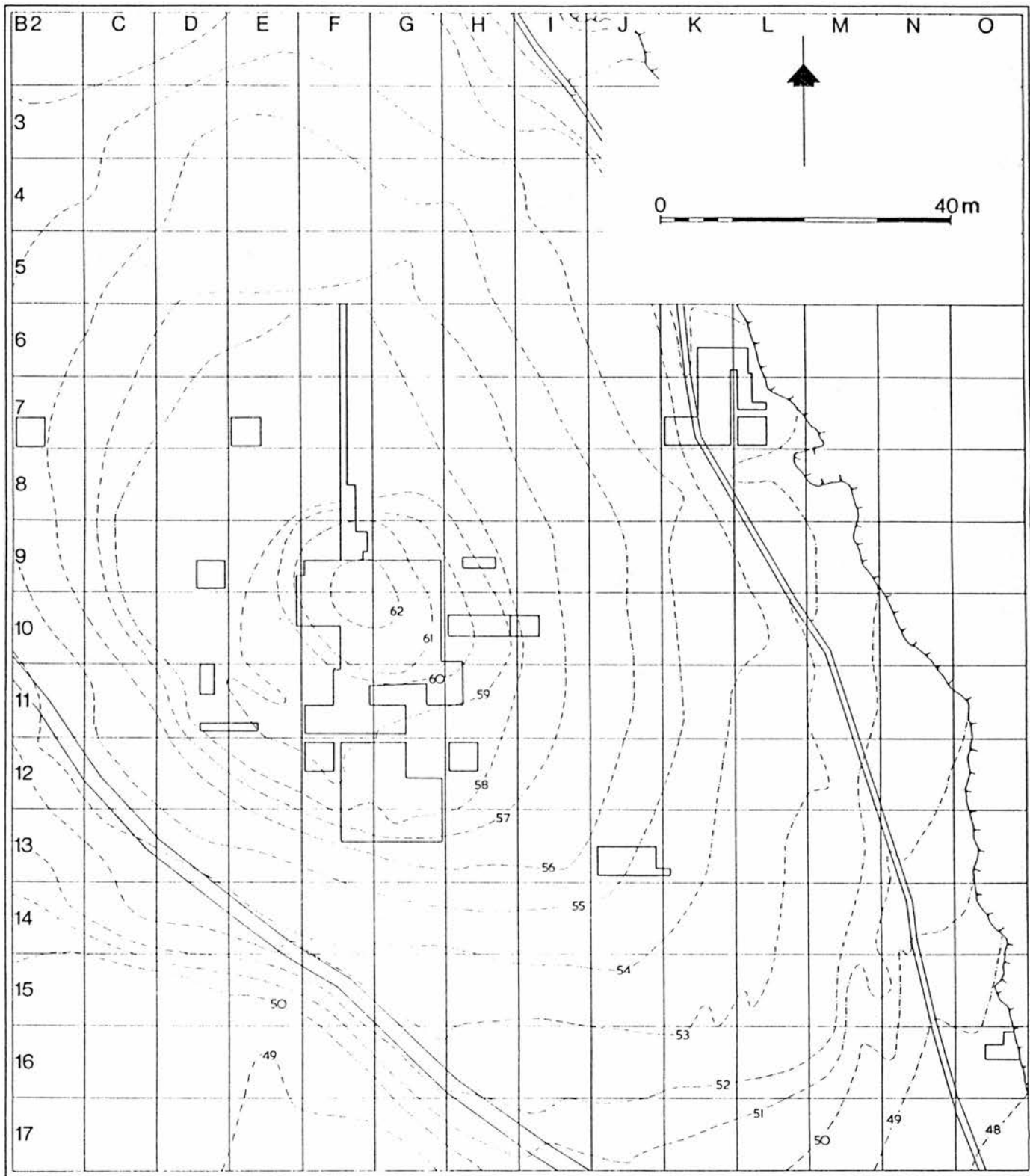


Figure 2.12 - Plan of Kalavassos *Tenta*, indicating Area O16B

(cf. Todd 1987, Figure 17)

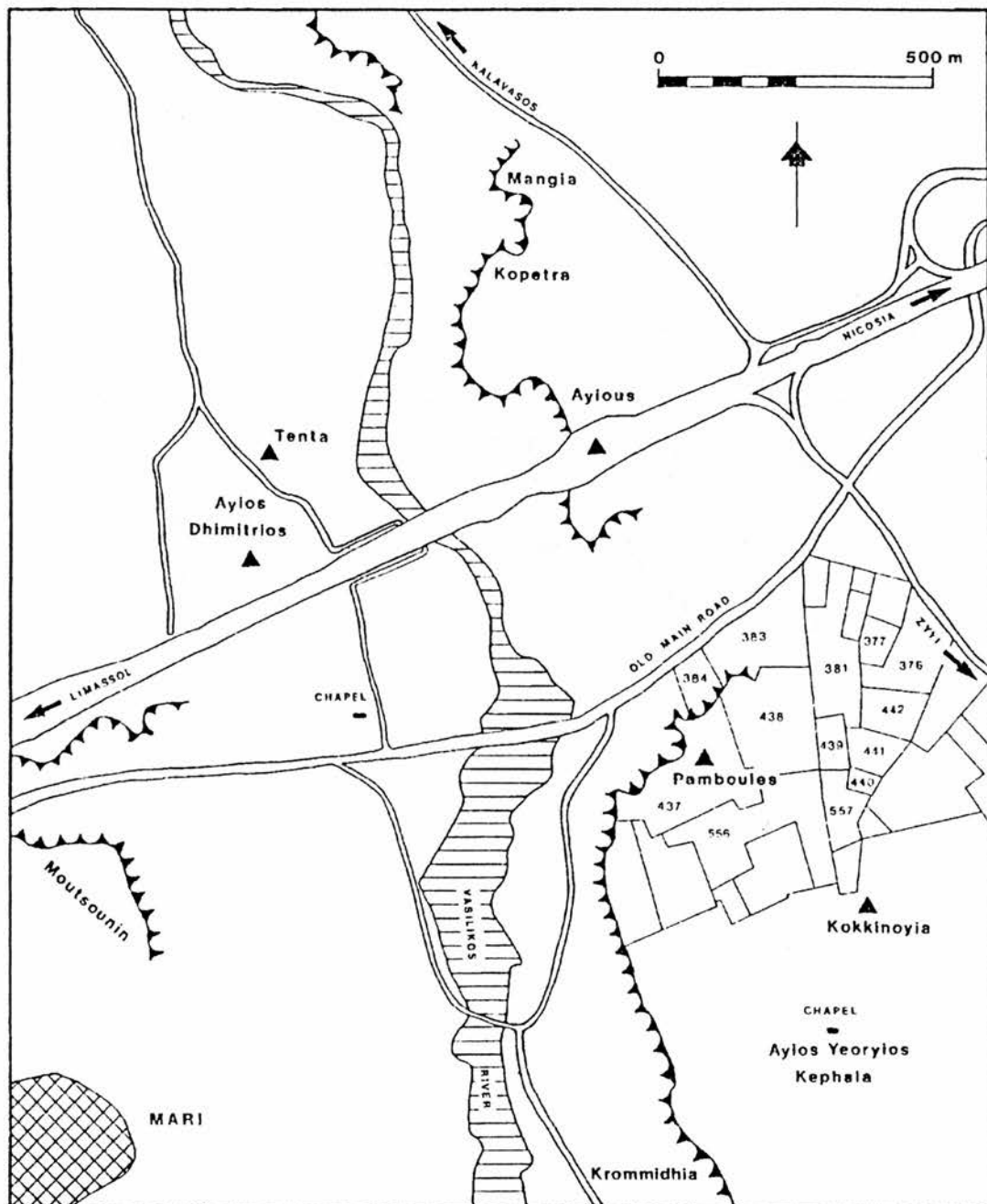


Figure 2.13 - The Kalavassos Survey sites, indicating Dikaios' excavation at Kokkinoyia, the survey area of Pamboules, and the excavations of Ayious and Tenta

(cf: Todd 1987. Figure 1)

CHAPTER 3

THE ABSOLUTE CHRONOLOGY AND RELATIVE DATING SEQUENCE

3.1 - Introduction

An argument for regional variation relies upon temporal comparability between the sites reviewed in this study. Although Dikaios's uni-linear chronological framework has been refuted, there is still a time-frame of some 400 years occupied by the SCU¹. The object is to correlate radiocarbon evidence with the seriation of individual ceramic sequences so that archaeological events are matched up on a chronological scale. To do this, it is first necessary to show that sites with predominantly positive design traditions (the Red on White tradition of the northern, eastern and western regions) are contemporaneous with sites with predominantly negative design traditions (the Combed tradition of the South-Central Region), and that all sites fall within the accepted time range for the SCU. The radiocarbon determinations provide a calibrated calendrical date band for the SCU, and the relative sequence places the archaeological phases, or events, at each site in chronological order within this band. The site of Vrysi, with a series of seventeen radiocarbon assays, provides the bench mark upon which other sites are compared. Using the relative and absolute evidence, a chronological matrix can be constructed which gives the broad temporal relationship between sites. However, even with the Vrysi assays, the dating evidence for the SCU is woefully inadequate. Problems with calibration, and a dearth of radiocarbon determinations from other SCU sites, increases the uncertainty that all sites within the sample are actually contemporaneous. Although there is considerable overlap in the pottery traditions, many of the sites in this study include poorly stratified excavation and survey samples, where only a percentage of the pottery fits stylistically within the SCU. In these cases there is a heavy reliance upon sequence dating based on the proportional occurrence of different ware types. Even so, there is enough overlap between the well excavated sites to illustrate broad contemporaneity.

This chapter reviews the relative and absolute dating evidence. There are a number of theoretical and methodological issues relevant to chronology in general which are discussed in the first section in relation to the Cypriot evidence. The second section tackles the problems associated

¹ 400 years is the widely accepted estimate for the chronological range of the SCU. Radiocarbon determinations at two sigma greatly extend the range.

with chronometric dating and its application to the SCU. Recently, most discussion has focused on calibration. With the development of a calibration curve extending back into the Pleistocene (Stuiver & Reimer 1993), the scope for fixing ever earlier calendrical determinations has increased. Unfortunately, even with high-precision dating methods, accuracy has not increased in line with dendochronological advancements. The problems associated with converting radiocarbon dates into calendrical years are particularly relevant to the time band between the fifth and fourth millennia B.C., and the relevance of this problem to the SCU dates is discussed. In the third section, the relative dating sequence for the SCU is reviewed. Previously, illustration of contemporaneity between SCU sites has been confined to a comparison of the pottery from Philia, Troulli, Sotira and Vrysi (Peltenburg 1975, 1978, 1979) and work at Tenta by Baird (Baird n.d.a.). There are many more sites which fall within the SCU cultural tradition and these will be linked into the relative chronology devised originally by Peltenburg and updated in this study.

3.2 - Chronology and methodology

The SCU Phase is dated radiometrically to between 5000 B.C. and 3900/3750 B.C. calibrated (Table 3.2)². The longevity of the period is misleading due to large error margins in the radiocarbon dates which have produced long trails at two standard deviations (Table 3.1). It is generally accepted that the floruit lasted about 400 years between 4300 B.C. and 3900 B.C., on the basis of the dates from Vrysi (Knapp, Held and Manning 1994, 381). However, Knapp would see the end of the phase brought forward to as late as 3750 B.C., as the Vrysi dates come from wood samples, and therefore, there is a possibility that they are older than their cultural employment (Knapp, Held and Manning 1994, 385). The chronology of the period derives from two sources, absolute determinations from radiocarbon sampling and a relative sequence established by seriation of the pottery between sites. An absolute date band has been obtained from a series of seventeen radiocarbon assays from Vrysi, and a number of single and double assays from other sites. The individual determinations from sites other than Vrysi cannot be used as a method of dating the absolute age of these sites, but they do give an indication that the sites fall within the range of the SCU Phase. Taken as a group, they also represent a reliable estimate of the age and duration of the period as a whole (Table 3.2).

² Table's 3.1, 3.2 and Figure's 3.1, 3.2, 3.3, 3.4, 3.5, 3.7, 3.8 and 3.11 are located at the end of this chapter.

3.3 - Principles and problems of relative chronology

The chronological ordering of most SCU sites is usually calculated by seriating each individual pottery assemblage with the well defined Vrysi sequence. Seriation of material culture assemblages has been used by archaeologists since its invention by Petrie in the late nineteenth century (Petrie 1899) but there are problems with the method which directly impinge upon the reliability of the SCU sequence. There are two types of seriation. The first, contextual seriation, compares the duration of different artefact styles by placing groups of artefacts in chronological order, based on the presence or absence of different artefacts in each group, or changes in artefact style. This was the method pioneered by Petrie during his excavations at the pre-dynastic site of Diospolis Parva (Petrie 1901). Petrie believed that the best arrangement for a series of tomb groups would be the one where the greatest number of individual artefact types had the shortest duration across each tomb assemblage. He arranged a series of tomb groups into seven phases, each linked to the other by at least one similar shape. The key to his sequence was the degradation of the wavy-handled jar, which appeared in five of the seven phases. Petrie's method has since been largely supported by subsequent research in Egypt. The second method, frequency seriation, was developed by American archaeologists working at Maya sites in the 1940s, and refined by Brainerd and Robinson in the early 1950s (Brainerd 1951; Robinson 1951). The principle was to compare the proportion of ceramic collections without stratigraphic context. They assumed that pottery styles had an inception, floruit and decline and that this was reflected in the proportion of different styles over time. This pattern could be mapped for individual styles and the corresponding "battleship curves", as they were called, could be arranged in a manner which would show the association of pottery styles with each other. They argued that, at a given time, a pot style popular at one site would be similarly popular at another. The more similar the frequency of styles across sites, the more contemporaneous the sites. The two methods of seriation have been applied to many cultural traditions with varying degrees of success depending on the nature of the culture, its geographical distribution and degree of interaction with other contemporaneous cultures. In Cyprus, seriation has been used to chronologically order pottery typologies of all periods, in particular the Early Prehistoric and Bronze Age sequences instituted by Gjerstad (Gjerstad 1926) and furthered by Dikaios (Dikaios 1962) and Stewart (Stewart 1962).

The most significant problem with both methods is the failure to identify variation as spatial rather than temporal, and this has initiated the re-evaluation of many transitional phases in Cyprus

and the Near East (for the Cypriot Early Bronze Age, see Dikaios 1962; Herscher 1981; Manning 1993; Peltenburg 1991; and Swiny 1985; for the Halaf Culture, see Campbell 1992; Watkins and Campbell 1987). Even within one cultural phase, there can be problems with temporal versus spatial variation (for Cypriot Middle Bronze Age ceramics, see Frankel 1974a, 1974b).

Dunnell (Dunnell 1970) suggests applying three general conditions to avoid the problems inherent in seriation:

1. All groups must be of equal duration.
2. Groups should be of the same cultural tradition.
3. All groups should be from the same local area.

The SCU satisfies Condition 2, and it will be shown later in this chapter that it also satisfies Condition 1. Condition 3 poses its own set of problems which are directly relevant to this study and the role of regional variation in pottery traditions. The geographical extent of the SCU incorporates significant geographical boundaries. Given that it is these boundaries which likely contribute to spatial variation, in this instance, Condition 3 must be considered in relation to the material culture in question, and within the parameters of the questions posed.

A second problem related to sequence dating arises from inadequacies in the archaeological record. If there are too few sites, or too few well excavated sites, gaps in the relative sequence are unavoidable. The SCU evidence is far from adequate. There are temporal and spatial lacunas which lead to hypotheses based upon negative evidence. For example, the relationship between Monochrome Burnished Ware (MBW) and the decorated wares is far from clear. Philia has produced MBW in stratigraphic levels below decorated wares, but at Dhali, MBW occurs in isolation. Even so, it has been hypothesised that MBW is the forerunner to decorated wares on the evidence of Philia alone (Watkins 1970, 1973). This theory is then extrapolated to include the rest of Cyprus (Held 1992b, 1993), while economic and spatial considerations are largely ignored. The same is true for the end of the period where evidence for the transition from the SCU to the SCU/ECU phase is only present at a few sites in the West and rather confusingly in the Kalavassos region.

A third problem is the role of socio/economic and subsistence strategies. Evidence suggests that differing subsistence strategies were frequently practised at different sites at varying times of the

year. These differences contribute to the level of variation in assemblages. A particularly acute example is the difficulty in establishing a relative chronology for the Halaf sequence in North Mesopotamia. In the first instance the spatial and temporal parameters of the culture are difficult to delimit because of the differential diffusion of cultural traits across the region traditionally accepted as coming under the Halafian cultural orbit. Secondly, a dearth of adequately excavated sites, equally distributed over the entire region, contributes to gaps in the sequence; and thirdly, though less relevant to SCU Cyprus, there are difficulties in defining the relationship between the preceding Hassuna tradition, the overlapping Samarran tradition and the Halaf sequence (Watkins & Campbell 1987, 432-440). For the Halaf sequence, there is evidence that individual sites absorbed Halafian features at differential rates depending on their position within an economically evolving complex society. For example, Watkins & Campbell note that there may be highly localised inter-site variation on very specific details, and a hierarchy of participation in the cultural traits (Watkins & Campbell 1987, 430). Although the SCU Phase has the advantage of being a homogeneous egalitarian society, where social complexity does not feature as an additional factor to an already difficult equation, there is strong evidence that divergent economic strategies were practised at a range of sites.

There are other problems. Peltenburg has recently highlighted inconsistencies in sequence dating sherd-based assemblages (Peltenburg et al. 1998). At Kissonerga *Mosphilia* (Mosphilia), there is evidence that sherdage circulates in the archaeological record for prolonged periods. SCU ware types are found in ECU deposits at Mosphilia and Erimi. In contrast, Peltenburg conducted a study of whole vessels and found that the floruit of a particular ware type closely matched the stratigraphic phasing of Mosphilia with almost no evidence for overlap into other phases. Therefore, Peltenburg suggested that earlier sherdage was being re-used in later building material (Peltenburg et al. 1998). This has problems for sites where only sherd assemblages are used in seriation. A site with a significant proportion of later pottery and only some SCU pottery might belong to a later period where re-use of earlier material has occurred. Sites where this might be the case, include Tenta and Pamboules. The only way to clarify the chronology is by applying a holistic methodology incorporating all evidence which might impinge upon the chronological sequence.

Finally, reliable seriation is dependent upon the classification of pottery into meaningful typologies, and by their very nature, typologies are biased human constructs. Adams and Adams say that:

Typologies, unlike many other classifications, are always made for some purpose, which must necessarily be the purpose of some person or persons. In typologies, therefore, subjectivity is inherent and inevitable.

(Adams & Adams 1991, 48)

Once a pottery assemblage has been categorised on the basis of one or more attributes into a typology, it is that typology which is used as the basis of seriation. If the typology is flawed, then its use as a tool in seriation is also flawed (for a review of the Typological Debate, see Adams and Adams 1991, 278-295). The methodology used in this study to create a reliable typology is discussed in Chapter 4.

Even with the inherent problems of seriation it follows that in SCU Cyprus there is a dearth of other chronological indicators which might help to refine the cultural sequence. The SCU is characterised by single phase sites with little stratigraphic depth and recourse to pottery seriation is often the only option. Having said this, there are drawbacks in trying to seriate pottery from single phase sites with pottery from other single phase sites, especially when spatial variation plays a significant role. Furthermore, the absence of chronological markers, such as easily dated imported material, inhibits fixing the relative sequence in time. However, the very elements which might hinder the relative SCU sequence, in this case actually ensure that the sequence is relatively reliable. The SCU chronology is not adversely affected by interference from the greater Levantine cultural sphere. In SCU Cyprus, there are not the problems of diffusion and cultural complexity which add to the problems noted in the Halaf sequence. The period is homogeneous in all other aspects of its material culture and it has a singularly distinct pottery tradition which is comparable in all features except mode of decoration. Therefore, this thesis argues that the relative chronological relationship between SCU sites can be estimated with a some degree of confidence using a combination of both relative and absolute dating methods. The tight dating framework for the Vrysi sequence can be used as a benchmark for dating the northern sites, and Philia. This framework can then be extrapolated to include the Paphos Region and the Southern Chalk Plateau sites, based on the presence of similar pottery types at each site.

The following section will consider the absolute chronology. First, problems with radiocarbon dating relevant to the SCU are reviewed. The existing radiocarbon dates are re-calibrated using the Oxford University calibration program, Oxcal v2.18 based upon the calibration curve

established by Stuiver and Reimer (Stuiver and Reimer 1993). Finally, the problems associated with each set of dates will be discussed.

3.4 - Principles and problems of absolute chronology

It is difficult to review the existing radiocarbon determinations for the SCU without first summarising some of the problems which directly impinge upon the validity of the dates. Recent work on the extension and refinement of the calibration curve has increased the time span upon which radiocarbon determinations can be calibrated, but it has also highlighted a number of problems concerning the reliability of absolute dating methods in general. As radiocarbon determinations become more accurate, and scientific methods of measuring radiocarbon residues in archaeological samples become more precise, archaeologists are reviewing their own methodologies and questioning the validity of calibrating dates (Aitchison, Ottaway and Al-Ruzaiza 1991; Buck, Litton and Scott 1994; Manning 1991; Watkins and Campbell 1987, 440-449; Whittle 1988, 12-35). Recent deliberations on the effectiveness of radiocarbon dating in archaeology have been the basis for a series of seminars and workshops; the debate is ongoing and the topics wide ranging (see *Antiquity* 1987, Vol.61/231; *Antiquity* 1991, Vol.65/249; Aurenche, Evin and Hours 1987). It is not necessary to summarise all the debates here, instead, a few of the arguments pertinent to the SCU of Cyprus will be highlighted.

There are a series of stages to the collection and sampling of archaeological material for radiocarbon analysis, and at each stage, various factors contribute to the diminishing reliability of the final outcome. Before samples are even analysed, the integrity of the sample can be affected by depositional and collection factors. The action of groundwater containing high levels of calcium carbonate (for example groundwater flowing through lime-based soils such as the calcareous soils of the Southern Chalk Plateaus) can affect the measurement by lowering the static level of Carbon 14 in the sample (Bowman 1990). This, in turn, has the effect of making the sample appear older than it really is because the radiocarbon measurement is perceptibly lower. At Tenta, the one SCU date available comes from a carbon sample which was not *in situ* and had been deposited by the action of groundwater (Todd 1987, 178). The date is rather high in relation to the relative pottery sequence which might be explained by groundwater contamination. In cases where samples might be contaminated by roots and/or soil, the sample will be treated before the level of Carbon 14 is measured, but if the sample is small, and the contamination is substantial, this can also affect the date. This is particularly germane to older radiocarbon dates where samples had to

be of sufficient size to allow reliable measurement of the decay of Carbon 14. Modern high precision dating, where actual atoms are counted, has alleviated this problem by requiring smaller samples (Whittle 1988, 13). Samples taken from different sources, or samples analysed in different laboratories, or in the same laboratory at different times, can all contribute to divergences in radiocarbon measurements (Whittle 1988, 18). The nature of the sample can also affect the measurement as radiocarbon readings date a sample from the time it ceases to take up Carbon 14. A radiocarbon measurement taken on wood, for example, will date the sample, not the context in which it was found. A once living tree will give a radiocarbon measurement of the date of the cessation of the uptake of Carbon 14 by that tree, not when the wood was used or deposited in an archaeological context. It is important to remember that radiocarbon dates reflect a time range, which in some instances can be substantial.

More recently, problems with the calibration of radiocarbon dates have been emphasised (Bowman and Balaam 1990; Buck, Kentworthy, Litton and Smith 1991; Buck, Litton and Scott 1994; Pearson 1987; Whittle 1988). When a laboratory produces a radiocarbon determination it is calculated in uncalibrated years b.p. (or before 1950). In order to calibrate a radiocarbon determination, it must be "read off" against an accepted calibration curve (ie, Stuiver & Pearson 1986; Stuiver & Reimer 1993). This gives a reading in calendar years. However, the calibration curve is not straight but has a series of inversions and flat or steep regions that all affect the accuracy of the absolute date. This is particularly problematic for the period between 5500 b.p. and 5000 b.p. where a series of oscillations (or wiggles) mean that one radiocarbon determination may relate to a series of points on the calibration curve giving a range of dates which might all be equally realistic. For example, the Vrysi radiocarbon assay BM-1907, 5290 ± 100 b.p., corresponds to a series of oscillations on the calibration curve (Figure 3.1). Ignoring the standard deviation of ± 100 years, the date alone corresponds to a calendrical period on the calibration curve between 4200 B.C. and 4000 B.C. When the standard deviation is added at one sigma this range extends to 4320-3990 B.C. At two sigma, the date range is even greater. The accuracy of the original date is therefore considerably reduced. For the SCU, this problem only effects the chronological picture when a site is borderline SCU/ECU transition, as in the case of Tenta and Pamboules. However, the problem becomes noticeably acute in circumstances where a series of archaeological events are being dated to a limited chronological band.

Bearing these factors in mind, the radiocarbon determinations for the SCU are surprisingly consistent, given the negative effects of error margins, the lack of sufficient dates for all sites

except Vrysi, differential sampling criteria and dating methods, and the dearth of contextual information. At two standard deviations, nineteen out of twenty four dates fall within the widely accepted 400 year time frame for the SCU, from 4300-3900 B.C. (Table 3.2). Even the early radiocarbon determinations from Sotira and Pamboules for example, which were taken when radiocarbon calculation methods were in their infancy (Bowman 1990), fit within the accepted time range. The dates which do not fit, including two dates from Dhali, two from Vrysi, and the Philia date, may be explained in terms of sampling error. The Dhali dates come from Concentration A, which Leheavy (Leheavy 1989) assigns to the SCU on the basis of the presence of pottery. However, the absence of both vertical stratigraphy and uncontaminated deposits have affected the reliability of the sample. Also, the Dhali samples come from bone rather than charcoal, but it is not stated what kind of bone. Bones from fish and shell fish, for example, can be significantly affected by high levels of carbonates in the water, and there is also the further problem of Carbon 14 depleted deep water which can affect radiocarbon measurements by up to 400 years (Bowman 1990, 24-25). One of the dates from Vrysi (GU-521), is clearly outside the general range, while both the Birmingham dates (Birm-182 and Birm-337) are within the accepted range but somewhat earlier, although Birm-337 falls just within the time range. The Philia date is based on carbon from an unknown deposit.

3.5 - The absolute dates for the SCU

Extensive work has been carried out on the radiocarbon dates of the Early Prehistoric Period, primarily by Held (Held 1989b). Held's work concentrated on the lacuna between the KCU and SCU periods, however, he also conducted a thorough review of the dates in general. Radiocarbon calibration is continually being developed and refined, therefore, the absolute dating evidence will be reviewed again here. There are twenty four radiocarbon and two thermoluminescence (TL) determinations for the SCU. Seventeen radiocarbon assays come from Vrysi, two from Dhali, two from Sotira, one from Philia, one from Tenta, one from Pamboules, and two TL dates from Troulli. The series of dates from Vrysi are clearly defined and form an internally consistent group. All the Vrysi determinations come from charcoal samples found in association with hearths on habitation surfaces. One series from the Middle Phase (GU-521-525), is from poor quality samples of finely dispersed charcoal mixed with soil and the possibility of contamination was considered significant by the Glasgow University Radiocarbon Unit (Peltenburg 1982b, 460). It is suspected that the resulting later determination GU-521, possibly arises from this contamination (*Radiocarbon* 1976, 162-163). Held noted further (Held 1992a, 167) that one determination for

the Middle Phase (BM-1908), and two for the Late Phase (BM-1907 and BM-1906), have been affected by systematic error (Tite et al 1987) and corrected (Bowman et al 1990, 72).

At two standard deviations, the date range for the Vrysi calibrations, taking all determinations into consideration, is enormous and clearly spurious (5050-950 B.C.). Therefore, a certain amount of subjective licence is required in order to assess the dates in the context of the period from which they appear to derive. At two standard deviations, the Birmingham determinations (Birm-182, Birm-337) only just overlap with the upper limit of the primary Vrysi date range (Figure 3.2). At one standard deviation, they fall well outside the primary date range. The Glasgow assay (GU-521) is spuriously late. If we can discount the Glasgow determination, and ignore the Birmingham determinations, then the remaining fourteen calibrated dates for Vrysi span 670 years from cal. 4460 B.C. to cal. 3790 B.C. at two standard deviations. The three assays taken from Early Phase samples (BM-847, BM-846, BM-845) are very closely dated between cal. 4350 B.C. and cal. 3980 B.C. at two sigma³. The upper limit of the earliest determination for the Early Phase is slightly later (110 years) than the earliest determination for the Middle Phase (GU-522, 4460-4040 cal. B.C.), although this date is from the possibly contaminated group. However, the Early Phase samples come from stratified deposits above basal levels, and therefore, do not date the inception of the site. The Middle Phase determinations set the parameters within which all of the other Vrysi determinations fall, spanning 670 years between cal. 4460 B.C. to cal. 3790 B.C. The Late Phase spans 650 years between cal. 4450 B.C. and cal. 3800 B.C.

If the two Birmingham determinations are taken into consideration then the time range for the occupation of Vrysi greatly increases. However, two thirds of both date ranges at one sigma are earlier than all other SCU dates, aside from one Dhali date discounted below as too early (Figure 3.3). One third of the date ranges of both assays overlap with the determination from Philia and the second, more acceptable, determination from Dhali. The two Birmingham determinations therefore partly fit the chronological band for the SCU, although the upper range might be discounted as too early on the basis that it falls outside the primary SCU date range.

It is therefore tempting to consider only those dates from Vrysi which form a coherent group. At one standard deviation, all fourteen dates conform to a tight band overlapping at 4100-4200 B.C. spanning the chronological range, 4350-3940 B.C. (or 410 years). Given that the Vrysi pottery

³ All dates are considered at two standard deviations unless otherwise stated.

exhibits decorative development during this period, it offers a particularly tight framework for dating sites with similar pottery traditions.

There are two radiocarbon determinations for Dhali. Determination GX-2847, cal 6000 B.C.-4600 B.C. appears to be unrealistically early, spanning 1400 years at two standard deviations (Table 3.2, Figure 3.3). Again, using a certain amount of subjective licence, GX-2847 should be discounted on the basis that it fits better with the chronological range for the KCU Phase and the succeeding lacuna. However, P-2769, cal. 4557 B.C. falls within acceptable SCU limits, although its upper range is considerably earlier than the Vrysi determinations (ie, 4770 B.C. at two sigma). At one sigma, P-2769 dates to 4690-4400 B.C. falling outside the range of the Vrysi dates at one sigma.

Two determinations come from Sotira, St-337, cal. 4550-4000 B.C. and St-350, cal. 4350-3650 B.C. (Table 3.2, Figure 3.3). Both derive from charcoal samples. The first determination comes from Phase 1 deposits in Hut 29 and encompasses almost the entire Vrysi sequence at two standard deviations. Its upper range pre-dates the Vrysi determinations by ninety years. However, its lower range is remarkably consistent with eleven of the Vrysi assays, including the three Early Phase determinations. The second sample comes from an unknown deposit in Hut 12. Hut 12 was in use during all three phases at Sotira, and therefore, the absence of contextual information is unfortunate given that the duration of the site is unknown. At one sigma (4220-3780 B.C.), the upper range of St-350 coincides with the latest dates from Vrysi which were all taken from Middle Phase deposits (GU-1459, BM-844, BM-849). However, the lower range extends 190 years further beyond the Vrysi determinations. At two sigma, the date fits more comfortably within the Vrysi sequence, although its lower range is still significantly later than the latest Vrysi determinations.

There is one reliable determination from Philia, Birm-72, cal. 4780-4350 B.C. (Table 3.2, Figure 3.3). It comes from hearth material in Phase 3, but it is not stated whether this material is charred wood or other organic remains. Birm-72 does not overlap with the Vrysi determinations at one sigma (4690-4460 B.C.), being considerably earlier. However at two sigma (4780-4350 B.C.) there is some overlap at the upper limits of the Vrysi range. Birm-72 ties in well with Dhali P-2769, but as the Philia date comes from Phase 3, there is no way of reconciling it with the Dhali date.

There is one determination from Tenta, P-2780, cal. 4550-4000 B.C. which derives from charcoal found in square B7C. The sample was not in situ and was deposited by the action of groundwater. It also contained roots (Todd 1987, 178) and it is likely that this contamination may have affected the quality of the sample. However, at one sigma (4460-4150 B.C.), and at two sigma (4450-4000 B.C.), P-2780 is quite early, but overlaps with all fourteen of the reliable Vrysi assays.

One determination comes from charcoal found on the lowest floor in Pit VIII at Pamboules (St-419 cal. 4250-3700 B.C.). At one sigma (4080-3780 B.C.) the Pamboules date barely overlaps with the Vrysi dates, with its upper limit coinciding with the lower limit of eleven Vrysi assays. At two sigma, the date falls within the Vrysi range, although its lower limit extends 90 years beyond the lower limit of the Vrysi determinations. Therefore, although St-419 appears somewhat later, it remains within the accepted time-frame for the SCU.

Troulli was dated using thermoluminescence. There are two determinations, Ph TL 09a, (3860 ± 480 B.C.) and Ph TL 09b, (3570 ± 445 B.C.). Thermoluminescence dating is highly problematic and this is reflected in the enormous margins of error. Samples must be taken immediately upon retrieval from a sealed deposit. To ensure there is no contamination, they should be properly stored by wrapping in foil and double bagging. In contrast to this procedure, the samples from Troulli were taken from survey sherds, collected from the surface. There is no information concerning how they were stored, or whether they were stored for an extended period of time. Therefore, the determinations must be treated as highly suspect. With this in mind, the mean of both determinations is quite late, falling at the end of the SCU sequence in line with the determinations from Pamboules and Sotira. However, the error margins are so great that both determinations could just as easily fall at the beginning of the sequence, or conversely, outside accepted ranges.

Summarising the calibrated determinations for the SCU as a whole, the most significant factor is the level of cohesion within the Vrysi determinations in comparison with those from other SCU sites (Figure 3.3). Fourteen out of seventeen Vrysi dates are internally consistent with a very narrow margin of error at both one and two standard deviations. This contrasts with the assays from other sites where the margin of error is much greater. The Vrysi determinations, therefore, offer the most reliable absolute dates for the SCU, and also provide the benchmark for the relative dating sequence discussed below.

3.6 - The relative sequence

It is thought that the SCU Phase spanned roughly 1000 years from 5000-3900 B.C. (Knapp, Held, Manning 1994, 409). The central 50% of the calibrated calendar probability distribution lies between 4240 B.C. and 3980 B.C. (Knapp, Held and Manning 1994, 385). Therefore, it can be estimated on the basis of the radiocarbon evidence above, and the calculations by Knapp, et al., that the SCU floruit lies somewhere between these two ranges, probably around 4300-3900 B.C. In order to demonstrate that variation in the ceramics is largely spatial rather than temporal, the chronological relationship between the SCU sites must be established. This can be worked out using frequency seriation of the pottery. As the SCU floruit correlates with the Vrysi radiocarbon dates, the relative sequence can be estimated as falling between 4300 B.C. and 3900 B.C. However, the Vrysi sequence does not mark the beginning or the end of the SCU phase. MBW is not represented at the site⁴, nor are many of the later ware types which characterise the SCU/ECU transition. However, at Vrysi there is discernible change in the frequency of different Red on White (RW) motifs over time. Therefore, using frequency seriation, other SCU excavated sites with large RW assemblages, can be tied into the Vrysi relative sequence by comparing the occurrence of the RW motifs with the occurrence of similar motifs at Vrysi. Survey sites with RW assemblages can be fitted into this sequence using comparative seriation, based on the presence or absence of RW motifs. Sites without RW pottery or only a small percentage of RW, cannot be compared with Vrysi on the basis of their motif counts. In this instance comparative seriation and stratigraphic evidence are used to fix the relationship between earlier and later ware types with the main SCU red on white sequence.

The southern sites are dominated by Combed (Cb) pottery, but the presence of RW in small quantities enables them to be incorporated into the relative sequence using comparative seriation. As this thesis pre-supposes that regional variation is evident in the decorative schemes on the pottery, an argument for chronological comparability between the northern and southern sites, needs to take into consideration the diversifying effect of distance. It was mentioned above that in all other aspects of material culture, other than mode of decoration, the northern and southern sites belong to a uniform tradition. Furthermore, the absolute dating evidence illustrates broad contemporaneity. Therefore, it can be surmised that the northern and southern sites were occupied at approximately the same time. I would argue for the purpose of the relative dating, that identical

⁴ It might be that Fabric F (Peltenburg 1982b, 64) is similar to Monochrome Burnished Ware (see Chapter 5), but without viewing quantities of this fabric it is impossible to be certain.

motifs found at sites in the North and the South are evidence of contemporaneity between these sites, and that regional variation is discernible only in the presence of unusual or structurally dissimilar motifs at some sites and not others.

The first true pottery appears on the island at the beginning of the SCU in a technically evolved form. It has been argued that MBW predates all other SCU pottery types (Watkins 1970, 1973). This argument has been generally supported by scholars working on the Early Prehistoric Phase (Held 1992b, 1993; Peltenburg 1982a; Stanley Price 1977a). Only two sites in Cyprus have produced MBW in any quantity - Philia and Dhali. At Philia, it appears in isolation in the lowest levels of the site. In later levels, where it is found in association with both RW, and an hybrid ware characterised by red motifs painted onto a MBW fabric (MBW/RW), the deposits always overlay levels with exclusively MBW (Watkins n.d.). It has been suggested by Watkins (Watkins 1970a, 1972) that this phenomenon provides evidence that at Philia, the RW tradition followed on from MBW, and that it may have actually evolved out of the MBW tradition. At Dhali, MBW accounts for 100% of the fine ware pottery, and although the relationship between the ceramic horizon and the phasing of the site is less secure, the one radiocarbon date available for Concentration A, suggests that the ceramic horizon at Dhali is early in the SCU sequence. However, the excavators have admitted that both Philia (Watkins n.d.) and Dhali (Lehavy 1974, 1989) are characterised by extensive erosion and shallow, problematic stratigraphic sequences. Baird's work at Tenta (Baird n.d.a.) led him to suggest that MBW might be similar or identical to Coarse Ware Type B, which he identified as a separate functional class to the classic SCU Coarse Ware (Type A). However, Baird had access to only a small sample of MBW, currently stored in the Department of Archaeology, University of Edinburgh (personal communication). Further analysis of both MBW and Coarse Ware Type B by the writer suggests the two wares are functionally and stylistically distinct (see Chapter 5). Furthermore, Watkins' assertion that MBW appears in a transitional form, MBW/RW, can be corroborated by the analysis of the Cyprus Museum material undertaken for this study. Without further excavation there is little to suggest that MBW is not an earlier functional class, if not a clear ware type, predating the decorated fine wares. For the purpose of this thesis therefore, it will be assumed that MBW predates the main SCU Phase. However, it should be pointed out that MBW has been found in very small quantities at Yeroskipos *Chouvljin tis Yermaninis A* (personal observation) in the West, and at Sotira and Troulli,⁵ and future work might suggest a different relationship.

⁵Sherds of MBW have been recognised by the writer in the Troulli and Sotira assemblages stored in the Cyprus Museum in Nicosia and in Limassol.

The site that best displays development in the RW tradition is Vrysi. The frequency distribution of different RW motifs over time in the North and South Sectors at Vrysi are illustrated in Figure 3.4 and Figure 3.5. In the Early Phase, reserved circles, dots and wavy bands or lines are popular, but by the Middle Phase, these motifs fall out of use (Peltenburg 1982b, 71). In the Middle Phase, a number of new motifs appear, including lattice, hatching, chevrons, dot borders, mottle, crescents and ripple pattern. The Middle Phase also sees the introduction of Cb Ware (Peltenburg 1982b, 73). Chevrons and ripple pattern increase in popularity in the Late Phase. Therefore, the trend is a movement away from curvilinear motifs towards predominantly linear motifs in the Middle and Late Phases. Shapes evolve too. The concave hemispherical bowl becomes less popular and the classic SCU/ECU platter appears in small quantities (Peltenburg 1982b, Fig. 5, 64).

No true phasing exists for Philia. Watkins based his phasing predominantly on changes in the frequency of motifs over time, rather than on the stratigraphy. As the site remains unpublished, comparative frequency charts are unavailable, but Watkins' interpretation of the pottery sequence can be compared with the Vrysi sequence in order to gain some idea of the relationship between the two sites. Watkins interprets the Philia sequence in the following manner (Watkins n.d.). In Phase 1, the earliest phase, MBW occurs on its own. In Phase 2, MBW predominates, but is found in association with small quantities of MBW/RW and RW with primarily curvilinear motifs. Combed Ware appears in Phase 2 in very small quantities. Phase 3 is separated from Phase 2 on the basis of a greater proportion of RW to MBW. In this phase, linear motifs are common and ripple pattern appears in greater quantities. Phase 4 pottery is a continuation of Phase 3 trends, but stratigraphically, it is separated from Phase 3 by a sterile layer of marl, and therefore, has been designated a separate phase. Based upon Watkins interpretation of the sequence at Philia, the following relationship between the two sites can be suggested. If we assume that MBW is a forerunner to RW, then Phase 1 at Philia is earlier than all of the phases at Vrysi because of the absence of MBW at the latter site. Similarly, the presence of MBW and MBW/RW suggests that Phase 2 at Philia is slightly earlier than the Early Phase at Vrysi, although some overlap might be envisaged on the basis of the presence of RW in Phase 2. Phase 3 at Philia is comparable to the Middle Phase at Vrysi. As ripple pattern is present in some number in Phase 3 and Phase 4, the Middle Phase at Vrysi probably extends into Phase 4 at Philia. The Late Phase at Vrysi, with the presence of SCU/ECU shapes and motifs most likely post dates the end of Phase 4 at Philia. This relationship is illustrated below (Figure 3.6).

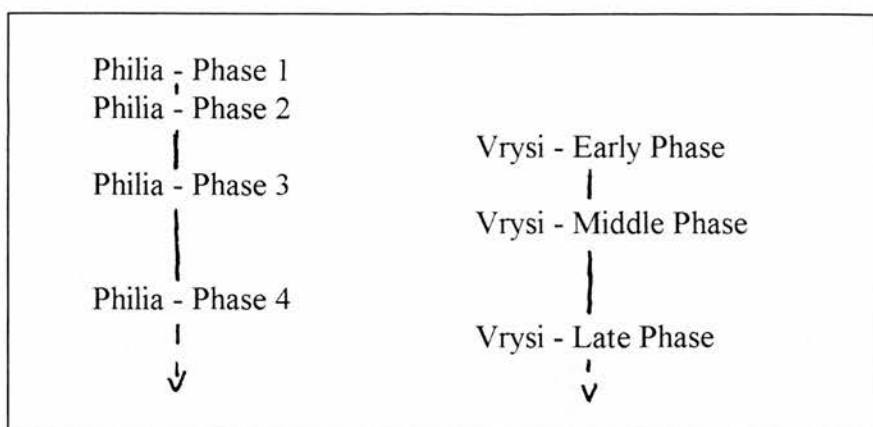


Figure 3.6 - Relative chronological relationship of Philia and Vrysi

3.6.1 - Klepini-Troulli

Having established a relative dating sequence for Vrysi and Philia, it is possible to link in other broadly contemporaneous sites on the basis of their ceramic assemblages. The most representative pottery sample at Troulli comes from Pit A, where a long stratigraphic sequence from KCU Troulli I through to SCU Troulli II was encountered. Pottery was also found in Pit B, Pit Gamma and Area C, but for the purpose of establishing Troulli's relative sequence to other sites, it is Pit A which gives the greatest depth of stratigraphy. Dikaios' technique of excavating by 20cm spits on a decline of 1 in 4 was thought by Peltenburg (Peltenburg 1979, 22) not to have radically cut across levels. Even so, it is worth applying some circumspection when interpreting the pottery sequence.

The lower levels in Pit A, which lie at a depth of 380-550cm below the ground surface, are aceramic. Pottery is found stratified above the KCU levels, which in turn are directly above a sterile layer at 360cm (Peltenburg 1979, 21). The majority of the pottery occurs at a depth of 320-160cm. At 340-260cm, the only motifs recorded by Peltenburg, in his re-assessment of the Troulli pottery stored in the Cyprus Museum (Peltenburg 1979, Table 1), were dots, targets and curvilinear motifs. Wavy bands and vertical lines appear at 260cm. Mottle filler appears at 180cm and ripple decoration at 40cm. Figure 3.7 illustrates Peltenburg's table as a frequency seriation of motifs in levels 360-180cm (Early Phase) and levels 180-40cm (Late Phase). Although the overall number of motifs is small, there is a predominance of curvilinear motifs in the Early Phase, and linear motifs are not represented until the Late Phase, which suggests a ceramic sequence similar to Vrysi. However, Peltenburg (Peltenburg 1979, 27) does admit that the evidence could be fuller.

A comparison of the RW motifs found at Troulli with Vrysi and Philia would suggest that the early levels (from 360-180cm) are early in the RW sequence as they consist almost exclusively of dots, targets and concentric circle motifs. From 180cm, the motifs fit more closely with the Middle Phase of Vrysi and Philia Phases 2 and 3. The presence of ripple pattern in the very top levels suggest that Troulli Pit A, 40cm and above, fits with the Middle to Late Phase at Vrysi and Philia Phases 3 and maybe 4. Based on Peltenburg's assessment of Troulli, the following relationship with Vrysi and Philia is suggested in Figure 3.9, below.

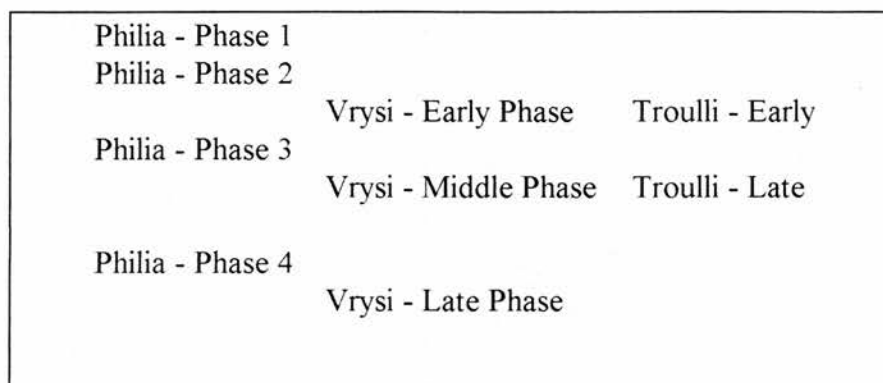


Figure 3.9 - A relative sequence for Philia, Troulli and Vrysi

3.6.2 - Kalavastos-Kokkinoyia (Site A)

Dikaios suspected that Kokkinoyia dated to the end of the SCU due to the predominance of Red Monochrome Painted Ware (RMP) in Hut XI. However, surface pottery collections, undertaken by the Vasilikos Valley Project, and analysed by the present writer (Clarke and Todd 1993), indicate that a date for the site falls more squarely within the SCU. The excavated pottery from Kokkinoyia has been re-analysed in Chapter 7, and the general chronological trends can be summarised here.

It is not known whether the present pottery assemblage from Kokkinoyia, housed in the Cyprus Museum, is the complete sample excavated by Dikaios in the 1940's. However, given Dikaios' perspicacity at Troulli and Sotira, where both samples are most likely to be complete, it is also likely that the Kalavastos sample is complete. Pottery counts of both the re-analysed sample from Pit XI presented here, and the counts for Pit XI reported by Dikaios (Dikaios 1962, 106-112), show the likelihood of the sample being complete. A total of 711 sherds were analysed from Pit XI. The pottery has been categorised by ware type and is presented in Table 3.3, below.

	?	RMP	RW	Cb	CWa	CWb	GBW	EChalc/CW
0-30cm	1	49	1		7			2
30-80cm	1	74		12	9			6
Floor III	14	132	2	3	7		22	5
Floor IV	13	140		4	4	1	20	5
Floor V	8	146		3	5			2
Floor VI	1	9		1	1			1

<i>Key</i>		
?=unknown	RMP=Red Monochrome Painted Ware	RW=Red on White Ware
Cb=Combed Ware	CWa=Coarse Ware Type A	CWb=Coarse Ware Type B
GBW=Glossy Burnished Ware	EChalc/CW=SCU/ECU Coarse Ware	

Table 3.3 - Ware counts from Pit XI at Kalavassos A

Seventy seven percent of the total sherd sample from Pit XI is RMP. However, a more distinctive feature of the sample is the small quantities of SCU/ECU burnished and slipped EChalc Coarse Ware, which is found in all contexts in Pit XI, but never in stratified SCU deposits. This feature alone, places Pit XI at the beginning of the SCU/ECU Phase, even though small quantities of Cb are also present in the majority of contexts, including the lowest floor level. The presence of Glossy Burnished Ware (GBW) in Pit XI is also a late feature, as GBW is known from well stratified SCU/ECU sites in the West of the island (Peltenburg et al. 1998). Therefore, using pottery seriation, based on ware types, it can be shown that Dikaios' original premise about Pit XI was correct.

In contrast, the same breakdown was undertaken for Pit V, which like Pit XI, has a relatively long sequence of floor levels. The results are given in Table 3.4, below.

	?	RMP	RW	Cb	PCb	CWa	EChalc CW
Floor I	6	3		3		3	
Floor I-II	10	16	3	7	2	18	
Floor II-III	8		1	6		7	
Floor III		1	1		2	1	
Floor III-IV	10	4	2	15	2	8	
Floor IV	2	8		4	1	9	

<i>Key</i>		
?=unknown	RMP=Red Monochrome Painted Ware	RW=Red on White Ware
Cb=Combed Ware	PCb=Painted and Combed Ware	CW=Coarse Ware Type A
EChalc CW=SCU/ECU Coarse Ware		

Table 3.4 - Ware counts from Pit V at Kalavassos A

In Pit V, there is none of the EChalc sherdage which occurs in Pit XI, nor is GBW present. There are very few RW motifs, but most are linear, including bands, lines and chevrons. Leaving regional differences aside, the pottery from Pit V would appear to belong squarely in the SCU, with good representative samples of Cb, Painted and Combed (PCb) (absent in Pit XI) and SCU Type A CW. Furthermore, in contrast with Pit XI, RMP accounts for only 20% of the sample, substantially less than in Pit XI. The pottery samples from Pit V and Pit XI suggest that individual subterranean structures were relatively short lived, as both Pit V and Pit XI are clearly single phase, but that the duration of the site spanned the SCU and SCU/ECU Phases. Unfortunately, the exact location of Pits XI and V is not known, and this might explain the temporal disparity. For example, a second explanation may be that Pit XI belongs, not to the Kokkinoyia occupation, but to the chronologically later Pamboules occupation which is contiguous with Kokkinoyia and is also characterised by a series of pit dwellings. A further explanation may be that Kokkinoyia and Pamboules are in fact the same site, with the SCU occupation predominantly located to the south (Kokkinoyia) and the Early, Middle and Late ECU occupation predominantly located to the north (Pamboules). Further excavation would go a long way towards clarifying these problems.

3.6.3 - Kalavastos-Pamboules

In the publication of his excavations at the ECU site of Pamboules, Dikaios illustrated a number of Cb and PCb sherds from Pit VIII. Although Dikaios did not pick up on the significance of this in the publication of the excavations (Dikaios 1962, 133-140), Peltenburg later questioned whether Pamboules Pit VIII dated to the SCU (Peltenburg 1978, 68). An analysis of the wares from Pit VIII suggests there is contamination from Middle and Late ECU wares. In Chapter 2 it was pointed out that Late ECU pottery is found in Floor III deposits and there is also one example of Basket Ware, known to appear first in the Middle ECU (Bolger 1988). From a breakdown of the wares by floor levels, summarised in tabular form below (Table 3.5), it would appear that the upper floor levels are contaminated and the lower floor levels (Floors IV-VI) date to the SCU/ECU transition rather than the SCU. The presence of small quantities of Cb and PCb are common in stratified SCU/ECU contexts (Peltenburg et al. 1998).

	?	RMP	RW	Cb	PCb	CW	PW	BW	EChalc	MChalc	LChalc
Surface	3								9	76	150
BTW floors III-IV	3	30	2			1	33	1	19		1
BTW floors IV-V		19	66	13	1		5		5		
BTW floors V-VI		1	37	5	1				2		
Floor VI	1	33	13		1		7				
Floor VI to rock	4	52				3			15		

Key					
?=unknown	RMP=Red Monochrome Painted Ware	RW=Red on White Ware	Cb=Combed Ware	CW=Coarse Ware Type A	
PCb=Painted and Combed Ware	PW=Plain White Ware	BW=Basket Ware	EChalc=Early Chalcolithic wares		
MChalc=Middle Chalcolithic wares		LChalc=Late Chalcolithic wares			

Table 3.5 - Ware counts from Pit VIII at Kalavastos Pamboules

3.6.4 - Kalavastos-Tenta

The ceramic phase at Tenta is primarily SCU/ECU transition, and almost all of the pottery comes from unstratified surface deposits. However, one area, an ill-defined cut, O16B, produced a good proportion of SCU pottery in its lowest levels. A comprehensive analysis of the pottery from Tenta has been undertaken (Baird n.d.a.), and it is only necessary to summarise the results here. However, I was able to re-analyse the pottery from O16B and the results will be presented in Chapter 7.

Contexts 1.1 to 3.1 in O16B were mixed surface deposits, but underlying this material, was a series of poorly understood depositional layers, 4.1 to 8.1, which appear to have been in some stratigraphic relationship. The nature of the stratigraphy is still in question, but it appears that the lowest deposits (7.1 and 8.1) are not only well sealed, but that the character of the pottery shifts away from primarily SCU/ECU types, to an assemblage dominated by SCU wares. It is the relationship between the later contexts (4.1 to 6.1) and the earlier contexts (7.1 and 8.1) which is of interest.

Contexts 4.1 to 6.1 are dominated by a fabric type found at Kalavassos *Ayious* (Ayious) in large quantities, and associated with stylistically later shapes and decorative schemes. This fabric accounts for between 80-100% of all the sherdage in the later contexts in Pit O16B. In contrast, contexts 7.1 and 8.1 are dominated by completely different fabric types and a higher proportion of Cb motifs. The disparity in fabric type is supported by a variation in the frequency of vessel shapes and motif types between the lower and upper deposits. However, the sample size for contexts 7.1 and 8.1 is small, and the following comments suggests trends only. First, SCU/ECU Coarse Ware (EChalc/CW) is present in small quantities in deposits 4.1 to 6.1, but absent in the earlier deposits (7.1 and 8.1). This may be the result of depositional factors, or it may be due to temporal factors. Furthermore, standard CW shapes in the later deposits include holemouth buckets with flanged bases, a shape which does not exist in the SCU CW repertoire, where profiles tend to be flared. Secondly, there is a strong propensity for fined rims in contexts 4.1 to 6.1, again a feature of the SCU/ECU transition onwards. Sixty nine percent of all rim types in the later deposits are fined, whereas there are no examples in the earlier contexts. Thirdly, pointed bases on closed vessels are present in contexts 4.1 to 6.1. Again, a feature that is never found on SCU vessels.

Analysis of the RW motifs from contexts 4.1 to 6.1 can be closely matched with those from the nearby site of Ayious, which has been firmly dated to the SCU/ECU transition (Kromholz 1981). These include a high proportion of plain white and plain red surfaces, and a preponderance of linear and reserved slit motifs. In contrast, these motifs are absent in the earlier contexts, where apart from two examples of ripple decoration and one example of chevrons, all other RW motifs consist of variations on the broad band.

The morphological evidence suggests that the later levels in O16B belong to the SCU/ECU transition, whereas the shapes found in levels 7.1 and 8.1 fit within the SCU repertoire.

Furthermore, the presence of ripple decoration in the lower deposits, combined with the lack of any curvilinear motifs, suggests that levels 7.1 and 8.1 date to the end of the SCU and are probably contemporary with Phases 3 to 4 at Philia and the Middle to Late Phase at Vrysi.

3.6.5 - Sotira-Teppes

A relative pottery sequence for Sotira has never been established. Dikaïos made a count of ware types by hut and by floor but did not complete the analysis by comparing the frequency of ware types by phase. It is therefore necessary to place Sotira within the relative sequence for the SCU. The phasing established by Stanley Price (Stanley Price 1979b) is used here in preference to the original phasing established by Dikaïos, with the exception that Stanley Price's Phases 1a and 1b have been lumped together to increase the size of the RW motif sample. As Stanley Price recorded continuity between the two sub-phases (Stanley Price 1979b, 60) this should not affect the final results.

The complete Sotira sample totals some 40,000 sherds. Nineteen and a half thousand sherds come from stratified levels within dwelling units. The greatest proportion of pottery dates to Phase 2 (some 15,000 sherds), but there are good representative samples from the earliest phase [1] and the latest phase [3]. The breakdown of stratified pottery by phase and ware type at Sotira is illustrated in Table 3.6 below.

?	RMP	RS	RW	PCb	Cb	CW	MBW	GBW	TOTAL
Phase 1	319	632	137	52	547	17	242	36	1982
Phase 2	2483	4543	725	452	4137	304	1445	6	14,905
Phase 3	745	899	139	95	788	34	389	1	3090

Key				
?=unknown	RMP=Red Monochrome Painted Ware	RS=Red Slip Ware	RW=Red on White Ware	
PCb=Painted and Combed Ware	Cb=Combed Ware	CW=Coarse Ware	MBW=Monochrome Burnished	
GBW=Glossy Burnished Ware				

Table 3.6 - A count of ware types by phase at Sotira

Sotira has a predominantly Cb and RMP tradition which makes it difficult to establish its relationship with sites in the North, where the tradition is predominantly RW. In contrast with northern sites, RW accounts for only 3% of the sample at Sotira. Even so, the most important aspect of the collection is the presence of RW in all phases at Sotira, suggesting that its inception

at Sotira did not occur before that of the northern sites. Secondly, the proportion of RW in the assemblage remains constant throughout all phases accounting for 2.5% of the pottery in Phase 1, 3.2% of the pottery in Phase 2, and 3% of the pottery in Phase 3. Given that Cb does not appear at Vrysi until the Middle Phase, it might be hypothesised that the inhabitants in the north of the island were indeed the founding SCU population. However, as Philia has Cb in Phase 2, directly following the MBW levels, the west of the island is more problematic.

The percentage frequency of ware types between Phases 1 and 3 at Sotira remains constant. The only anomaly occurs in Phase 3, where percentages of RMP, and Cb drop by about 3% to 4%, and is probably due to a higher proportion of unidentifiable sherds (Table 3.7, below).

	?	RMP	RS	RW	Cb	PCb	CW	MBW
Phase 1	16	32	7	2.5	27.5	1	11.5	2
Phase 2	17.7	32.2	5.2	3.2	29.3	2.2	10.2	
Phase 3	24.1	29	4.5	3	25.5	1	12.5	

?=unknown	RMP=Red Monochrome Painted Ware	Key	RS=Red Slip Ware	RW=Red on White Ware
Cb=Combed Ware	PCb=Painted and Combed Ware		CW=Coarse Ware	MBW=Monochrome Burnished Ware

Table 3.7 - Percentage frequency of ware types at Sotira, by phase

In order to tie in Sotira's sequence with the North, it is necessary to look at the RW motifs to assess whether there is any variation in the proportion of motif types from Phase 1 to Phase 3, in line with variation evident at Vrysi and Troulli. Using the motif breakdown which Peltenburg applied to Vrysi and to Troulli, Figure 3.8, is a battleship curve illustrating the frequency of RW motifs in each of the three phases at Sotira. Phase 1 has proportionally fewer RW sherds than the later phases, but trends can still be identified. The most predominant motifs are curvilinear, circles, dots and reserved targets. However, the motif repertoire is also dominated by broad parallel and intersecting bands. In Phase 2, motifs found in Phase 1 continue, but ripple pattern appears for the first time. There is also a greater range of motifs in general, which would be expected given the much larger quantity of sherds. However, motifs such as concentric V's, zig zags, strings of diamonds and other linear motifs are now in evidence. In Phase 3, ripple pattern is

absent, but there is still a greater variety of linear motifs including zig zags, chevrons and step motifs, all absent in Phase 1.

Evidence for temporal development in bowl morphology, from concave hemispherical bowls early in the sequence, to straight sided platters late in the sequence, has been noted at Vrysi (Peltenburg 1982b, 64) and Troulli (Clarke 1992a, 8). An analysis of the bowl morphology at Sotira has provided no evidence for this development. The most common type of bowl throughout the sequence is the standard hemispherical bowl, while small quantities of concave hemispherical bowls (12% in Phase 1, 15% in Phase 2 and 10% in Phase 3) occur in all phases.

Comparison of Sotira pottery shapes and motifs with the chronological framework established for the northern sites highlights a number of points which help to establish Sotira's relationship with these sites. First, RW pottery appears in all phases at Sotira, therefore, the earliest levels at Sotira are probably not earlier than Vrysi or Philia. Secondly, ripple pattern, known to be later in the RW stylistic sequence, appears in Phase 2 at Sotira, tying this phase to the Middle Phase at Vrysi and Phase 3 at Philia. Thirdly, as Cb does not appear at Vrysi until the Middle Phase, it is likely that Phase 1 at Sotira at least partly overlaps with the Middle Phase at Vrysi. Finally, as Vrysi Late Phase shapes and motifs are absent at Sotira, it may be assumed that Phase 3 at Sotira is not as late as the Late Phase at Vrysi (Figure 3.11). In short, it would appear that the occupation of Sotira may have been of relatively short duration when compared to both Vrysi and Philia, an argument already suggested by Peltenburg (Peltenburg 1975, 37) and which is also partly supported by the depth of deposit at the site (Stanley Price 1979b, 49).

3.6.6 - Khirokitia-Vounoi

The pottery bearing deposits at Khirokitia are unstratified, and therefore, the site cannot be phased. The only way in which Khirokitia can be related to other SCU sites is by broad stylistic comparisons of shapes and motifs. As considerable quantities of pottery were found at Khirokitia, it is possible to make some broad statements about its relationship with other SCU sites.

In the tradition of the Southern Chalk Plateau sites, Khirokitia is dominated by Cb and RMP, which make up 25% and 23.5% of the sample respectively. A further 32% of the sample is unidentifiable due to very heavy concretion on the surface of sherds, possibly due to ground water action post deposition. Red on White and PCb each account for 5% of the sample, and a further 9% of the pottery is CW of an identical type to that found at other SCU sites. In general, the

percentage distribution of ware types at Khirokitia correlates with Sotira but there is a marginally higher proportion of PCb in the Khirokitia sample (Table 3.8).

?	RMP	RS	RW	PCb	Cb	CW	MBW	GBW	RMP Var
	31.6	24.4	0.4	5.4	23.5	4.7	8.6		1

<i>Key</i>		
?=unknown	RMP=Red Monochrome Painted Ware	RW=Red on White Ware
PCb=Painted and Combed Ware	Cb=Combed Ware	CW=Coarse Ware Type A
MBW=Monochrome Burnished Ware	GBW=Glossy Burnished Ware	RMP Var= Red Monochrome Painted Ware Variant

Table 3.8 - Percentage frequency of ware types at Khirokitia

Figure 3.10 is a pie chart illustrating the percentage distribution of the total motif counts for Khirokitia. Broad trends can be identified.

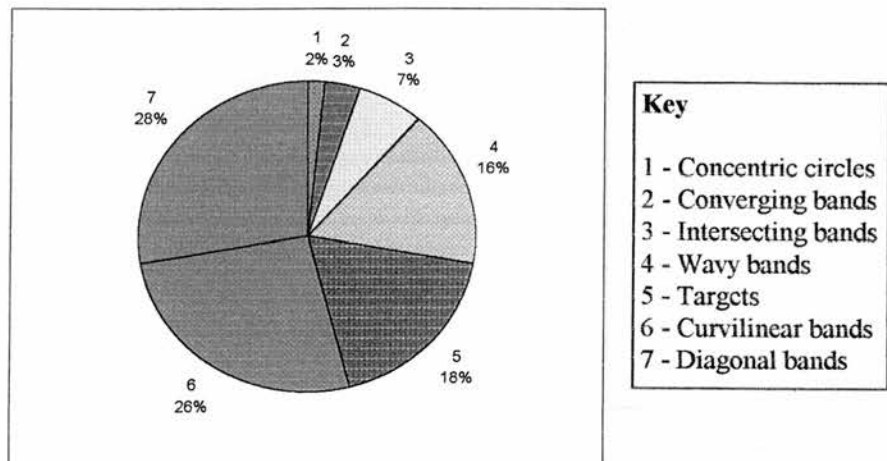


Figure 3.10 - Percentage frequencies of different RW motifs found at Khirokitia

First, there is a complete absence of ripple decoration, which at Vrysi and Philia, are known to occur in stratigraphically later deposits. The most predominant motifs found at Khirokitia are broad vertical and diagonal bands and a range of targets and reserved circles. There are very few linear motifs of any variety, the only examples being single occurrences of ladder pattern, hatching, concentric V's, dot borders and dot bands.

In contrast vessel shapes at Khirokitia do not give any indication of its place within the SCU relative dating sequence. Like Sotira, there are very few examples of the concave hemispherical bowl (0.3%), which in the North, are associated with the early phases at Vrysi and Troulli. Similarly, there are only five examples of the platter shape (0.1%), which is known to come later in the sequence at Vrysi, and is also found in abundance at the SCU/ECU site of Ayious in the South.

Based upon the evidence presented above, Figure 3.11 illustrates the final relative position of the primary SCU sites in relation to each other.

3.7 - The survey sites

Of all the survey sites included in this study, only four have ceramic collections of sufficient size and condition to allow broad statements to be made about their relative chronological placement. The smaller survey assemblages contain too few diagnostic sherds for inclusion within this chapter. However, their relationship to larger adjacent sites will become important in later chapters when subsistence patterns are reviewed. Having said this, all the survey sites included in this study belong within the SCU cultural sphere on the basis of their ceramic assemblages. In cases where sites span more than one chronological phase, only the SCU ceramics have been counted.

The survey sites which have good representative SCU samples are Orga, Kokkinoyia, Mari, and Kafkalia VI. Each will be reviewed separately.

3.7.1 - *Orga-Palialonia/Ambellia*

Located in the North, Orga has a ceramic tradition dominated by RW which makes it easier to fit the site within the relative sequence. Orga's motif repertoire is diverse, with both stylistically early and late motifs represented. The most common motifs are broad straight and wavy bands, although there are also examples of curvilinear and circular motifs, parallel lines, hatching and ladder pattern. In terms of morphology the hemispherical bowl predominates, but there are equal proportions of the concave hemispherical bowl and the platter shape. The evidence is therefore limited, but it would appear that on the basis of the pottery, Orga spans the floruit of the SCU, with an inception coeval with Vrysi. The absence of ripple motif could be due to the size of the sample, as ripple is never strongly represented at any site, except Vrysi. The presence of platters,

however, might place the end of the site late in the sequence, possibly on a par with the end of Phase 4 at Philia.

3.7.2 - Kalavastos-Kokkinoyia (survey)

The area around Dikaios' excavations was surveyed by Ian Todd as part of the Vasilikos Valley Project, and a preliminary report on the pottery is published in the *Report of the Department of Antiquities, Cyprus* (Clarke & Todd 1993). The pottery from the survey fits wholly within the SCU typological sequence, which is slightly at odds with the excavation of Pit XI conducted by Dikaios (above).

The pottery assemblage is dominated by RMP (32.8%), but due to the nature of surveys there is also a high proportion of unrecognised SCU sherds. Red on White accounts for only 2% of the sample. Within this however, there is one example of ripple motif and a predominance of thin parallel lines, both stylistically late in the northern sequence. The evidence from the survey data ties in with the evidence from Pit V, where linear motifs dominate. The Kokkinoyia survey assemblage therefore substantiates the positioning of the Kokkinoyia (Site A) excavation material with Philia Phase 3 and Vrysi Middle Phase.

3.7.3.- Mari-Paliambela

Mari also has a predominantly Cb (16%) and RMP (34%) tradition, as it is located close to the Kalavastos sites and falls within the southern RMP/Cb tradition. Red on White accounts for 12.3% of the sample but very little can be said about the RW motifs as only a few sherds are diagnostic. The dominant motif is the broad band, but there are examples of circular motifs, parallel lines and chequerboard pattern. Again, on limited evidence, all that can be said is that Mari can be placed firmly within the SCU, and that there are no examples of stylistically later motifs which would suggest the site extends into the SCU/ECU transitional phase.

3.7.4 - Kalavastos-Kafkalia VI

As with Mari, there are too few diagnostic sherds to make any definitive statements about Kafkalia VI. The assemblage is not as well preserved as Mari, and there is a greater proportion of unknown SCU sherds in the sample. Red on White motifs include a number of examples of ripple motif, and the morphology is dominated by platters which might suggest the site was, *at least*, occupied late in the SCU sequence. However, there are no examples of SCU/ECU transitional ware types, and therefore, it is unlikely that Kafkalia VI is later than the end of Vrysi sequence.

The temporal relationship of the four survey sites above with the five major excavated sites would suggest the following chronological arrangement (Figure 3.12).

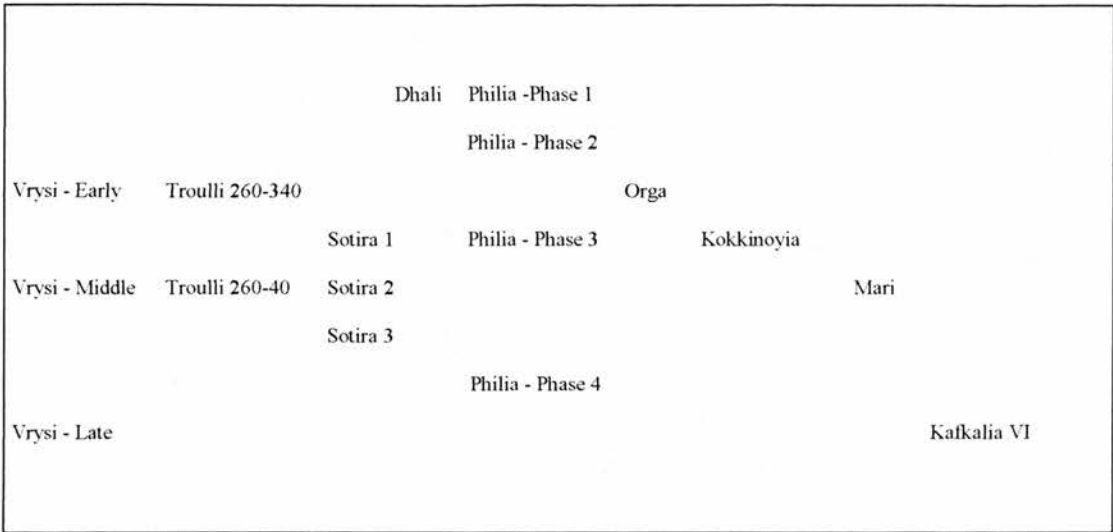


Figure 3.12 - Relative temporal sequence for the survey sites

3.8 - Discussion

The evidence presented above suggests the following temporal relationship for the major SCU sites.

- The presence of MBW at Philia, stratified beneath RW, locates these deposits at the beginning of the SCU sequence.
- Monochrome Burnished Ware at Dhali, combined with very early radiocarbon determinations from the site, indicate that Dhali, and Phase 1 at Philia, are earlier than the floruit of the SCU.
- A combination of MBW, MBW/RW and early RW motifs and shapes in Phase 2 at Philia, places the beginning of this phase before the beginning of the Early Phase at Vrysi.
- The Early Phase at Vrysi overlaps with Phase 2 and Phase 3 at Philia on the basis of curvilinear RW motifs and concave hemispherical bowls.
- The Early Phase at Troulli is coeval with the Early Phase at Philia based upon similarities in the pottery motifs and morphology.
- Ripple decoration is found in quantity at the end of Phase 3 at Philia, but is common throughout the Middle Phase at Vrysi. This would suggest that Phase 3 at Philia begins before the Middle Phase at Vrysi.

- If Philia Phase 3 is broadly contemporaneous with the Middle Phase at Vrysi, then the single radiocarbon date for Philia Phase 3 is too low.
- Ripple decoration is present in the Late Phase at Troulli, aligning it with the Middle Phase at Vrysi, Phase 3 at Philia and Phase 2 at Sotira.
- Red on White is found in the lowest levels of Sotira, but Cb is not found until the Middle Phase at Vrysi. This might suggest that Sotira was founded after the foundation of the northern sites.
- Combed Ware are present in Phase 2 at Philia. However, the stratigraphic sequence at Philia is poorly defined and this anomaly might be due to the contamination of deposits.
- Ripple decoration continues to predominate in Phase 4 at Philia. There is a sterile layer separating Phase 3 from Phase 4, suggesting a break in the sequence and enigmatic subterranean features appear. The only other site known to have these subterranean features is the SCU/ECU transitional site of Ayios. Therefore, Philia Phase 4 is possibly quite late in the SCU sequence. In contrast, pottery types found at Philia Phase 4 are not as evolved as either Vrysi Late Phase or Ayios, suggesting that Philia Phase 4 might begin a little earlier than Vrysi Late Phase. It is unfortunate that very little architecture remains of the Late Phase at Vrysi to help clarify the relationship.
- The radiocarbon evidence from Vrysi suggests that the Late Phase there begins around cal. 4000 B.C. This is slightly earlier than the beginning of the SCU/ECU transition which has been radiometrically dated as falling between 3800-3300 B.C. (Knapp, Held & Manning 1994, Fig.6). This would place Vrysi Late Phase just before the beginning of the ECU/SCU transition.
- The apparent brevity of Sotira is matched by a lack of depth of deposit, averaging less than 1m (Stanley Price 1979b, 49). Moreover, rather than seeing a change in pottery shapes and motifs in post destruction Phase 3 at Sotira, when architectural features are much less substantial, there is continuity. This suggests that Sotira, far from being long lived, may have been occupied for a markedly shorter duration than either Philia or Vrysi.
- The radiocarbon dates from Sotira do not clarify the relative dating sequence. However, they do show that Sotira is broadly contemporaneous with Vrysi.
- Tenta O16B, levels 7.1 and 8.1 are stylistically comparable with Philia Phase 3 and Sotira.
- Tenta O16B, levels 4.1 to 6.1 appear to date stylistically to the SCU/ECU transition.
- The single radiocarbon date for the SCU at Tenta does not come from context O16B, and therefore, cannot be used to date this deposit.

- Pit V at Kalavastos Site A ties in stylistically with Sotira, Phase 3 at Philia, the Middle Phase at Vrysi and Tenta O16B, 7.1 and 8.1. This is corroborated from the survey data.
- Pit XI at Kalavastos Site A belongs stylistically to the SCU/ECU transition.
- The lower levels of Pit VIII at Pamboules date stylistically to the SCU/ECU transition. This ties in with the single radiocarbon date for the basal floor level.

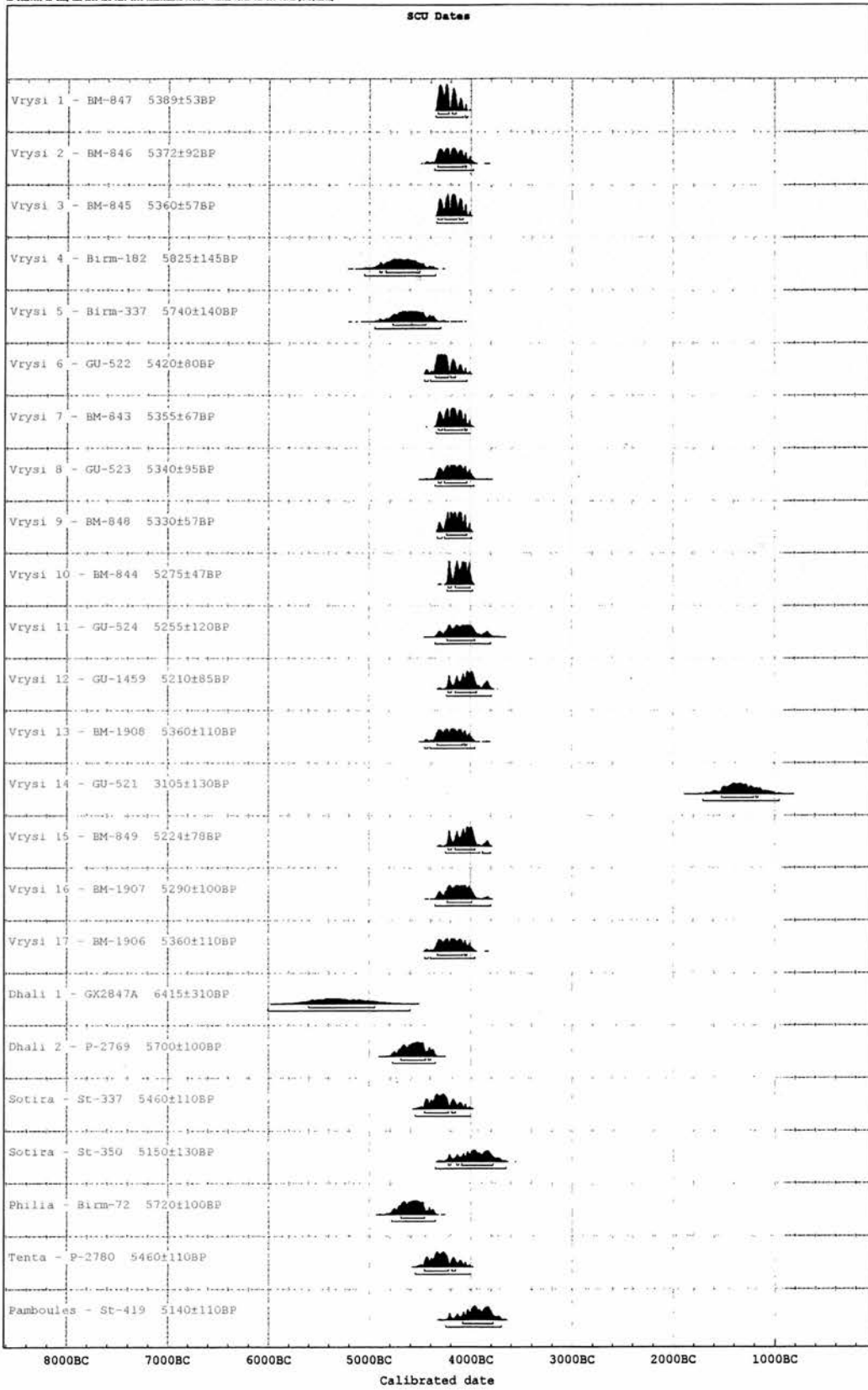


Table 3.1 - Calibration chart for the twenty four SCU radiocarbon assays

Site	Lab Ref	Age BP	Material	Deposit/Phasing	1 σ	2 σ
Vrysi 1	BM-847	5389 \pm 53	charcoal	House 7 floor4b (Early)	4330-4150BC	4350-4040BC
Vrysi 2	BM-846	5372 \pm 92	charcoal	House 4B floor 8 (Early)	4330-4050BC	4360-3980BC
Vrysi 3	BM-845	5360 \pm 57	charcoal	House 4A floor 5 (Ea/Mid)	4330-4080BC	4340-4040BC
Vrysi 4	Birm-182	5825 \pm 145	charcoal	(Middle)	4900-4510BC	5050-4350BC
Vrysi 5	Birm-337	5740 \pm 140	charcoal	(Middle)	4780-4460BC	4950-4300BC
Vrysi 6	GU-522	5420 \pm 80	charcoal	House 2A floor 3 (Middle)	4350-4150BC	4460-4040BC
Vrysi 7	BM-843	5355 \pm 67	charcoal	House 2A floor 4 (Middle)	4320-4040BC	4340-4000BC
Vrysi 8	GU-523	5340 \pm 95	charcoal	House 2A flour 4 (Middle)	4320-4040BC	4350-3970BC
Vrysi 9	BM-848	5330 \pm 57	charcoal	Passage B east 3.4 (Middle)	4240-4040BC	4330-3990BC
Vrysi 10	BM-844	5275 \pm 47	charcoal	House 2B floor 8 (Middle)	4220-4000BC	4230-3980BC
Vrysi 11	GU-524	5255 \pm 120	charcoal	House 1 floor 2 (Middle)	4230-3960BC	4350-3800BC
Vrysi 12	GU-1459	5210 \pm 85	charcoal	(Middle)	4220-3940BC	4240-3790BC
Vrysi 13	BM-1908	5360 \pm 110	charcoal	(Middle)	4330-4040BC	4450-3960BC
Vrysi 14	GU-521	3105 \pm 130	charcoal	Passage A floor 5 (Middle)	1520-1160BC	1700-950BC
Vrysi 15	BM-849	5224 \pm 78	charcoal	Area 5D (Mid/Late)	4220-3960BC	4250-3800BC
Vrysi 16	BM-1907	5290 \pm 100	charcoal	(Late)	4230-3990BC	4350-3800BC
Vrysi 17	BM-1906	5360 \pm 110	charcoal	(Late)	4330-4040BC	4450-3960BC
Dhali 1	GX-2847A	6415 \pm 310	charred bone	Concentration A	5600-4950BC	6000-4600BC
Dhali 2	P-2769	5700 \pm 100	charred bone	Concentration A	4690-4400BC	4770-4350BC
Sotira	St-337	5460 \pm 110	charcoal	Hut 29 (Phase 1)	4460-4150BC	4550-4000BC
Sotira	St-350	5150 \pm 130	charcoal	Hut 12 (unknown)	4220-3780BC	4350-3650BC
Philia	Birm-72	5720 \pm 100	carbon	(unknown)	4690-4460BC	4780-4350BC
Tenta	P-2780	5460 \pm 110	carbon	not in situ	4460-4150BC	4550-4000BC
Pamboules	St-419	5140 \pm 110	charcoal	HVIII fl. VI	4080-3780BC	4250-3700BC
Troulli	ph TL 09a	3860 \pm 480		survey		
Troulli	ph TL 09b	3570 \pm 445		survey		

Table 3.2 - SCU radiocarbon determinations and corresponding calibrations at two standard deviations

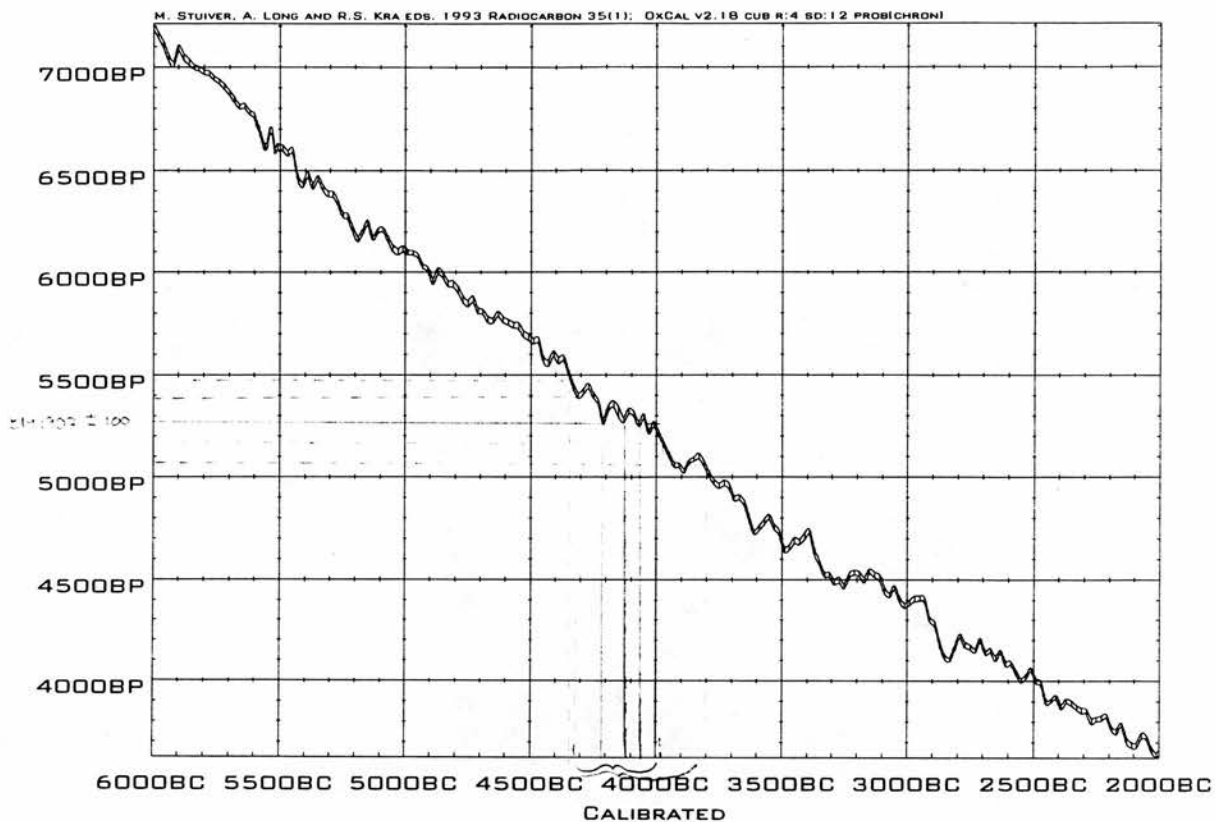


Figure 3.1 - Calibration curve indicating the oscillations present between 5500 b.p. and 5000 b.p.

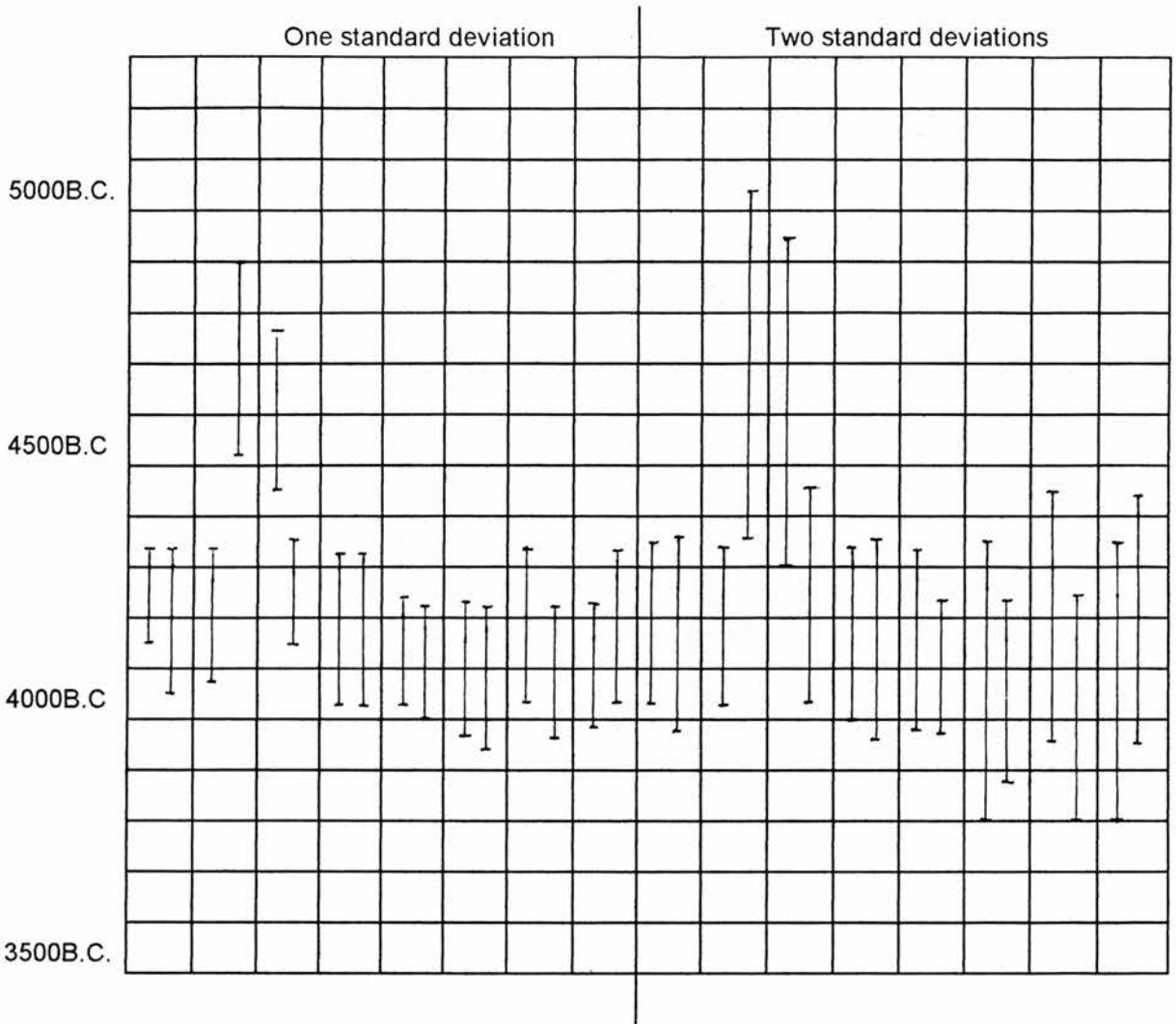


Figure 3.2 - Vrysi calibrations at one and two standard deviations

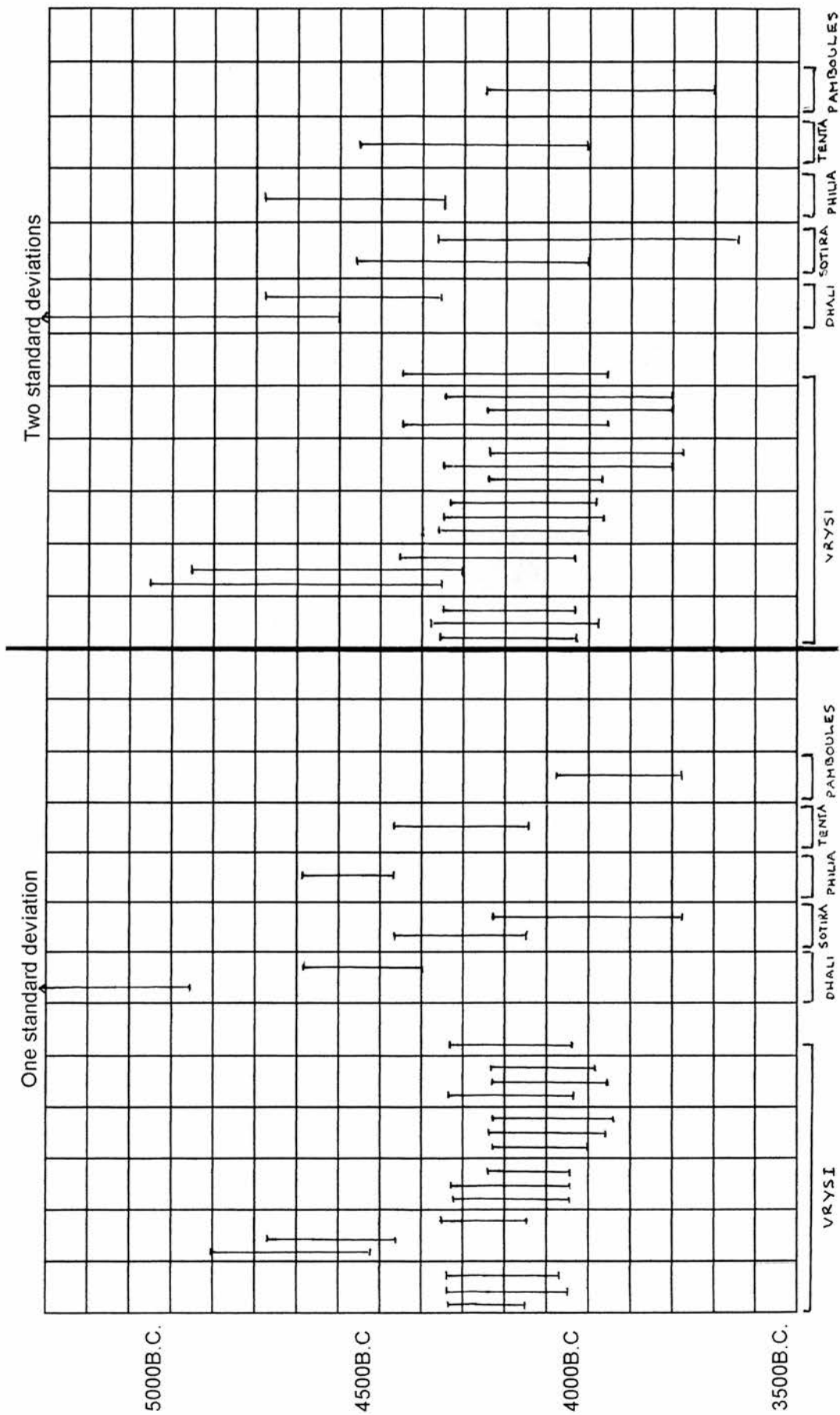


Figure 3.3 - SCU calibrations at one and two standard deviations

Figure 3.4-The frequency distribution of different RW motifs in the North Sector at Vrysi

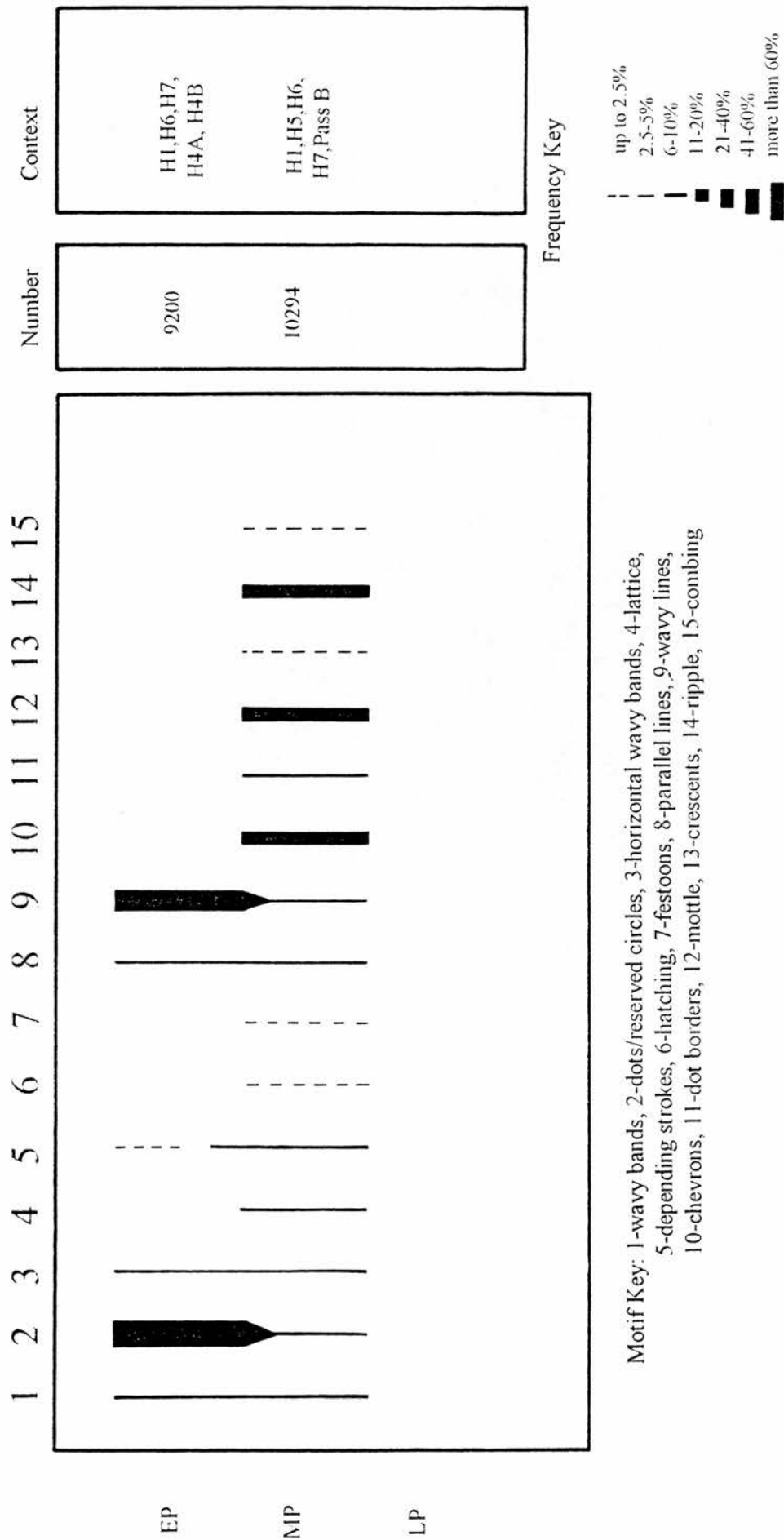
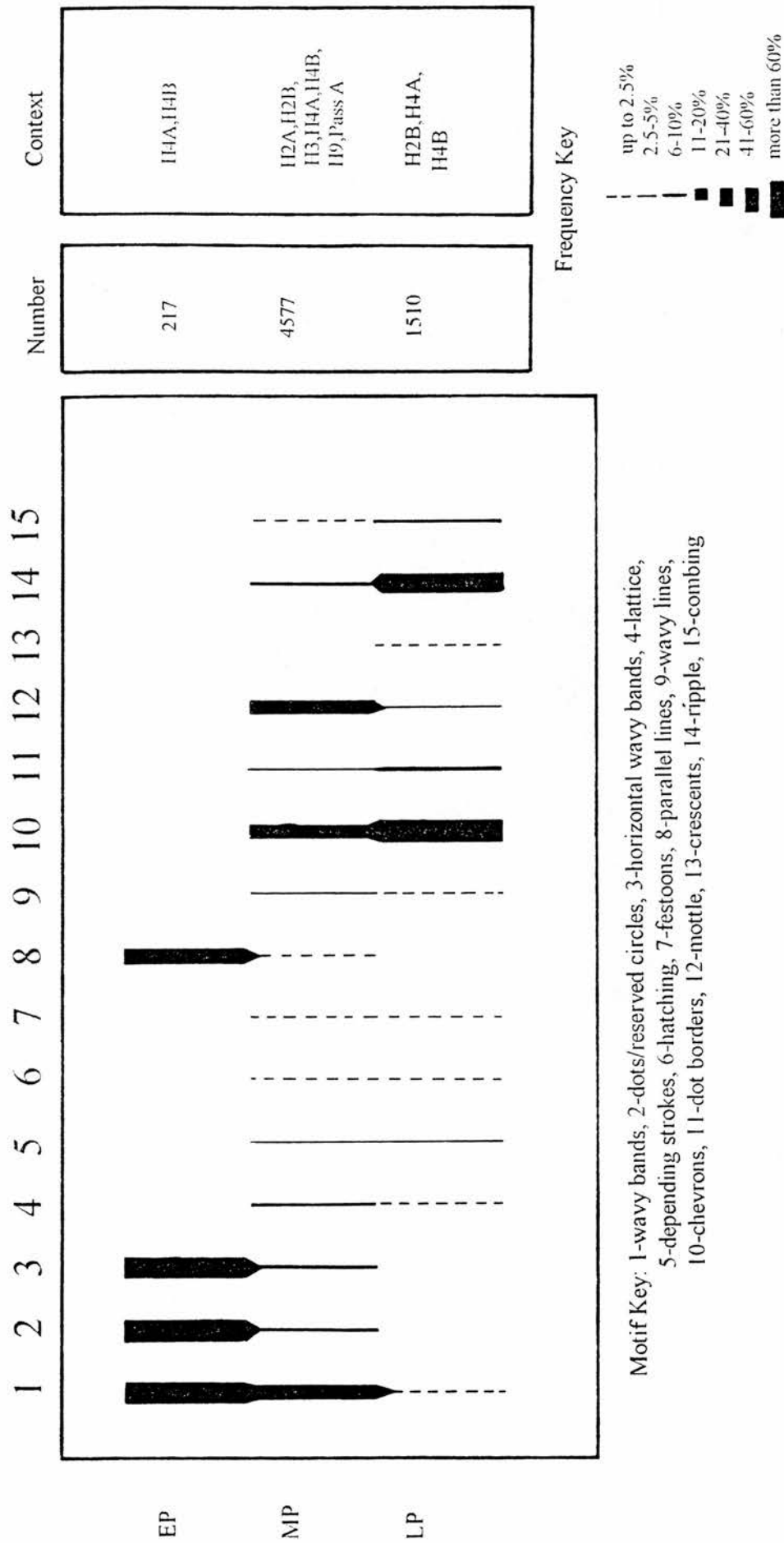


Figure 3.5-The frequency distribution of different RW motifs in the South Sector at Vrysi



Motif Key: 1-wavy bands, 2-dots/reserved circles, 3-horizontal wavy bands, 4-lattice, 5-depending strokes, 6-hatching, 7-festoons, 8-parallel lines, 9-wavy lines, 10-chevrons, 11-dot borders, 12-nottle, 13-crescents, 14-ripple, 15-combing

Figure 3.7-The frequency distribution of different RW motifs from Pit A at Troulli

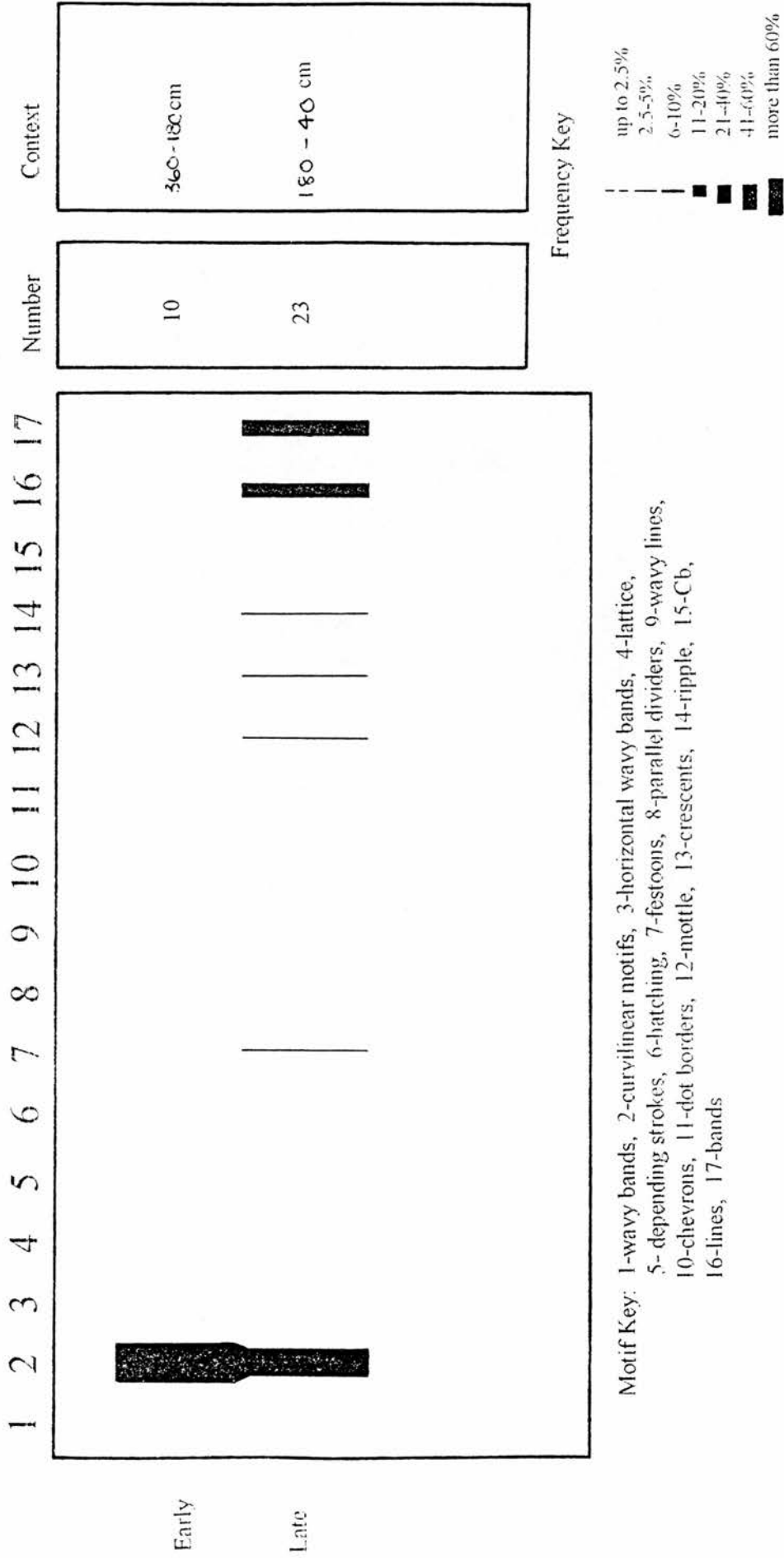
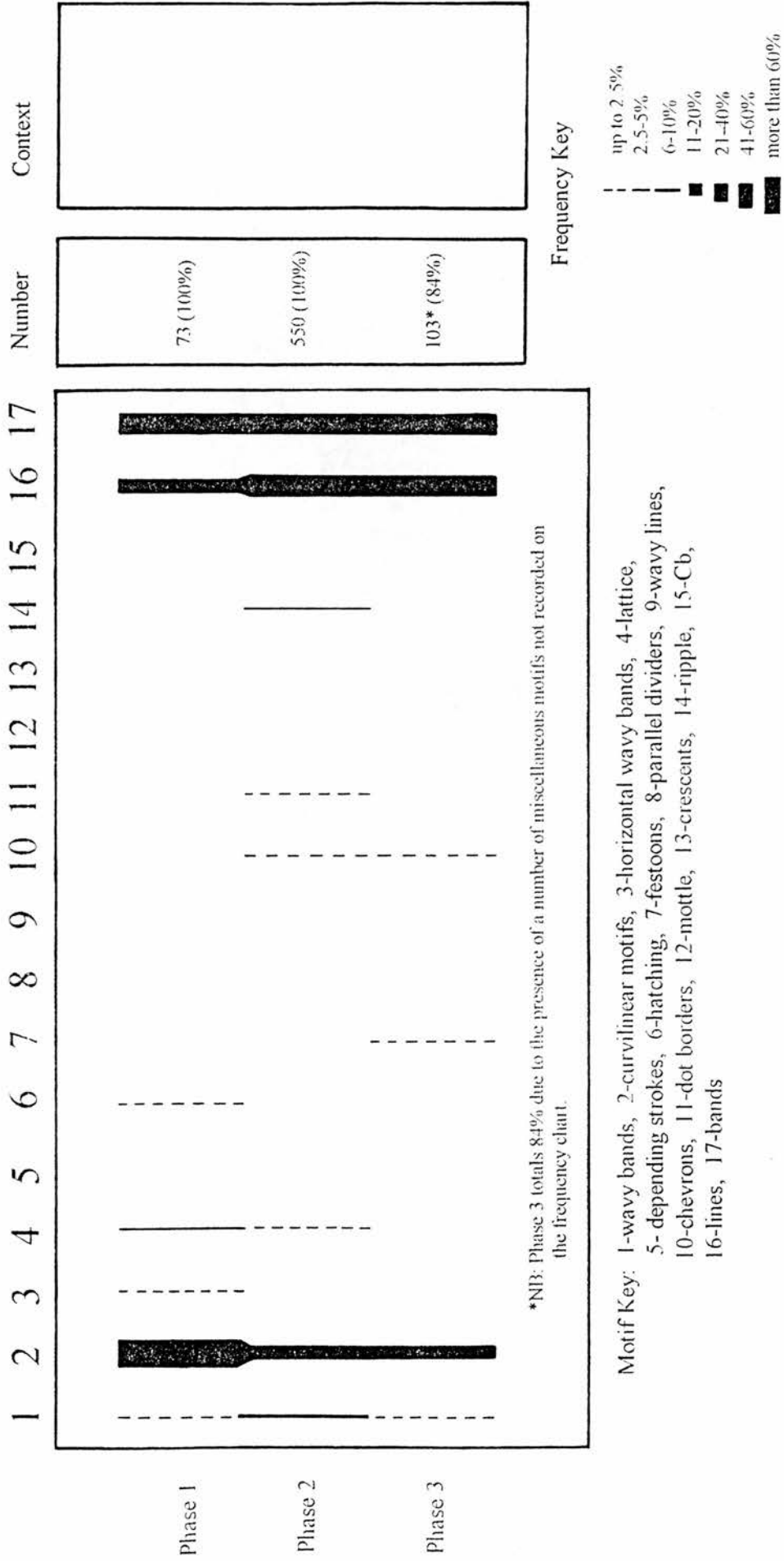


Figure 3.8-The frequency distribution of different RW motifs at Sotira



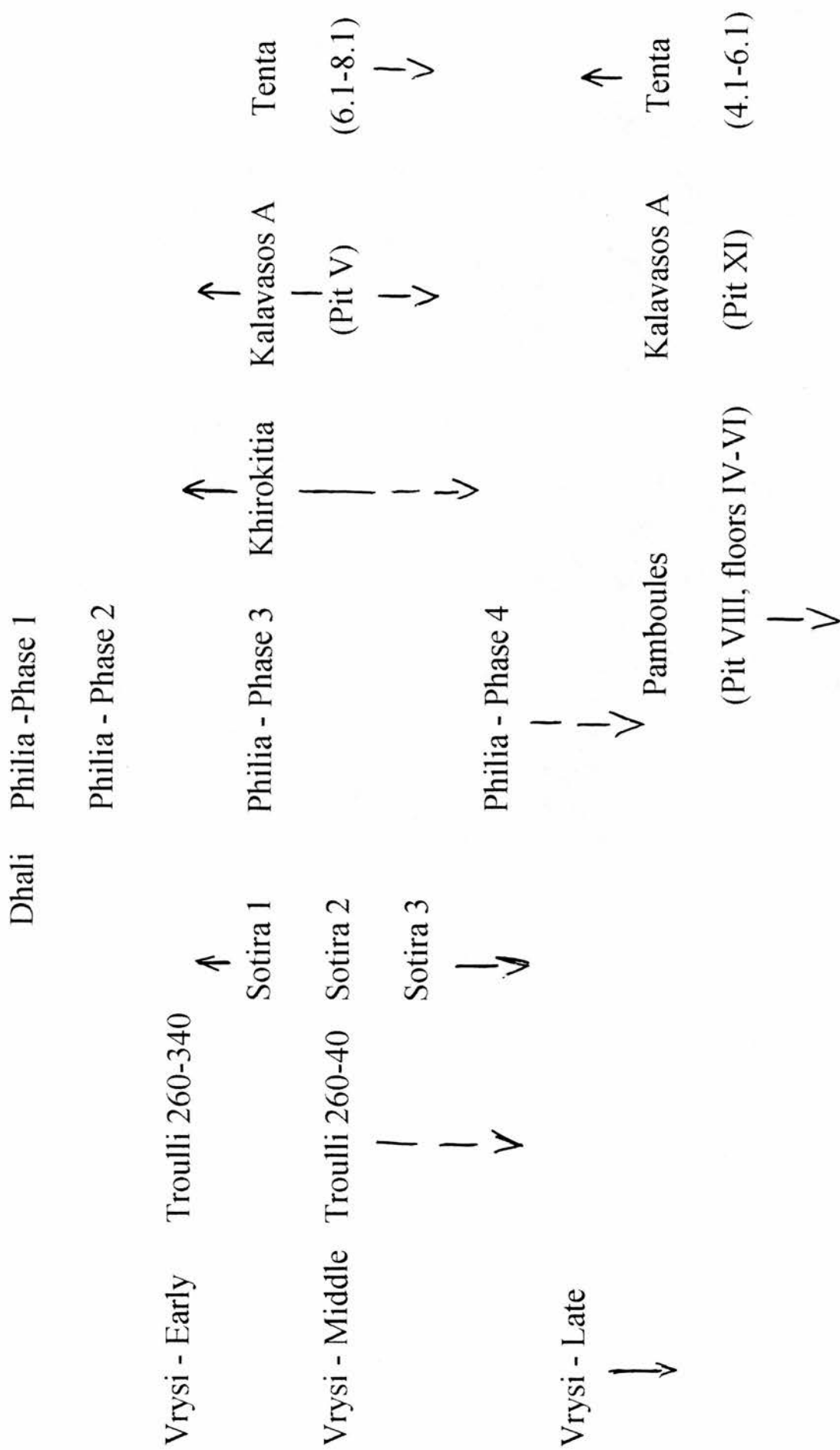


Figure 3.11 - The relative dating sequence for the SCU sites

CHAPTER 4

METHODOLOGY: THE CERAMIC CLASSIFICATION

4.1 - Introduction

Pottery accounts for a large proportion of the cultural remains retrieved from archaeological excavations. Because it varies both spatially and temporally, and is directly affected by socio-economic factors, it can be used to determine patterns of human interaction and evolution. Orton, et al. (Orton, Tyers and Vince 1993, 23) argue that archaeologists classify pottery with three primary aims in mind: dating evidence, aspects of distribution, and evidence of form and function. In a similar way, this thesis aims to establish,

1. when the SCU in Cyprus began and when it ended?
2. what were the socio/economic and environmental factors acting upon the population? and
3. how the population interacted with each other and with their environment?

In order to answer these questions, the information extracted from the pottery must be relatively objective. Moreover, the way in which the data are recorded and analysed must be reliable. One way to ensure a degree of objectivity in the data analysis, is to create a reliable ceramic classification system which can measure variability in ceramic attributes, and can be applied easily to samples of different size and different integrity.

The pottery classification formulated for this thesis is specifically designed to answer the questions outlined above. The method by which this classification was arrived at is discussed below. It is important to note that the system used in this study is a classification and not a typology. This difference is crucial and should be made explicit. Adams and Adams define the difference between classifications and typologies in the following way:

While the identity of classes is absolute, their meaning is relative. It is possible to lay down absolute criteria of identity for any class, but the class has meaning only in its relation to other classes in the same system. This means that classes...have negative as well as positive defining criteria. Class A1 is included in Classification A because it has the attributes that are common to all members of Classification A, but it is distinguished from Class A2 because it lacks the defining characteristics of Class A2.

(Adams & Adams 1991, 45-46)

In contrast, Adams and Adams define a typology as:

a particular kind of classification: one designed not merely for categorizing and labeling things, but for segregating them. A typology is a particular kind of classification, made for the sorting of entities.....typologies must have systemic features that are not necessary in other classifications. First of all it must be clear what is and is not to be sorted.....Second, each object that is sorted must go somewhere.....Finally, each entity can be put in one and only one place.

(Adams & Adams 1991, 47)

Typologies, therefore, have strict parameters. They are often single attribute based, and objects must be attributed to one category only. In a classification, artifacts (in this case pottery), can be grouped into more than one category on the basis of different attribute associations. In other words, Red on White pottery can be classified into Group A on the basis of shape, or Group B on the basis of surface treatment, or Group C on the basis of fabric type. This allows for greater freedom of association. Typologies also do not allow for the problem of "continuum" within the archaeological record where:

the gap between two apparently distinct types will become filled with a continuum of intermediate types, and it will be not at all clear where you should draw the boundary.

(Orton, Tyers & Vince 1993, 78)

Classifications get around this problem by allowing the parameters to be more fluid, which is necessary when dealing with a handmade ceramic tradition.

Cypriot pottery is traditionally categorised into typologies based upon shape and ware type (Dikaios 1962; Karageorghis 1982; Stewart 1962). However, more than one archaeologist has found that the type-variety system is less than adequate in any categorisation of pottery (Baird 1991; Dunnell 1986; Frankel 1991, 1993; Rice 1987, 282-283; Schaub 1992). Extensive research has been undertaken on classification systems and recording methods. As a result, there has been a move away from traditional methods of classification of pottery into "ware" types, to multivariate techniques where a number of "attributes" or variables (such as rims, bases, clay type, vessel thickness, technological features) are recorded. Extensive work on the development of new and better defined methods of ceramic recording, such as Attribute Analysis (Baird 1991; Clarke 1968; Plog 1980, 40), Design Element Analysis (Campbell

1992; Deetz 1965; Longacre 1964), Design Symmetry (Shepard 1976, 268; von Wickede 1986; Washburn 1977, 1978), and Structural Analysis (Bolger 1991; Hole 1984; Shepard 1976, 259-306), has contributed to more definitive and transferable ceramic analytical frameworks.

This thesis attempts to avoid the problems inherent in typologies by applying a multivariate attribute based classification system which enables single entities (in this case sherds) to be analysed at different levels. Although ware type is largely ignored during the initial sorting process, ware based typologies are universally recognised in Cyprus, due to the propensity for mutually exclusive surface treatment on Cypriot pottery. In order to ensure that continuity is maintained between the SCU ware based typology and any new classification, ware type must be incorporated into the classification. However, in the present study this happens only at the end of the analysis process, and only as one of a number of attributes recorded.

4.2 - Recent ceramic methodology and theory

In the last decade, archaeologists working on Early Prehistoric pottery have re-defined the way in which Cypriot ceramics are analysed and interpreted. Baird's work at Tenta and Ayious (Baird 1991, n.d.a, n.d.b) utilised the ideas of Orton (Orton 1980) by focusing upon the importance of mathematical definition in classification. Baird's study of the Tenta ceramics, particularly his attribution of the vast majority to the SCU/ECU transition, aided the attribution of ceramic material from other sites to what is a poorly represented phase in the Cypriot prehistoric record. The work at Lemba *Lakkous* and Kissonerga *Mosphilia* by Bolger (Peltenburg, et al., 1998) adopted a more traditional approach by identifying and categorising ware types. However, the uniquely protracted ceramic sequences at both sites enabled her to develop a well-defined chronological framework for the entire Early Prehistoric sequence (Peltenburg 1985b; Peltenburg, et al. 1987, 1989). Other archaeologists have adopted statistical methods to analyse pottery. As early as 1974, David Frankel, in a study of Middle Cypriot White Painted wares, successfully illustrated similarities and divergences in decorative schemes across the island using a variety of statistical tools including Cluster Analysis, Principal Components Analysis and Factor Analysis (Frankel 1974a). Since then, a variety of multivariate techniques have been applied to prehistoric ceramics in an effort to objectively quantify and interpret assemblages (Bolger 1991; Frankel 1974b, 1988, 1991; Peltenburg 1982, 61).

Conversely, there has been a lot of criticism regarding the objectivity of recording methods. The classification and analysis of decorative schemes, in particular, has come under intensive

scrutiny. Design Element Analysis, one of many techniques used by ceramicists to quantify variability in the ceramic record (Campbell 1992; Deetz 1965; Longacre 1964), has been widely criticised for its inconsistent methodology and application (Plog 1980, 40-44; Rice 1987, 252-260). In the first instance, the term 'design element' is never clearly defined. In some cases, it has been used to describe the smallest self-contained component of a design (Bolger 1991; Rice 1987, 248). In other instances, the term has been applied to more complex design states, which are arrived at through a series of ill-defined criteria (Longacre 1964, 163). The problems are greater still when it comes to the recording of designs. When a ceramicist sets up a series of criteria upon which design elements are classified into design motifs, the criteria may not be equal for each set of design elements. For example, a target may consist of a central dot and one ring, or it may consist of a central dot and two rings (Figure 4.1a-b). Are they two variations on the same motif, or are they separate motifs? To complicate matters further, it could be argued that a target consisting of a central dot and two concentric circles should be recorded as a separate motif, or it could be argued that the three elements which make up the motif should be recorded individually. In the case of the target motif, the meaning is lost if each element is recorded individually, and it would be no longer possible to recognise subtle differences between target motifs across sites and regions. But, in recording the target as one motif and not three individual elements, one loses a great deal of objectivity because the decision to count a two ringed target as a different motif to a one-ringed target is arbitrary. To extend the example, it may be that the target consisting of a central dot and two concentric circles is contained within two parallel lines (Figure 4.1c). The whole is in fact a very distinct design state because the target is not floating free, but the lines are not part of the target motif itself, and therefore, have to be recorded as a separate motif without losing the relationship between the lines and the target. Ultimately, there needs to be a system by which separate motifs can be analysed as motif sets.

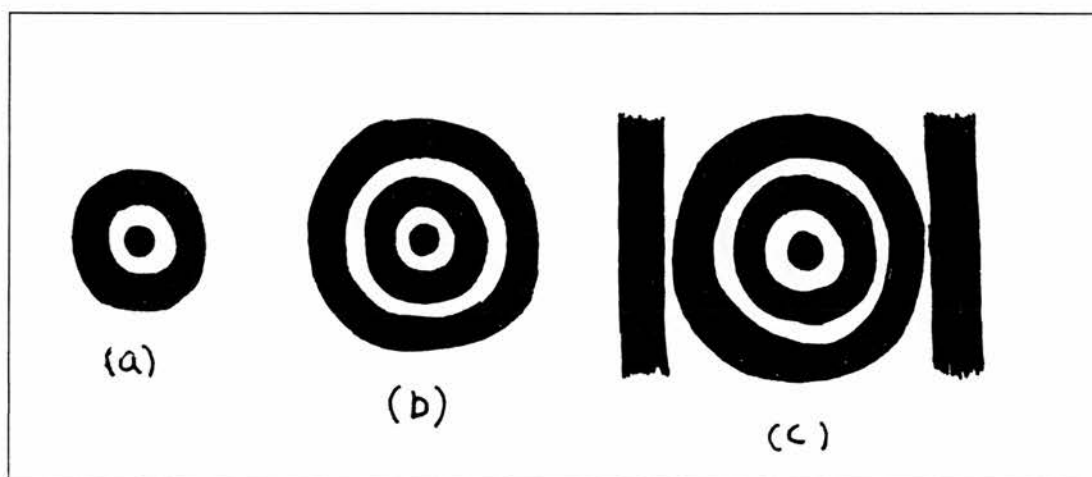


Figure 4.1 - Schematic representation of different design states of the target motif

In order to reduce the level of inconsistency inherent in most methods of design analysis, a number of ceramicists have used attribute based systems to analyse design motifs (see Friedrich 1970, 338-339; Plog 1980, 44-53). Attribute Analysis was originally used to record aspects of covariation in chipped and ground stone assemblages. Ceramicists use the technique less frequently as the success of attribute studies depends upon the nature of the ceramic assemblage. A particularly standardised assemblage, such as Roman Terra Sigilata, would not benefit significantly from an attribute-based recording system. Conversely, handmade heterogeneous pottery assemblages are well-suited to attribute based recording systems. Recent studies on Cypriot ceramic assemblages (Baird 1991; Frankel 1993) have employed attribute based systems of analysis because it allows greater flexibility in isolating patterns of variation which characterise assemblages.

Plog (Plog 1980), in his study of the pottery from the Chevelon Canyon area in the American Southwest equates attributes with:

decisions, whether conscious or unconscious, made by the artisan during the manufacturing or decorating process.

(Plog 1980, 41)

Each attribute has a number of “attribute states” (Figure 4.2). For example, the attribute, “rim” has the attribute states of rounded, squared, fined etc.; whereas the design attribute “form of primary unit” has the attribute states of triangle, square, line, circle etc.










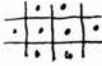
Attribute	Attribute states			
Rim	 rounded	 fined	 square	 thickened
<i>motifs</i>				
Form	 disk		 ring	
Composition	 solid		 cross-hatched	
Unappended unit	 ring		 dots	

Figure 4.2 - Attributes and attribute states (cf: Plog 1980, Figure 4.3, 51)

Deciding what attributes to record depends on whether or not there are strong patterns of covariation in the frequencies of the attribute states. It is therefore important that the attributes chosen for analysis are problem orientated and clearly defined. Also, the format by which attributes are recorded must be based on objective criteria. It is not enough to record inclusions as an attribute, if type of clay, and texture are not also recorded, because the decision to add certain types of inclusions is one that is made by the artisan in conjunction with the decision of what type of clay to use.

4.3 - The attribute-based recording system

SCU pottery is hand made, coil- or slab-built, with painted and burnished surfaces, and sometimes incorporating a variety of free-form patterns. This means that every vessel is unique as no design is ever repeated on another vessel, nor are shapes ever exactly the same. Therefore, although SCU pottery can be broadly classified by shape and surface finish, the finer analysis of morphology and decorative styles requires an attribute-based system which can quantify the types of diversity only observable in hand-made and decorated pottery. The recording system used in this study takes into account a range of factors relating to function, including dimension, fabric and component type (such as base, rim, spout etc) and surface finish. It also takes into account stylistic diversity, such as motif orientation, structure and application. The system combines various aspects of classifications used by Plog (Plog 1980) and Frankel (Frankel 1991). It is an hierarchical system in that it reflects decisions made by the artisan, and it is specifically designed to be used on sherd-based assemblages.

Deciding which attributes would best reflect changes in the level of observable variability necessitated that thought be given to the problems being addressed. In the first instance, this required a thorough review of previous research on relevant ceramics (Orton, Tyers & Vince 1993, 34-35). Even so, at the outset, it was impossible to predict which attributes would be barometers of stylistic variation. Therefore, as much information as possible was recorded, and as the character of SCU assemblages became more familiar, attributes which did not appear to reflect variation were omitted, while other attributes were included.

Some of the attributes recorded were those that had been previously identified as displaying strong patterns of covariation (Peltenburg 1978, 1979, 1982a). Other attributes were chosen after reviewing the pottery assemblages (for variation in bowl morphology over time see, Clarke 1992a, 8). First, the ceramics were divided according to four categories: vessel shape, component shape (ie rims, bases, lugs etc.), fabric (ie, paste), and decoration. A fifth category, ware (ie, RW, PCb, RMP), was recorded but not used in the initial classification. Variation in

fabric was recorded once the whole assemblage had been cursorily viewed, as broad differentiation cannot be recognised until large quantities of sherds have been studied. Macroscopic constituents, such as temper and paste, were analysed using a x10 magnifying glass and pottery samples were taken for petrographic analysis, which although beyond the scope of the present study, will be undertaken in the future.

The classification system was devised in such a way that ceramics could be analysed without immediate recourse to decorative mode. This ensured that functional similarities, rather than design variation, formed the basis of groupings. This also gave the classification flexibility, in that sherds with similar fabric and shape could be lumped into one large group, and later, separated into smaller groups with the inclusion of decorative mode. The only instance where this pattern varied was when a specific ware was known to be functionally distinct, such as Coarse Ware and MBW.

Within the four basic categories of shape, component, fabric and decoration, an hierarchical attribute based system was devised which, ideally, followed decisions made by the artisan during the manufacturing process (Table 4.1)¹. Therefore, shape and fabric became the primary attributes, as they dictate the function of the vessel. Component type preceded decorative mode because the shape of a rim, spout or lug often has a utilitarian aspect. As decorative mode was considered to be a secondary decision in the cognitive process, it was recorded after the pottery had been sorted by all other attributes.

Style is a function of decoration (see Chapter 6), and previous studies on SCU ceramics have identified decorative schemes as being a strong indicator of temporal and spatial variation (Peltenburg 1978, 1979, 1982a; Watkins 1970, 1973). With this in mind, an independent classification was established for surface decoration. Each new motif observed was recorded as a separate motif, whether positive, negative or a combination of both. Because of the inherent subjectivity in the decorative process, no attempt was made to break down motifs into primary and secondary parts on the basis of cognitive decisions made by the artisan. For example, in an early study Plog (Plog 1980) divided motif parts into primary and secondary categories on the basis of the choices an artisan would make when decorating a pot. For example, he suspected that there might be an initial decision to paint a circle and then a later decision to fill the circle in with hatching. Plog says:

Primary motifs are those combinations of design units which are the strongest units in the pattern and form the basis thereof. Filler

¹ Table 4.1 is located at the end of Chapter 4.

(or secondary) motifs are those units which are either included within the boundaries or appended to the borders of a primary motif, or are used to fill an area within the field of decoration which is not covered by the primary motifs.

(Plog 1980, 47)

More recently, Plog (Plog 1995) acknowledges that attempting to divide design units into primary and secondary motifs is extremely subjective. He says of his previous argument that:

In earlier discussions of design hierarchies, I have suggested that the different levels of a hierarchy may represent different decisions made by the prehistoric artisan. I would still argue that the different levels of variation are not equivalent, and therefore should be analyzed separately. However, despite qualifying statements that "decisions" could have been conscious or unconscious the word "decision" implies a conscious recognition and is inappropriate.

(Plog 1995, 377)

In other words, although the analysis of motifs can involve the breaking down of motifs into different design units, assumptions concerning which unit was painted first are arbitrary and misleading.

The design classification system used in this study is based primarily on the system used by Plog (Plog 1980, 1995) on the Chevelon Canyon ceramics. However, a series of modifications were made which counteracted sampling problems and problems with the nature of the designs. First, many of the sherds were so small that only parts of designs survived. Half motifs were therefore recorded separately from whole motifs. Secondly, designs on SCU pottery are executed by hand and display none of the standardisation of later assemblages, such as the Middle Bronze Age White Painted Wares, or the designs on Plog's sample (Plog 1980, 26-34). Motifs are often haphazard and poorly executed and of no particular shape, consequently, unrecognisable shapes, often with filler motifs, are common and were also recorded as separate motifs. Because of these difficulties, there was a large proportion of decorated sherds which could not be classified by their designs.

The simplest method of recording and analysing individual attributes and attribute states was to record every motif variation as a separate motif. Therefore, targets with one ring were recorded as a separate motif from targets with two rings. Triangles with hatched filler motif were recorded as a separate motif from targets with lattice motif. Targets bounded by parallel lines were recorded separately from those floating free.

4.4 - Method of analysis

In order for the analysis of the SCU pottery to be meaningful, two important premises need to be satisfied. First, it needs to be shown that samples are similar in size and have been collected from broadly similar contexts, using similar sampling criteria. The SCU ceramics in their entirety, do not fit these criteria. However, in Chapter 2, it was suggested that ceramic samples fell into four distinct groupings on the basis of the level of “integrity” of the sample. The four levels are:

- Category 1 - large/or complete excavation sample from stratigraphically phased contexts.
- Category 2 - large/or complete excavation sample from unphased contexts and large survey collections
- Category 3 - small survey collections
- Category 4 - biased museum sample comprised of diagnostics and representing a fraction of the original sample

This division enable two primary levels of analysis be undertaken: a broad or coarse level of analysis, where all samples are included, and a finer level of analysis, broken down into the various categories listed above.

The second premise is that samples are relatively homogeneous and originate from contexts which show evidence of similar human behavioural practices. In cases where samples are collected from excavations or surveys, where only a small percentage of the site is sampled, the likelihood of sample bias increases. For example, studies conducted in the 1960's and 1970's (Hill 1970, 1977) have shown that different areas of a site will be used for different purposes and this will be reflected in the types of pottery which are found on building floors and in middens. For example, Hodder and Orton state that:

..in addition to selection by archaeologists, any group of pottery from a pit of living floor is not a random or representative sample of the pottery that was used on the site - its composition will vary with functional differences across the site.

(Hodder and Orton 1976, 105)

Attempting to demonstrate that the SCU sites in the sample satisfy this premise is difficult. At Vrysi, there is convincing evidence that the discard patterns of faunal material are

significantly divergent for sheep/goat in comparison to deer (Peltenburg 1982b, 79). However, there exists no similar evidence of differential discard in the ceramics. Although Peltenburg was able to demonstrate divergences in the density of artefacts on house floors between the North and South Sectors at Vrysi (Peltenburg 1985e, 61-62; 1993, 10), he makes no mention of varying proportions in the types of pottery classes present. Peltenburg suggests that a similar pattern of settlement expansion occurred at Sotira (Peltenburg 1993, 11), but there is no evidence for spatial differentiation in the types of ceramics collected there either. Dikaïos (Dikaïos 1961) recorded ceramic finds by house and by floor and in every case, the proportion of ware types and shapes are broadly similar. Moreover, there is no evidence to suggest that different functions were practised in different areas of the site. Rather, the evidence suggests that each household unit undertook similar activities on a day-to-day basis.

Having said this, there are apparent differences in settlement form which might reflect variations in subsistence patterns. For example, the pit dwellings at Kokkinoyia are distinct from the above ground dwellings at Vrysi and Sotira. Therefore, ceramic assemblages were carefully analysed for variations which might reflect settlement function. Before undertaking the analysis of the pottery, a thorough revision of the potential for differential settlement function and discard patterns is undertaken in Chapter 5.

Having allowed for variations in sampling criteria, and intra- and inter-site spatial and temporal variability, sherds could then be sorted into categories and classified in accordance with the criteria set out in Section 4.2 (Table 4.1). The aim was to devise a database which could meaningfully process large numbers of sherds. In previous attribute-based systems, undertaken by other ceramicists, the data sample has been relatively small, allowing for each sherd to be recorded individually². This method was considered to be unrealistic for a sample in excess of 70,000 sherds. Therefore, a group of sherds with identical attributes were recorded together as one entry. The disadvantage of this system was that groups of sherds could not be “summed” if the database field was alfa-numerical. In order to counteract this problem, a fully numeric system of recording was devised, which allotted a discreet number to each attribute state within the hierarchical ordering of attributes. Fletcher and Lock (Fletcher and Lock 1991) have highlighted the importance of working with a numerical coding system when dealing with large data matrices:

With categorical variables it is necessary to represent the values of each category in a standardised way by using a coding system. It is common in statistical analysis to use a numeric coding system.

² Frankel 1974. c1000 vessels and 80 motifs; Frankel 1991. c2285 diagnostic sherds; Plog 1980. c3110 sherds.

in fact, using letters rather than numbers can cause problems with some statistical software.

(Fletcher & Lock 1991, 5)

Table 4.1 is the classification of shapes, components and decorative schemes. For the attribute “shape”, there were 70 attribute states which were given the numbers 01-70, and for the attribute “component”, there were 68 attribute states which were given the numbers 01-68. To give an example, a concave hemispherical bowl with a flat rim, omphalos base and trough spout, would be given the numeric sequence 05//05-43-63. In this case the attribute state of the attribute “shape” is a concave hemispherical bowl and has the number 05. There are three different attribute states of the attribute “component”, each with a unique number: 05 represents a flat rim, 43 represents an omphalos base and 63 represents a trough spout (see Figure 4.3).

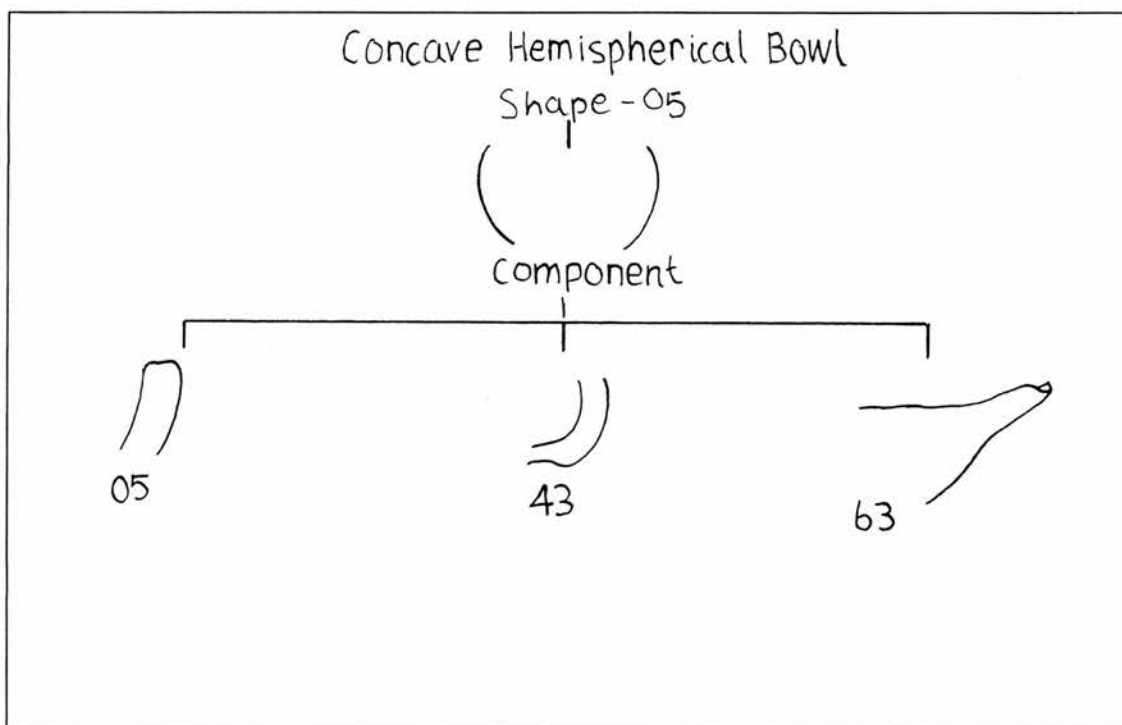


Figure 4.3 - Example of the numeric classification system

4.5 - The attributes

4.5.1 - Shape

Sherds were initially separated into open and closed vessels. Body sherds were separated from the morphological diagnostic sherds (ie, rims, bases). Undiagnostic sherds were counted and removed. Where the shape of a vessel was known it was recorded. In most instances however,

even diagnostic sherds were too small to indicate overall shape but on most occasions could indicate the shape of a rim a base (ie, component).

4.5.2 - Component

Diagnostic sherds which indicated morphology were then isolated on the basis of their individual component types. Rims of open and closed vessels were classified as either flat, rounded, flared etc; necks were classified as either long and straight, short and straight, flaring etc., and spouts were classified as either trough, bridge or tubular. Most separation was achieved at the component level. It was at this level, that diameters of rims and bases were recorded, that is, where more than 10% of the diameter survived.

4.5.3 - Fabric

Where clear definition between fabric types was observed, this was recorded. Some assemblages, such as Sotira, had homogeneous fabrics with only one or two variants. Other assemblages, such as Philia, had extremely heterogeneous fabrics and in these instances, it was easier to lump fabrics together than to separate into discrete types. Fabrics, for the most part, are excluded from the succeeding discussions because they are very much indigenous to each site. However, a complete review of fabrics is given in Appendix 1.

4.5.4 - Surface treatment

Sherds were then categorised according to their surface decoration. Diagnostic sherds which indicated decorative mode, were separated into either burnished and unburnished, slipped, painted etc. In almost all instances, sherds fell into already established ware types, and these were recorded. In other instances, sherds were too small to identify the mode of decoration. An example which is often quoted in Cypriot ceramic studies, is the problem in identifying a red and white painted motif from a solid monochrome red surface, or a painted and combed surface, on very small sherds (Baird n.d.a; Bolger 1988, 35; Dikaios 1961, 173). In order to classify all sherds by decoration without recourse to ware type, solid red painted surfaces and solid white painted surfaces were given motif numbers.

The repertoire of SCU motifs totalled over 150 separate examples. Each motif was given a separate number, which could then be added to the numeric sequence established for shape, component and surface treatment. Positive (RW) designs were given a number between 000-499, negative (Cb) motifs were given a number between 500-599, and combinations (PCb) were given a number 600-699. Other rare motifs, such as plastic and incised decoration, were given a number between 700-799. Therefore, numbers were not sequential, but it was possible

to see at a glance the decorative mode applied to any group of sherds. New motifs were added to the list as and when they were identified.

The recording system also allowed for multiple motif occurrences. For example, there was often more than one motif on a sherd, and there could be two surfaces on which motifs were present, if the sherd was from a bowl for instance. The numeric string for motifs was therefore quite large on its own. Each surface was allocated three sets of three digits, with each set of three digits representing a separate motif. It was very rare that a sherd, or whole vessel, had more than three motifs present at any one time. Motifs were given a separate database which could be analysed without reference to the main database. However, if simple presence/absence analyses was all that was required, the motif string could be added to the main string again.

It was noted that, depending on the nature of deposition, different proportions of sherds could be classified with differing degrees of confidence. At excavated sites, such as Sotira and Philia the correct identification of sherds was as high as 95%. At survey sites, correct identification could fall as low as 20%. A vast majority of sherds, therefore, have been recorded as unknown shape, unknown component and unknown surface treatment.

Each group of sherds now belonged to a discreet category with its own set of hierarchical attribute states, but sherds could also be analysed at different levels within the classification. For example, sherds belonging to the group 'rounded rim sherds with rim bands', could be analysed as rounded rim sherds, irrespective of decoration.

In this way, the data set came together as a coherent whole. In Chapters 7 and 8 the data are analysed using a variety of qualitative and quantitative methods, taking into consideration various depositional and sampling criteria. The analysis of ceramic form and design, as a method of elucidating patterns of temporal and spatial variation, is not definitive. However, there is extensive research, both archaeological and ethnographic, to show that with careful research design, hypotheses explaining human interactive processes can be formulated which can be tested against the compiled data using current ceramic recording methods.

Table 4.1 - Hierarchical numbering system of attributes for the SCU ceramics

Level 1 - Shape Open Bowls

- 00 - unknown
- 01 - standard hemispherical
- 02 - shallow hemispherical
- 03 - deep hemispherical
- 04 - deep straight
- 05 - concave hemispherical
- 06 - flaring straight sided (platter)
- 07 - vertical sided
- 08 - carinated
- 09 - outward flaring
- 10 - small dish

Holemouths

- 21 - simple
- 22 - small collared
- 23 - short necked
- 24 - out-turned rim #1
- 25 - straight sided
- 26 - out-turned rim #2
- 27 - unknown holemouth

MBW Bowls

- 31 - simple hemispherical
- 32 - shallow hemispherical
- 33 - deep hemispherical
- 34 - deep straight
- 35 - concave hemispherical
- 36 - shallow straight
- 37 - dish
- 38 - out-turned rim
- 39 - unknown MBW bowl

MBW Holemouths

- 41 - straight sided, out-turned rim
- 42 - short necked #1
- 43 - vertical sided
- 44 - flat out-turned rim
- 45 - straight sided
- 46 - short necked #2
- 47 - jar type
- 48 - unknown MBW holemouth

Coarse Ware Shapes

- 51 - unflanged
- 52 - straight sided, flanged
- 53 - thumb pot #1
- 54 - coarse buff ware variant
- 55 - holemouth
- 56 - dish
- 57 - thumb pot #2
- 58 - small jar
- 59 - flared flanged
- 60 - out-turned, flanged

Table 4.1 - Hierarchical numbering system of attributes for the SCU ceramics (continued)

- 61 - rectangular dish (CBW variant)
- 62 - flared sided, unflanged
- 63 - generic matt impressed base
- 64 - unknown shape
- 65 - straight walled
- 66 - disk base
- 67 - u-shaped opening
- 68 - thumb pot # 3
- 69 - course buff dish

Closed Shapes

- 71 - small flask #1
- 72 - small flask #2
- 73 - small flask #3
- 74 - small flask #4
- 75 - handled flask

Level 2 - Component

Open Rims

- 00 - unknown open
- 01 - rounded
- 02 - fined
- 03 - rounded thickened
- 04 - flat inward sloping
- 05 - flat thickened
- 06 - out-turned
- 07 - flat
- 08 - outward sloping #1
- 09 - elongated lip
- 10 - outward sloping #2
- 11 - bulbous
- 12 - thickened inward sloping
- 19 - open body sherd

Closed Rims

- 20 - unknown
- 21 - flaring #1
- 22 - flaring #2
- 23 - straight, thin walled #1
- 24 - straight, thick walled #2
- 25 - short, straight, tapering inwards #1
- 26 - MBW wide, flaring variant
- 27 - straight, tapering inwards #2
- 28 - flaring with articulation
- 29 - short collared #1
- 30 - carinated
- 31 - outward flaring
- 32 - convex
- 33 - short collared #2
- 34 - elongated defined lip
- 39 - shoulder
- 40 - closed body sherd

Table 4.1 - Hierarchical numbering system of attributes for the SCU ceramics (continued)

Open Bases

- 41 - rounded
- 42 - flat
- 43 - omphalos
- 44 - disk
- 45 - flanged
- 46 - MBW variant
- 47 - unknown open base

Closed Bases

- 51 - wide omphalos
- 52 - rounded
- 53 - narrow omphalos
- 54 - pointed
- 55 - flat
- 56 - disk
- 57 - button (Philia 3.1 surface only)
- 58 - unknown closed base
- 59 - flanged

Spouts

- 61 - tubular, level with rim
- 62 - tubular, below rim
- 63 - trough
 - type #1 - long
 - type #2 - short
- 64 - bridge
- 65 - tubular, rising above rim
- 66 - holemouth with tubular spout
- 67 - pinched
- 68 - unknown spout

Level 3 - Decoration - Red on White

- 01 - rim band
- 02 - vertical broad band (> 4cm)
- 03 - horizontal broad band ""
- 04 - diagonal broad band ""
- 05 - vertical thin lines (< 1cm)
- 06 - horizontal thin lines ""
- 07 - diagonal thin lines ""
- 08 - vertical thick lines (1-4cm)
- 09 - horizontal thick lines ""
- 10 - diagonal thick lines ""
- 11 - converging bands
- 12 - intersecting bands
- 13 - converging lines
- 14 - intersecting lines
- 15 - converging lines and bands
- 16 - wavy bands
- 17 - bounded wavy bands
- 18 - ripple lines
- 19 - ripple pattern
- 20 - ripple variant #1
- 21 - ripple variant #2

Table 4.1 - Hierarchical numbering system of attributes for the SCU ceramics (continued)

- 22 - broad ripple bands
- 23 - ladder pattern
- 24 - ladder pattern variant #1
- 25 - ladder pattern variant #2
- 26 - ladder pattern variant #3
- 27 - ladder pattern variant #4
- 28 - ladder pattern variant #5
- 29 - ladder pattern variant #6
- 30 - bounded ripple bands #1
- 31 - bounded ripple bands #2
- 32 - curvilinear ripple bands
- 33 - cross-hatching
- 34 - cross-hatched intersecting bands
- 35 - cross-hatched bands
- 36.1 - lattice
- 36.2 - lattice bands
- 37 - concentric circles
- 38 - single circles
- 39 - reserved dots
- 40 - concentric squares and circles
- 41 - targets
- 42 - reserved targets
- 43 - reserved circles
- 44 - strings of targets
- 45 - cross-hatched circles
- 46 - cross-hatched circles with dots
- 47 - unbounded cross-hatching with dots
- 48 - curvilinear bands with cross-hatching and dots
- 49 - multiple v's
- 50 - opposed solid triangles
- 51 - solid pendant triangles
- 52 - hatched triangles
- 53 - cross-hatched triangles
- 54 - ripple filled triangles
- 55 - multiple zig-zag
- 56 - dot borders
- 57 - stroke borders
- 58 - dot bands
- 59 - strokes
- 60 - solid chequerboard
- 61 - chequerboard with hatched filler
- 62 - chequerboard with ripple filler
- 64 - chequerboard with wash filler
- 65 - chequerboard variant #1
- 66 - chequerboard variant #2
- 67 - "Philia" pattern
- 68 - Unidentified areas
 - 68.1 - ripple
 - 68.2 - target
 - 68.3 - dots
 - 68.4 - solid

Table 4.1 - Hierarchical numbering system of attributes for the SCU ceramics (continued)

- 68.5 - triangle
- 68.6 - lattice
- 68.7 - cross-hatched
- 68.8 - hatched
- 68.9 - wavy lines
- 68.10 - chevron
- 69 - shoulder band
- 70 - shoulder and neck bands
- 71 - solid neck and shoulder band
- 72 - multiple shoulder bands
- 73 - concentric circles defining base
- 74 - targets defining base
- 75 - circles defining base
- 76 - mottle
- 77 - mottle bands
- 78 - ripple filled broad bands
- 79 - solid disk defining base
- 80 - solid zig-zag
- 81 - band defining trough spout
- 82 - band defining tube spout
- 83 - solid paint on inside spout
- 84 - solid paint on outside spout
- 85 - opposing spatulas
- 86 - dots
- 87 - reserved circles with chevron
filler
- 88 - converging lines and band variant
- 89 - festoons
- 90 - festoon variant
- 91 - solid circles with wavy line filler
- 92 - targets with wavy line filler
- 93 - concentric squares
- 94 - solid pendant semi-circles
- 95 - curvilinear band
- 96 - curvilinear line
- 97 - curvilinear band variant
- 98 - multiple curvilinear line variant
- 99 - stings of diamonds
- 100 - reserved slits
- 101 - curvilinear solid zones
- 102 - crescents
- 103 - curvilinear hatched area
- 104 - cross-hatched bands meeting
targets
- 105 - dot border variant
- 106 - solid red paint
- 107 - solid white paint
- 108 - strings of circles
- 109 - diamonds and intersecting lines
- 110 - curving solid bands vertical from
rim
- 111 - joined circles
- 112 - joined targets

- 113 - wavy horizontal line below rim
band
- 114 - joined target variant
- 115 - tendrils
- 116 - barred lines
- 117 - solid paint on neck
- 118 - "Sotira" thin wavy bands
- 119 - rectilinear bands
- 120 - curvilinear shapes
- 121 - rows of dots
- 122 - dot band on rim
- 123 - rectilinear shapes
- 124 - multiple brush wavy lines
- 125 - broad band with circle border
- 126 - reserved stings of dots

- 400 - broad bands orientation
unknown
- 401 - lines orientation unknown
- 402 - thin bands orientation unknown

Painted and Combed

- 501 - broad combed bands
- 502 - broad combed bands with lines
- 503 - broad intersecting combed bands
- 504 - thin straight combed bands
- 505 - broad straight combed bands
- 506 - broad wavy combing
- 507 - hairpins
- 508 - converging thin straight bands
- 509 - combed bridge btw targets
- 510 - thin combed reserved lines
- 511 - combed curved bands
- 512 - converging wavy combed
broad bands with solid zones
- 513 - wavy combed concentric circles
- 514 - wavy broad bands and solid
bands
- 515 - wavy combed ladders
- 516 - combed zones
- 517 - combed curvilinear zones
- 518 - straight combed zones
- 519 - combed and solid bands
intersected by solid bands
- 520 - combed rim band
- 521 - combed wavy bands
- 522 - straight combed ladders
- 523 - circles with combed boxes
- 524 - combed figure of 8
- 525 - combed diagonals
- 526 - combed squares
- 527 - combed squares and solid
squares
- 528 - diagonal bands combed in
diagonal straight lines

Table 4.1 - Hierarchical numbering system of attributes for the SCU ceramics (continued)

- 529 - converging straight bands
 combed in wavy lines
- 530 - "Khirokitia" tight waves
- 531 - combed straight returns
- 532 - combed bands with thin
 intersecting lines
- 533 - horizontal broad wavy
 combed bands

Combed

- 601 - thin wavy lines horizontal to rim
- 602 - thin wavy lines vertical to rim
- 603 - thin wavy lines diagonal to rim
- 604 - thick wavy lines horizontal to
 rim
- 605 - thick wavy lines vertical to rim
- 606 - thick wavy lines diagonal to rim
- 607 - thin straight lines horizontal to
 rim
- 608 - thin straight lines vertical to rim
- 609 - thin straight lines diagonal to
 rim
- 610 - thick straight lines horizontal to
 rim
- 611 - thick straight lines vertical to
 rim
- 612 - thick straight lines diagonal to
 rim
- 613 - chequerboard combing
- 614 - converging combed straight lines
- 615 - combination thin wavy and thick
 straight lines
- 616 - combed zig-zags
- 617 - combed wavy cross-hatching
- 618 - wavy combed lines no
 orientation
- 619 - wavy combed bands no
 orientation
- 620 - straight combed lines no
 orientation
- 621 - straight combed bands no
 orientation
- 622 - combed hairpins
- 623 - horizontal combing on
 trough spout
- 624 - horizontal combing on tube
 spout
- 625 - combed sharp horizontal waves
- 626 - combed sharp diagonal waves
- 627 - combed sharp vertical waves
- 628 - rectilinear combed lines

Table 4.1 - Hierarchical numbering system of attributes for the SCU ceramics (continued)

Level 4 - Ware

- 00 - unknown
- 01 - RMP
- 02 - RS
- 03 - RW
- 04 - CB
- 05 - PCb
- 06 - CW (Type A)
- 07 - CW (Type B)
- 08 - MBW
- 09 - MBW (variant)
- 10 - RR
- 11 - CBW
- 12 - CG
- 13 - PW
- 14 - GBW
- 15 - Burnished Coarse Ware
- 16 - Early Chalcolithic
- 17 - Middle Chalcolithic
- 18 - Red Core Ware
- 19 - Khirokitia Coarse RMP
- 20 - RW/MBW
- 22 - Rose Pink MBW
- 23 - RMP ?
- 24 - Late Chalcolithic BTW
- 25 - Late Chalcolithic RMP
- 26 - Middle Chalcolithic RW
- 27 - Unknown L/Chalc
- 28 - Early Chalcolithic RW
- 29 - Early Chalcolithic RMP
- 30 - Later unknown

CHAPTER 5

CERAMICS AND SUBSISTENCE: THE ROLE OF POTTERY IN SCU CYPRUS

5.1 - Introduction

Pottery accounts for a large proportion of the recoverable objects from both excavation and survey, but there are other items, such as chipped and ground stone objects, bone implements, floral and faunal remains, architectural structures and burial customs, which also contribute to our reading of the archaeological record. In order to partly understand the interrelationships which governed the daily activities of SCU populations, the ceramic record must be studied in conjunction with other forms of archaeological evidence, particularly that portion which can tell us about how early societies lived.

Regional variation reflects social and economic interaction and evolution. With this in mind, the following discussions will focus on the role of pottery within the SCU social and economic structure. Consequently, this chapter does not constitute a formal ceramic review, where individual fabrics, forms and wares are inventoried, but uses the relevant data to support and develop wider issues. The first section presents a brief traditional summary of the formal attributes of the SCU ceramics, where it applies to regional diversity, however, the bulk of the pottery corpus is incorporated into the accompanying Appendix 1.

Having briefly reviewed the SCU ceramic tradition, aspects of pottery morphology are considered in reference to current theories on function. However, in order to discuss the functional role of pottery in SCU Cyprus, the economic evidence must be thoroughly reviewed. Therefore, the second part of the chapter assesses the role of both subsistence strategies and pottery in the interactive process. The floral and faunal evidence is considered in some detail. It is argued that because very little economic evidence from the SCU survives, comparative material from temporally contiguous agro-pastoralist societies is relevant to the identification of broad subsistence behaviour patterns, even though the material is somewhat earlier and later. Therefore, the KCU and ECU economic evidence is also briefly summarised. The chapter then returns to the issue of ceramic form and function. On the basis of the economic evidence, it is suggested that the SCU inhabitants used pottery for a variety of subsistence related tasks, including cooking, sorting, and milk production. It is argued that a

range of seasonally scheduled subsistence tasks were carried out over the course of the year, and that these would have dominated village social structures.

The final part of the chapter considers the possible affects of seasonal subsistence scheduling on agro-pastoralist societies from a social interactive perspective. The relevance of various theories concerning the importance of mating networks (Wobst 1974, 1976) or alliance networks (Gamble 1989, Madden 1989) for continued group survival are discussed in relation to the SCU.

5.2 - The SCU pottery assemblages

Peltenburg (Peltenburg 1978, 1982a) noted that SCU sites fall into two distinct categories based upon variation in the execution of designs on painted pottery.

1. Those sites which have a predominantly RW design tradition (Dikaios 1962, Fig 35; Peltenburg 1982b, Fig. 70-76; Watkins n.d.).
2. Those sites which have a predominantly Cb and RMP design tradition (Dikaios 1953, Plates LXXII-LXXVIII; 1961, Plates 58-73 and 80-83).

The two categories can be separated geographically into two broad regions:

1. a northern, RW region, encompassing all of the sites north of the Kyrenia Range, the Morphou Bay area and the Paphos Region; and,
2. a southern, Cb and RMP region, encompassing all of the sites around the Coastal Gateway, between the Paphos Region and the Southern Chalk Plateaus, and the south-central Southern Chalk Plateaus (see Map 2.2 at the end of Chapter 2). When broadly contemporaneous assemblages are compared, differences between the two regions are not manifest in any other aspect of the material culture.

Despite regional differences, the ceramic tradition is essentially homogeneous. Techniques of pottery manufacture, form, and function are essentially identical throughout all areas. Although a northern and southern region can be differentiated according to the distribution of decorative motifs, there is also significant overlap. This homogeneity is most clearly seen in the limited range of vessel shapes (Table 5.1). Vessels are hand made, and in most instances coil built, using wide flattish bands, which are overlapped and smoothed into each other for added strength. This technique produces a distinct layered effect in the section, noted by Dikaios at Sotira (Dikaios 1961, 171) and Kromholz and Baird at Tenta (Baird n.d.a; Kromholz 1981, 20).

Unfortunately, evidence for the production of SCU pottery is meagre. There is one example of a possible “waster” found in Hut 2A at Vrysi (Peltenburg 1982b, 100), but as yet no confirmed firing pits or kilns have been identified. It has been suggested that some of the ashy pits and hollows found at many ECU sites might represent pottery producing installations (Shiels 1993, 63), or cooking areas for larger joints of meat (E.J. Peltenburg, personal communication). Since they are unlikely to be a new feature in the ECU, Peltenburg also suspects that fire pits were present at SCU sites, but may have been missed during excavation (E.J. Peltenburg, personal communication).

Variation in fabric and temper indicates that local clay sources were exploited, and pottery manufacturers experimented with different types of temper to achieve different results. The clays along the Southern Chalk Plateaus, where limestone formations predominate, are highly calcareous. Conversely, inland sites such as Philia, are characterised by high levels of igneous inclusions. On the whole, the SCU fabrics are local to individual regions and sometimes to individual sites. As previously mentioned, little is known about the firing conditions for SCU pottery, but studies conducted on analogous ECU pottery (Shiels 1990) have shown that firing temperatures averaged about 750 degrees centigrade.

At this point it should be noted that on the basis of the evidence it would appear that pottery production was an activity which took place within separate villages. This is in sharp contrast to other periods. In the Late Bronze Age, the site of *Sanidha Moutti tou Ayiou Serkou* (Todd 1991, 1992, 1993), substantial evidence for specialised pottery manufacture, including large quantities of plano-convex clay bricks, thought to be part of kiln structures, and White Slip Ware “wasters” have been excavated. Evidence from Sanidha shows that by the Late Bronze Age, and probably much earlier, there were specialised pottery production centres which supplied local regions with ceramic items. There is no evidence to suggest specialised production was carried out during the SCU.

Shapes and fabrics can be broadly sub-divided by function. There are three main functional classes, the Decorated Fine Wares (RW, RMP, Cb and Pcb) (Table 5.1/1-2), the Monochrome Burnished Wares (Table 5.1/3-4), and the Coarse and Fine Cooking Wares (Table 5.1/5-6). There are also a number of variants in each class, represented in very small quantities at most sites. Morphological variation between the Monochrome Burnished Wares and the Decorated Fine Wares is likely to be due to MBW being earlier in the archaeological sequence than the Decorated Fine Wares, but in all other instances it would appear that shape, fabric and temper are related to function, and that surface treatment was a secondary consideration.

It was mentioned above that a comprehensive corpus of the pottery is presented in Appendix 1, and as such, the following section constitutes a summary of the broader aspects of the SCU pottery assemblages, where they directly relate to aspects of regional variation.

5.2.1 - The Decorated Fine Wares¹

Red on White (RW), Red Monochrome Painted (RMP), Combed Ware (Cb), Painted and Combed Ware (PCb).

The Decorated Fine Wares account for the majority of SCU pottery. Traditionally, they have been divided into four main ware types (RW, RMP [Red Slip and Red Lustrous], Cb and PCb) on the basis of the surface treatment (Dikaios 1961, 1962; Peltenburg 1982a, 1982b, 1985a). Similar shapes and fabrics occur in all four wares at each site, and as suggested, variation in surface treatment appears to be a secondary decision on the part of the artisan. It was stated in Chapter 4, that ceramicists are leaning towards technological and/or attribute based systems of categorisation in an effort to avoid the problems inherent in type-variety systems (Adams & Adams 1991, 296-304; Rice 1987, 282-284). In the same way, the four traditional ware types are treated as a coherent whole in the first part of this chapter.

Because shapes in the Decorated Fine Wares are relatively standardised across the island, morphology will be summarised first. However, the categorisation of SCU pottery on the basis of its surface treatment is long-standing and implicitly understood by archaeologists working on Early Prehistoric Cypriot ceramics. Therefore, I will also summarise the four traditional ware types individually, and outline the reasons why a holistic approach to the study of the surface treatment is necessary.

5.2.1.1 - Shapes in the Decorated Fine Wares

The pottery from SCU contexts is, without exception, from settlements and therefore assemblages are predominantly sherd based. The paucity of whole vessels makes identification of shapes extremely difficult. Because of this, only a small number of vessels in this study are categorised by shape, and this could only be attempted when there was sufficient extant rims for extrapolation (for a summary of morphological studies see, Rice 1987, 215-217). In the majority of cases, only variation at the component level could be identified, and the importance of components will become evident later in the analysis. Even so, because the repertoire of shapes is so limited, a certain proportion of sherdage could be attributed to different shape categories by comparison with a few surviving whole vessels from excavated sites, and careful recording of the angle and diameter of rims and bases of diagnostic sherds.

¹ Pottery figures and Tables 5.1 and 5.2 are located at the end of the chapter.

Using this technique, sherds which were large enough to extrapolate the complete shape, were categorised by shape in the data analysis.

Shapes in the Decorated Fine Wares are limited to a variety of open bowls of various dimensions, holemouth vessels and one type of narrow necked bottle. There are eight open bowl shapes which occur in all the Decorated Fine Wares (Table 5.1/1). Bowls are either large (40cm diameter or greater) or small (15-30cm in diameter). Large bowls can sometimes have one of seven types of spout (Table 5.2/5) and are more likely to be hemispherical in profile. Conversely, small bowls occur in a number of different shapes from hemispherical to shallow dishes, and spouts are always absent. Both large and small bowls may have one of three main types of base; flat, omphalos or rounded (Table 5.2/3). Bowl shape, size, and the addition of a spout appears to be functionally directed. This is in contrast with the shape of the base, which in all probability is a product of the manufacturing process, because the degree to which bases can be considered round, omphalos or flat is very slight and the surface on which a bowl was manufactured might account for these differences.

There are six holemouth shapes, easily distinguished from bowls by a greater projected height to diameter ratio and the presence of a convex or tapering profile ending in a narrow orifice (Table 5.1/2). Variations are slight and mostly occur at the component level. For example, they are usually simple globular vessels with either an incurving profile, or they can have short, sinuous or offset necks. Holemouth vessels usually average a rim diameter of between 10cm and 15cm and have flat or slightly rounded bases.

There is also one type of large, necked bottle. This shape has a variety of neck types, from long and tapered, to short and flaring (Table 5.2/2). There are also a variety of base types but flat or rounded bases predominate (Table 5.2/4). Body sherds of bottles and holemouths could not be identified separately and are classed as ubiquitous closed vessel sherds, although it is known from surviving complete vessels that the body of necked vessels were usually globular.

5.2.1.2 - Wares types in the Decorated Fine Wares

All of the shapes summarised above are found in the four major variations in surface treatment; traditionally known as the SCU ware types of RW, RMP, Cb and PCb. Each of the four ware types occur in differing percentages at each site. The pattern tends to be that RW averages around 80-90% of the total pottery collection from northern sites and Cb and RMP together average about 60-70% of the total collection from the south-central sites. PCb is found in small quantities at all sites, averaging approximately 1-8% of the total collection.

The ratio of open to closed shapes is also surprisingly consistent (approximately 60:40) with open shapes predominating and some sites and closed shapes at others (see Table 7.2).

Red on White Ware (Figure 5.1)

Red on White Ware is characterised by positive red painted decoration on a plain buff surface or a self- or cream-coloured slip. The red pigment used for the painted surface of all decorated wares derives from an iron-oxide, most likely red ochre, which is found in other contexts at Early Prehistoric sites (Peltenburg 1985, 322) and was also recorded as adhering to a hammerstone at Sotira (Dikaios 1961, 197). The preponderance of a white slip suggests that the distinctive contrast between the two colours was particularly desired. The only instances where the absence of a slip has been recorded is on fabrics which fire a very light orange or buff, therefore creating contrast without the addition of a white slip underneath. Occasionally RW will also have the addition of a thin red wash overlying the white slip but underneath the red painted motifs. Red on White Ware is present at all SCU sites except Dhali. Its development is lengthy and can be traced from its inception at Philia, right through the SCU and SCU/ECU transition into the ECU proper (Baird n.d.a.; Bolger 1991; Kromholz 1981; Peltenburg et al. 1998).

Red Monochrome Painted Ware

Dikaios' Red Lustrous Ware and Red Slip Ware have been lumped together under the catch-all title of Red Monochrome Painted Ware (RMP). The term was coined during the excavations at Philia and Vrysi when it became difficult to distinguish the difference between the two wares at these sites (Peltenburg 1982a; Watkins n.d.). Red Monochrome Painted Ware has since become a more useful descriptive term for all classes of SCU pottery with a completely red surface as the range of variation in colour, paint application, and burnishing can be substantial. Despite careful examination of the pottery assemblages from the sites excavated by Dikaios, I too, was unable to clearly differentiate between Red Lustrous and Red Slip Ware and have therefore chosen to retain the collective term, RMP, here. Broadly defined, it is characterised by a monochrome red slip, or red painted surface, where the vessels are either "dipped" into the red slip solution, or the paint/slip is applied in large brush strokes to the whole surface, either evenly, as in Red Lustrous Ware, or in light streaks, as in Red Slip Ware. The surface may then be burnished or left matt. Like RW, it is a ubiquitous ware, appearing in significant quantities at most sites.

Red Monochrome Painted Ware is found in exactly the same shapes as the patterned wares. Therefore, there can be problems with trying to correctly quantify RMP because sherds attributed to this class may actually come from the red part of a RW vessel. The percentage of

sherds from each site which are incorrectly attributed to RMP is not known because the percentage of RMP and RW varies from site to site. In instances where RW wares dominate, the proportion of incorrectly assigned sherds could be relatively high, because there will be a large percentage of small and worn RW sherds. At sites like Khirokitia and Sotira, where RMP is more common than RW, the level of wrongly attributed sherds is probably much lower. There is no safe way of gauging the level of incorrectly attributed sherds, and it is more simple to be aware of the pitfalls of categorising sherds by ware types, rather than by attributes.

Combed Ware (Figure 5.2/3-6; Figure 5.3/2-5)

Combed Ware is so called because of its distinctive surface treatment, which involves the monochrome red surface of a vessel being "combed" away in straight or wavy bands using a multiple tool. The combing reveals the buff vessel surface underneath, producing distinctive negatively contrasting decoration between the thick red paint and the light orange surface of the vessel. At sites such as Vrysi and Philia, a similar technique is found on RW, where ripple decoration is created by the positive application of paint to a white slipped surface in wavy lines using a multiple tool (Figure 5.2/2). Peltenburg has pointed out (Peltenburg 1978, 66) that Cb Ware appears at Vrysi in the Middle Phase at the same time as ripple pattern begins to become popular. The same trend is apparent at Philia, where Cb appears in Phase 2 in small quantities but is most prolific in Phase 3 along with ripple design. Oddly, there is little evidence of ripple decoration penetrating the south of the island and the only examples come from some of the Kalavassos sites, including Kokkinoyia and Kafkalia VI. There are also a few examples from Sotira, primarily from Phase 2, but one example from Hut 5, below Floor III, dates to the very inception of the site. Peltenburg has suggested that the similarities between the two techniques probably stem from an interchange of ideas between the two regions (Peltenburg 1978, 66).

Painted and Combed Ware (Figure 5.2/1; Figure 5.4/1-7)

Painted and Combed Ware is characterised by a combination of both the RW and Cb decorative techniques, described above. A white slip is applied to the surface of the vessel and then large bands of red paint are added which are "combed" away in wavy and straight lines using a multiple tool. Between the bands there are often the usual RW motifs, such as circles, dots, targets and wavy lines. A variant of this technique on open vessels is the so-called "Bilingual" technique (Bolger 1991, 82) where one surface is combed and the other decorated in RW motifs (Figure 5.5/5), or one surface is combed and the other decorated in painted and combed design. Painted and Combed Ware is found in small quantities at all sites and its

frequency is relatively homogenous across the island, accounting for approximately 1%-8% of the pottery sample at both northern and southern sites.

When considered in relation to one another, the similarity between the three techniques is obvious, and the concept of variation between the north and south of the island comes into perspective. Red on White, Cb and PCb, far from being distinctly different decorative techniques, are technically varying interpretations of the same basic principle of decorating a vessel with red and white design (Peltenburg 1978, 66). Combed Ware and RW can be thought of as opposite ends of a decorative spectrum, between which lie PCb, and RW motifs applied with a multiple tool. The relationship between the three techniques, and its importance in terms of interaction across the island, becomes more intriguing when considered in this manner. Decoration was a secondary decision in the manufacturing process, but there is also ample evidence to suggest that combinations of designs was socially determined. Decoration is always achieved by a contrast of two colours, red tones and white tones, achieved through a combination of brush and multiple tool. The fact that all four decorative techniques are found at most sites in a variety of local fabrics suggests that pottery was locally manufactured. However, it is not known whether local potters used all four decorative techniques, or whether, artisans moved around the island bringing with them a knowledge of one technique which they practised at different sites using local clays.

5.2.2 - Monochrome Burnished Ware (Figure 5.6/1-6; Figure 5.7/1; Figure 5.8/1-4)

Classic Monochrome Burnished Ware (Classic MBW), Monochrome Burnished Ware Variant (MBW Variant)

Monochrome Burnished Ware is distinguished from other wares on the basis of surface finish, fabric and morphology. It is also suggested in Chapter 3 to be chronologically earlier than all other functional classes except Coarse Ware. However, within this class there is a range of surface treatments and fabrics. The most characteristic form of MBW is a dark, highly burnished surface with a very hard, dark, fine mineral tempered fabric. This form of MBW can sometimes be found with embossed decoration, such as small “nipple” like protrusions, and wavy and straight cords (Figure 5.6/3; Figure 5.8/2). At the other extreme MBW can have a thin red, yellow, or buff coloured burnished slip and soft crumbly fabrics with heavy vegetable temper, akin to Coarse Ware. Between these two extremes there is a whole range of variants. Because of the blurring of boundaries, all variations of MBW have been lumped together into one class - Classic MBW. There is a second class of MBW, which was noted by the excavator (Watkins 1970a, 5) and which has been called MBW Variant in this study. The two classes have been categorised separately on the basis of vessel morphology and clear distinctions between the fabrics. Monochrome Burnished Ware Variant is described in the next section.

Classic Monochrome Burnished Ware

There are eight varieties of small bowl in Classic MBW (Table 5.1/3). All are thin walled and usually highly burnished on both the inner and outer surfaces. Unlike Decorated Fine Ware bowls, MBW bowls are almost always hemispherical, or less commonly, deep straight sided small buckets. Very rarely do you find spouts. Other MBW bowl shapes are rare and never total more than one or two examples in any assemblage. Monochrome Burnished Ware bowls usually have flat bases, or occasionally a disc base which is a type almost never found in the decorated wares (Table 5.2/3).

There are only two holemouth shapes (the straight sided holemouth or a more globular form) but there are a variety of neck types (Table 5.1/4), from short sinuous, upright, and rare examples of short flaring necks (Table 5.1/4). All of the examples of holemouths in this ware come from Philia.

In addition to bowls and holemouth vessels, Monochrome Burnished Ware is found in a range of small flasks (Table 5.1/6). None are common, and all come from Philia, but they include an S-shaped, round based flask and a variety of tear drop shaped vessels with long narrow necks. There is also one example of a small flask with handles running from the lip to the shoulder.

Monochrome Burnished Ware is sometimes confused with Type B Coarse Ware (Baird n.d.a.). There are similarities in fabric type and, occasionally in surface treatment, where Type B Coarse Ware examples are burnished. However, there is a clear distinction in morphology and therefore the two are separate functional classes.

Monochrome Burnished Ware Variant (Figure 5.7/1)

Monochrome Burnished Ware Variant is clearly distinguished from classic MBW by its distinctive fabric and surface finish. Watkins identified rim sherds only. Rim sherds occur in only one shape, a wide flaring neck belonging to a closed vessel (Figure 5.7/1). This variant is only found at Philia, and is characterised by a distinctive hard, gritty, deep pink fabric with a highly burnished pink surface. Even after careful study of the Philia collection in the Cyprus Museum, I was unable to clearly identify body sherds in this variant, however, there were some examples of MBW closed body sherds which had traces of a sinuous flaring neck with colour variation which ranged from dark brown to the deep pink shade found on the rim sherds. This suggests that colour variation is a characteristic of these vessels (Watkins 1970a, 5), and that the bodies were predominantly dark brown while the necks were fired the

characteristic deep pink shade. It might be postulated that MBW Variant comes primarily in closed vessels and were fired in a partly reducing and partly oxidising atmosphere to achieve colour variation.

5.2.3 - *Coarse Ware* (Table 5.1/5)

Coarse Ware type A, Coarse Ware type B

Coarse Ware comes in two varieties, a low fired, poorly finished, soft, crumbly ware (Type A) (Figure 5.7/3-4), and a finer, hard fired, brick red ware (Type B) (Figure 5.7/2), which sometimes can be burnished but which bears no relationship to the later SCU/ECU Coarse Wares. The surface treatment of Coarse Ware Type A is cursory. It is always roughly finger smoothed and never slipped or burnished as is Type B. The categorisation of Type B as a Coarse Ware has been made on the basis of shapes, which are particular to the Coarse Ware class, often identical with Type A shapes. Both are most commonly found in a flanged based tray, with or without a U-shaped opening (Figure 5.7/4), presumably located at the front of the vessel. On the other hand, fabrics and finishes in Type B are completely different to that of Type A (see Appendix 1).

Coarse Ware is found in association with Monochrome Burnished Ware in basal deposits at Philia and Dhali, and in basal deposits with other wares at all sites. Therefore, along with MBW, Coarse Ware can be considered one of the earliest functional classes of pottery found on the island.

5.2.3.1 - *Shapes in the standard coarse wares*

There are four shapes in Coarse Ware (a shallow tray, a thumb pot, a holemouth vessel and a small finger impressed dish). Each comes in a range of variations (Table 5.1/5). Coarse Ware Type A is extremely friable and very few whole profiles exist, which makes classification difficult. A feature of Coarse Ware vessels is that they were often manufactured on some type of woven mat which leaves a circular impression on the underside of the base of the vessels. This method of manufacture is not unique to Cyprus, nor to the SCU Phase. Examples of mat impressed bases are known from the Greek Final Neolithic (Vitelli 1983, Fig. 4) and from later contexts in Cyprus.

5.2.3.2 - *Coarse Ware Variants*

There are Coarse Ware variants which occur in small numbers at Vrysi and Philia only. These can be distinguished from the more regular Coarse Ware on the basis of fabric and surface finish. To a lesser extent, there are also distinctions between shapes in the regular Coarse Wares and the Coarse Ware variants. Buff Coarse Ware appears in limited quantities at Vrysi

(Peltenburg 1982b, 63) and Philia (personal observation). It is always found in shallow trays, small holemouths, or thumb pots. Peltenburg (Peltenburg 1982b, 63) questions whether this ware at Vrysi is commensurate with Dikaios' Plain White Ware, recognised at a number of sites, including Troulli and Sotira (Dikaios 1962, 67). This appears to be unlikely as Buff Coarse Ware at Vrysi and Philia is a separate class, characterised by a unique fabric, and found in shapes dissimilar to those reported by Dikaios. Furthermore, it is suspected that Dikaios' Plain White Ware can be attributed to the unpainted parts of RW vessels. In the study of the Troulli and Sotira assemblages there were no examples that could be classified as Buff Coarse Ware.

5.3 - Fabrics

The various fabric types from each site are described in detail in Appendix I. The aim of the following discussion is to give a general overview of the relationship between fabrics and wares types and to discuss the patterns of variation that are observable between sites.

5.3.1 - *Aspects of clay and temper*

There appears to be no particular strategy to the way in which pottery artisans exploited clay sources and tempers. At some sites a variety of clays and tempers are used, while at others only one type of fabric is found. These differences no doubt reflect the availability of resources, and probably the distance from source. At sites where there is little variation, rare (possibly imported) fabrics are easily discernible, whereas, at sites such as Philia, it would be difficult to recognise an imported fabric due to the heterogeneity of the assemblage.

There is enough evidence from the analysis of fabrics with a x10 hand lens to support the premise that each site manufactured its own pottery. Samples for petrographic analysis have been obtained, but due to time constraints and the scope of this thesis, the analysis will be undertaken in a later, separate study. Even so, much information can be obtained from using a hand lens. All vessels are hand made, fabrics vary widely across the island, and each region has temper types specific to local geological formations. Mineral tempers appear to have been whatever was available around the village. Local clay sources are also exploited. There is evidence at Philia and Tenta that the addition of certain minerals was deliberate, for example, crushed limestone and chert was used at Tenta (Baird n.d.a.). In other instances, mineral inclusions would have been originally present in the clay. Vegetable temper is common, though there are a number of very hard firing fabrics at Philia and some fabrics at Vrysi which do not contain vegetable temper. The predominant form of vegetable temper is very fine chopped straw which leaves long thin voids in the clay paste when burnt out during firing. The

most likely source of this temper is animal dung, which was probably added intentionally and which is the only method by which straw can be chopped so finely. There is also evidence of seeds, and again, these may have been part of the indigestible vegetable matter in animal dung.

Because tempering agents are usually site specific, a lot of information about the origin of the pottery can be obtained from the study of the inclusions. Again, using a x10 hand lens, it is possible to identify some of the more common tempering agents. For example, in the Early Phase at Vrysi a specific fabric type, tempered with shell grit is common, and was most probably local (Peltenburg 1982b, 62). The shell grit may have been intentionally added or it may be a product of the manufacturing process, but whichever way it was included, this fabric is easily identifiable as coming from Vrysi. In contrast, at Troulli, another major coastal site, shell temper does not occur, which suggests that the shell temper at Vrysi was an intentional addition. At other sites, the presence of distinctive tempering agents can identify pottery geographically, such as Mamonía Silt Stone, present in the ceramics from Kissonerga Mosphilia (D. Bolger, personal communication). Petrographic analysis aids in the identification of spatial variation in fabric type, and the identification of tempering agents as local to a specific region helps to map the movement of pottery across the island.

A number of different fabric types are found at most sites. On a broad level, clear distinctions are only visible at the level of the major functional classes, ie., the Decorated Fine Wares, the Monochrome Burnished Wares and the Coarse Wares. However, a number of finer variations can be discerned within each functional class. For example, at Philia and Vrysi, a range of fabric variations have been identified in the Decorated Fine Wares. In some instances, variation is a aspect of diachronic change, for example, the shell grit fabric at Vrysi (Peltenburg 1982b, 63-64). In other instances variation has nothing to do with temporal change but rather, is the result of specific choices made by the artisan (for example, Philia). In other instances again, differences might be due to the presence of imported clays (Peltenburg 1982b, 64, Fabric F).

5.3.2 - Surface treatments

Although individual sites use a variety of different fabrics and tempers, there is greater homogeneity in the way the surface of vessels is treated. Most vessels are either slipped or painted, or both. Slips are usually fine clay suspensions into which a vessel would be repeatedly dipped and these repeated dippings can appear as layers in the slip. Slips may be thin or thick depending on the viscosity of the clay suspension, or the number of times a vessel is dipped. Monochrome Burnished Ware is usually treated in this manner, a particularly clear example being the Monochrome Burnished Ware Variant. On some occasions the

characteristic red paint of the Red Monochrome Painted Wares can be applied in the same manner as the self slips, while on other occasions paint has been visibly applied with a brush. In almost all instances both monochrome wares and the painted wares are burnished. Burnishing is undertaken with a type of rubber, or burnishing implement, most likely a small stone or piece of bone. Burnishing occurs after the slip and paint have been applied, and when the vessel is still leather hard. The monochrome wares, and some of the painted wares are burnished to a particularly high sheen (for example Cb ware, GBW etc).

The painted wares, such as RW, Cb and PCb, are usually decorated in red motifs after applying a self, or white slip to the surface of the vessel. In many instances it appears that the contrast of red and white was particularly desired as darker fabrics are more likely to have a slip than light fabrics. Designs are applied to the vessel with a small “brush”. Early in the sequence these are executed in broad bold strokes, but later, multiple brush technique is used and designs tend to become more “wispy”. Combing (used on Cb Ware and PCb Ware) is the reverse of red on white design in that the entire surface of a vessel is painted in thick red paint over a self or white slip, and then this is “combed” away with a multiple tool in a variety of different linear designs. On Cb and PCb vessels, burnishing would have been undertaken after the paint had been combed away to reveal the pale slip underneath.

5.3.3 - Regional characteristics of fabric and temper

At Vrysi, different fabrics types are easily identifiable (Peltenburg 1982b, 63-64). There are six fabric types, four of which are found in the decorated fine wares. Fabric variations appear to correlate closely with temporal variation, therefore Fabric A, the fabric with shell temper, mentioned above, is the standard fabric for the Early Phase, and Fabric C is the standard fabric for the Late Phase. Fabric B is common in the Middle Phase but is also present in the Early Phase. Conversely, Fabric F, the fourth fabric found in the decorated fine wares, occurs in very small percentages and is clearly different from Fabrics A-C, suggesting it may have been imported (Peltenburg, 1982b, 64).

Another pattern of variation is observable at Philia. The most striking feature is the heterogeneity. Although functional classes can be readily distinguished from each other on the basis of morphology and surface finish, within the functional classes the boundaries are blurred and variations appear to be the result of wide experimentation with fabrics and tempers. For example, in the Decorated Fine Wares, there are three clearly identifiable fabric types, however, there is also a considerable number of variations which can incorporate characteristics of all three major fabric types. There are also hybrid versions of Coarse Ware fabrics, or in some instances MBW fabrics. Watkins (Watkins 1973, 39) notes the

significance of experimentation with fabric types and finishes at Philia when referring to the hybrid ware which combines RW decoration on a Monochrome Burnished Ware fabric. Therefore, Philia potters experimented widely with fabrics, tempers and finishes, much more so than the Vrysi or Sotira potters. However, without further evidence from contiguous sites, it is difficult to suggest reasons for the significant levels of experimentation observable at Philia.

The pattern of variation is again different at Sotira and Troulli. At both sites there is only one major fabric type in the Decorated Fine Wares and only one fabric type in Coarse Ware. There is little experimentation with fabric and tempers and no experimentation with unusual or hybrid ware types. The standardisation at Sotira and Troulli is as much an enigma as the variation at Philia. Quite clearly, there is no particular pattern at any site or region and each experimented to differing degrees with fabrics, tempers and surface finishes. Throughout this experimentation, shapes continue to be limited and remain predominantly unchanged. Sites that show most experimentation with fabrics and surface treatment also display the most variation in shapes. Therefore, at Philia there is a greater range of shapes than at Sotira. There is also a greater range of fabrics and surface treatments, and a wide range of ware types.

The extent to which fabrics are homogeneous might be attributable to the proximity of sites to river systems. Philia, for example, is located on a major river system where the continual downcutting and aggradation of the river bed probably exposed new clay beds and new sources of grit temper (Stanley Price 1979a, 7). In contrast, the sites of Sotira, Vrysi and Troulli are farther from major river systems, therefore the clay sources were probably limited.

Finally, although there are clear fabric types at the Kalavassos sites, the spatial relationship between them is problematic. At Kokkinoyia and Pamboules, one fabric type predominates in all Decorated Fine Wares dating to the SCU and the SCU/ECU transition. This fabric can be easily identified by its dark pinkish brown, gritty paste. At Tenta, and Ayious, a completely different fabric type is common, and is characterised by a very fine, pale buff firing paste which is rarely slipped (Baird n.d.a., n.d.b.; Kromholz 1981). The difference might be argued to be temporal, however, as both Kokkinoyia and Pamboules span the SCU/ECU transition, the very limited occurrence of the Tenta/Ayious fabric is curious. If the sole explanation for the difference in fabric types is temporal, then both Kokkinoyia and Pamboules should have significant proportions of both fabric types present.

Another argument might be that two different clay sources were exploited. This theory is not in itself unlikely, although, the sites of Kokkinoyia, Pamboules, Tenta and Ayious are close

enough geographically to share the same clay sources. Therefore, the fact that the two fabrics are almost mutually exclusive to individual sites requires explanation. One theory is that different clay sources were exploited at different times of the year and that the Kalavassos sites might form part of one large seasonally shifting encampment. If this is true, then as the economic activities of the population shifted from one part of the region to another, different clay sources might be seasonally exploited. However, the evidence from Tenta and Ayious (Baird n.d.a., n.d.b.) suggests that settlement shift is a more permanent feature at these sites than simply seasonal subsistence strategies. The ceramics indicate that Ayious may have been abandoned for a number of years before it was re-occupied at the end of the SCU/ECU transition. Tenta exhibits an interim development between the two phases at Ayious and therefore may have been occupied in between. If this is the case then it could be argued that exploitation of different clay sources accompanied shifts in settlement location. Moreover, these settlement shifts might not be obvious in the archaeological record in every case if the time frame is narrow enough that ceramic development is not observable.

Based on the evidence from the Kalavassos sites, it would appear that settlement discontinuity was more prevalent in the SCU and SCU/ECU transition than was previously recognised. Still, it is uncertain whether Peltenburg's model for settlement dislocation (Peltenburg 1993b), discussed in Section 2.5, is applicable in all examples, and furthermore, whether the cause of settlement discontinuity can be attributed wholly to population pressure and to greater control of resources.

5.4 - The function of pottery in SCU Cyprus from an economic perspective

The previous section described and summarised broad similarities and divergences in the SCU ceramic tradition. In order to understand various aspects of this diversity, we must first understand the social and economic environment in which the pottery was produced. Variation in vessel morphology is tied closely to function. In other words, pottery manufacture is closely aligned with socio-economic strategies. Magness-Gardiner states that:

Storing, processing and consuming food is of central importance to the maintenance of life and continuity of culture in all societies. Functional analysis of pottery is important if we are to go beyond dating to some assessment of the conduct of day to day life.

(Magness-Gardiner 1992, 3)

The extent to which we can deduce subsistence strategies and economic relationships from the pottery evidence depends a great deal upon the completeness of the evidence. Schaub (Schaub

1992) points out the limits of using tomb vessels as a basis for functional studies, and notes the difficulties associated with determining the precise function of vessels, such as:

multiple functions for the same vessel, vessel re-use, cultural determinations etc.

(Schaub 1992, 7)

Rice (Rice 1987, 211) extends this to problems of terminology and objectivity of recording methods. A more acute problem is the accuracy and thoroughness of the original excavation. Determining function relies heavily on the relationship between the formal attributes of vessels and patterns of deposition. For example, a preponderance of small bowls in a domestic context might suggest food related usage, however, the same small bowls in a ritual context could indicate either food related usage or some other ritual activity. Rice (Rice 1987, 225) lists four major use-related properties of ceramic vessels in addition to form. These are capacity, stability, accessibility of contents, and transportability. Schaub (Schaub 1992, 7) adds to this a number of technological factors, such as mechanical stress, thermal behaviour, permeability/porosity/density, and the types of inclusions present.

5.4.1 - The function verses discard debate and the consequences for inter- and intra-site variation

SCU pottery is without exception, from settlement contexts. Within settlements there is variation in the kind of contexts in which the pottery is found. Most of the pottery comes from domestic contexts, such as house floors and work surfaces, and is often smashed in situ beside hearths and preparation areas. Determining the function of SCU pottery requires that four primary observations about the nature of settlement deposits are accepted:

1. SCU settlements display no evidence of craft specialisation.
2. There is uniformity in the use of space, although the overall structure of sites may vary.
3. There is no evidence for intra-site burials or ritual areas.
4. Extra-mural deposits are primarily middens and outside work areas, or thoroughfares, and there is no differentiation in the deposition of objects found in these contexts.

It will be illustrated below that these four observations are satisfied by SCU settlement structure, and therefore lend support to the theory that SCU pottery was associated with the day-to-day aspects of subsistence, including storage, preparation of food, cooking, serving and eating. There are, however, other factors which can modify the patterns of deposition. For example, Peltenburg (Peltenburg et al. 1998) noted in his analysis of the deposition of pottery

at the site of Mosphilia, that sherds are often re-used in later building material. Therefore earlier pottery types circulate in the archaeological record for a considerable length of time. A correct reading of the archaeological record is cardinal to identifying intrusive earlier material. In contrast to Mosphilia, the SCU sites are all single phase, but more importantly they are always built either on virgin soil, or on KCU sites. Therefore, the pottery recovered from excavation usually reflects the range of ceramics in circulation during the SCU Phase. The only instance when this pattern differs is at the Kalavassos sites where there is uncertainty about the nature of occupation.

Another example might be the way in which pottery is deposited as this can affect the validity of the sample when assessing function. Chapman (Chapman 1996) argues that material objects, including pottery, may be deposited in a deliberate and structured way. He suggests that when objects are accidentally broken they are not necessarily disposed of immediately, nor are they disposed of without some consideration of how and where they are to be deposited. Chapman uses the Balkan Neolithic and Chalcolithic to argue his case of Fragmentation Theory. He says that:

One of the key characteristics of Balkan Neolithic and Chalcolithic artefacts is that, when we discover them, they are not only broken but incomplete....One obvious means by which broken artefacts are incorporated into contexts of preservation is that they are broken during use or accidentally.....But between the time of accidental or use-related breakage and the time of deposition lies a time of decision-making. What to do with the fragments of painted pottery?If deposition is postponed, where to keep the fragments, with what other items and for how long” The implications of this argument are twofold: while breakage may be accidental, deposition is usually anything but accidental; and the decisions about deposition may well be subject to structured rules related to broader cultural and social practices.

(Chapman 1996, 210-211)

The implications for the SCU pottery are twofold. If Chapman’s theory of fragmentation is accepted as applying to the SCU then the surviving assemblages are not only biased from the viewpoint that they represent only a minuscule part of the original material culture, but also, that they represent ancient biases about what was kept within the village and what was removed to another, unknown location. Therefore, we may not have a representative sample of the complete pottery assemblage, and the fragments that were removed might represent a whole class of attributes which no longer appear in the archaeological record. The second implication is that pottery which is assumed to have a functional use, might in fact represent another completely different aspect of ancient cultural practices.

Is it possible that Chapman's model for fragmentation fits the evidence from SCU Cyprus? There are two reasons why it would seem unlikely. First, Chapman's model is part of a wider alternative theory to Renfrew's explanation for the emergence of new commodities and a new kind of prestige in the Balkan Copper Age. He argues (Chapman 1996, 204) that the emergence of ranked societies is closely linked to the role of the individual and the relationship between persons and objects. The SCU culture is quite different. There is no evidence of ranking, and no evidence that the individual was a socially recognised concept. The second, and perhaps more pertinent reason why Chapman's model does not fit the evidence, is that most sites are incompletely excavated and are usually characterised by sherd based assemblages where most of the fragments cannot be reconstructed into whole vessels. It seems illogical to assume that formal fragmentation and discard was a feature of every culture and every settlement. Furthermore, although Schiffer (Schiffer 1987) argues that the decision to clear up refuse and move it elsewhere transforms refuse into a culturally significant deposit, it doesn't prove that the decision to move refuse is linked to the concept of formally structured deposition.

Having said this, there is some evidence, at least at one site, of differential deposition. Peltenburg (Peltenburg 1985e, 1993) suspected that at Vrysi some sort of "ritual closure" of buildings was practised in at least two buildings. Peltenburg says:

One of the most remarkable features of this system was that functional as well as broken objects were abandoned on the floors. The intentional character of the infilling process therefore may also apply to the spatial patterning of the artefacts themselves.....Two earlier buildings and more general considerations provide checks on the possibility that we are dealing not so much with dispositions that are solely the result of everyday activities but arrangements that have been transformed by some ritual closure/renewal ceremony.

(Peltenburg 1985e, 48)

Peltenburg is quick to point out however, that this "ritual closure" and the general differences between the North and South Sectors at Vrysi, cannot be interpreted as differential site usage. He concludes:

This differentiation however, must be set against the background of standardised internal fixtures, especially the ubiquitous large hearths and associated benches which together with the normal range of domestic and craft items prevents us from describing either Sector as a specialized quarter.

(Peltenburg 1985e, 61)

Ultimately, Chapman's model cannot be substantiated for SCU Cyprus. Although this does not mean that certain occupation levels were not formally abandoned on impulse from unknown cultural or environmental factors, it can still be argued that the SCU pottery was made by the household, was used in a domestic context, and that it represents a reliable cross-section of the shapes and fabrics that would have been present during the life of the settlement. We cannot know what other, less durable objects might have once existed in the archaeological record, and might have fulfilled some of the functions that are attributed to pottery vessels. We can, however, make general statements about the likely functions of some pottery classes.

Evidence from the analysis of fabrics indicates that pottery, by and large, was made within individual villages. The absence of communal 'kilns', and the presence of ashy pits within dwelling units, with diameters that closely correlate with the diameters of pottery bowls (Peltenburg 1978, 61), could have been used either as cooking pits or fire pits for production of pottery. Therefore it is likely that pottery was manufactured by the household for the household. Habitation units were monocellular structures with domestic fixtures and fittings on the floors and around the walls. Deposition patterns on the floors of structures suggests that most of the economic activities; cooking, food preparation, craft production and storage, were carried out within and around the habitation units. Sleeping areas are hypothesised as being above ground level (Peltenburg 1978, 62), or outside of buildings. Therefore, the socio-economic division within the village structure was most likely based on one family unit per house, with members of the family manufacturing pottery seasonally, and on a needs basis. Intra-site settlement plans and burial practices indicate an absence of craft specialisation or storage surplus. Furthermore, the absence of large "storage" vessels, common in the ECU (Bolger 1988), argues against the production of surplus.

5.4.2 - The economic evidence

Evidence from floral and faunal remains, and other material objects found within settlement contexts, can indicate village subsistence strategies, which aids the identification of vessel function. In understanding function, we also gain a better understanding of the systemic processes that contribute to regional variation. In order to identify the various functions that were carried out within the domestic setting, it is necessary to understand the processes which characterise subsistence strategies. A review of the surviving SCU floral and faunal evidence, and analogous material from the KCU and the ECU Phases, provides the background for subsequent theories on subsistence strategies and the daily use of pottery.

5.4.2.1 - The SCU economic evidence

The SCU is characterised by communities which engaged in mixed farming and herding, the gathering of sea and land mollusca and the controlled management and hunting of deer (Croft 1991, 65; Kyllö 1982, 82). Floral evidence indicates that wheat, barley, lentils and pulses were cultivated, and the presence of grinders and saddle querns indicate that grains were ground into meal. Some tree fruits such as figs, were also grown, and wild grapes and olives and a number of grasses were collected (Kyllö 1982, 415-436). Faunal remains are dominated by the basic domesticates and commensals of early sedentary communities. The domesticated ovicaprids, (*Ovis orientalis* and *Capra hircus*), and domesticated pig (*Sus scrofa*) predominate in the faunal record. In addition, at most sites there is a higher concentration of fallow deer bones than sheep and goat, indicating intensive management and controlled hunting².

The SCU evidence is meagre. The site for which we have a reasonable amount of floral and faunal data is Vrysi (Table 5.3). The evidence shows that sheep and goat, and fallow deer were the most commonly exploited animals. In contrast, pig accounts for approximately 10% of the bone sample. Pigs were killed in infancy, most probably for their meat. There is no information on the kill age for sheep, goat or deer³, nor is there a breakdown of the proportion of females to males. Legge does note that goat appears to be slightly more important than sheep. Davis (Davis 1989, 196) suggests that the preponderance of goat at Cape *Andreas Kastros* might be due to the fact that they are better adapted to rocky terrain. Peltenburg (Peltenburg 1982b, 19) notes that the same might have been true for the sites north of the Kyrenia range where the land rises steeply behind Vrysi and Troulli 2-3 km from the coast.

Male deer bones are more common than female bones in the faunal sample from Vrysi, and Legge (Legge 1982, 83) notes that it is tempting to suggest that this might represent some sort of purposeful culling.

² Vrysi produced a disproportionately high percentage of sheep and goat (74%) to deer (8.6%) in the Early Phase. When percentage frequencies for the whole site were calculated, fallow deer accounted for 45.1% and sheep and goat for 41.7%. The anomaly in the Early Phase is no doubt due to a preponderance of deer bones found in middens (Peltenburg 1982b, 79), while sheep and goat bones are found predominantly on floors in structures. As the Early Phase bone samples come primarily from floors there would be a greater bias towards sheep and goat in the sample.

³ Legge comments (Legge 1982, 83) that the preservation of the bones was not good enough to determine age at death.

Species	Percentage	Kill Age	Distribution of Males to Females	Proportion of Sheep to Goat
Caprines	41.7	?	?	More goat than sheep
Fallow deer	45.1	?	More males than females	
Pig	10.3	juvenile	?	

Table 5.3 - Summary of the faunal evidence from Vrysi (cf: Legge 1982, Table 5)

The most interesting feature of the Vrysi assemblage is the variation in the proportion and types of bones found. Sheep and goat bones were most commonly found on floors, while deer bones were more commonly found in middens. Legge (Legge 1982, 81-82) suggests that this feature might characterise different kill patterns. Legge proposes that sheep and goat were domesticated and therefore more likely to be killed within range of the village. In contrast, he argues on the basis of the presence/absence ratio of certain bones found in the middens and on floors, that deer were more likely to have been hunted, and butchered at the kill site.

Vrysi's botanical remains are dominated by wheat, barley and lentils, with lentils being slightly better represented in most deposits (Kyllo 1982, Table 9). Most seeds come from hearths and middens, but floor samples are poorer, indicating that floors were regularly "swept". Kyllo suggests that:

During the period of occupation, the area around the site would have been planted with crops of wheat and barley, possibly mixed with various pulses. Other pulses were likely to have been grown as individual crops....The overall picture provided by the botanical remains is of an agricultural community whose needs were well fulfilled by the land.

(Kyllo 1982, 90-91)

There is no floral evidence from Sotira and only limited faunal evidence. Zuener and Grosvenor Ellis (in Dikaios 1961, 235-236) record that bones from deer, pig and caprines were found on the floors of houses. Ducos (Ducos 1965, 4) quotes a figure of 76% deer in the sample but his figures are based upon only 19 deer bones.

The only other site with SCU contexts which yielded good faunal evidence is Dhali. Croft emphasises (Croft 1989, 260) that no stratigraphic separation of the animal remains by phase

was attempted. Therefore, KCU deposits and SCU deposits were analysed together. The result is that the Dhali material, as with the earlier and later evidence, should be considered analogous rather than directly comparable with Vrysi.

The Dhali sample is dominated by deer (Table 5.4). Pigs and caprines are also present in lesser numbers. Sheep out-number goat in the sample. Carter (Carter 1989, 246) says that of the sixty three specimens in the 1976 sample that can be positively identified as caprine, two are sheep, six are mouflon (or more probably sheep) and one is goat. Croft (Croft 1989, 264) supports Carter's analysis suggesting that where bones are attributable to sheep or goat in particular, they more often appear to derive from the former. Croft's figures are given in Table 5.4, below. Moreover, he suggests that culling took place between the ages of 28 months and 3½ years and that this pattern is indicative of meat rather than milk production (Croft 1989, 264).

A similar pattern is evident in the deer sample. Approximately similar numbers of males to females in the sample suggests there was no particular strategy to culling. This indicates that there was an abundance of available deer meat. Moreover, the age of animals at death (between approximately 18 months and 3 years), is commensurate with a meat producing strategy.

Species	Percentage	Kill Age	Distribution of Males to Females	Proportion of Sheep to Goat
Caprines	13.7	28 months - 3½ years	More males than females	30 sheep : 9 goat
Fallow deer	79.8	mature but not old	approx. equal numbers of males females	
Pig	6.5	juvenile to full body weight	?	

Table 5.4 - Summary of the faunal evidence from Dhali (cf: Croft 1989)

The paleobotanical remains from the 1972 season at Dhali were analysed by Stewart (Stewart 1972, 123-125). His conclusions are that wild lentil, wild einkorn and wild pistachio were present at Dhali in some numbers with wild olive and grape being less common.

The faunal and floral evidence from Philia is not published. Croft (Croft 1991, 69) briefly summarises the faunal evidence. Deer again dominate the sample, accounting for 71% compared to 17% pig and 11% caprines.

5.4.2.2 - *The KCU and ECU economic evidence*

Ordinarily, it would be impossible to compare the subsistence strategies of temporally disparate civilisations with any degree of reliability. However, in Cyprus, where insularity and cultural retardation marks the entire Early Prehistoric Period, there is merit in using analogous material from earlier and later phases to lend support to the economic data from the SCU Phase. The most important aspect of the KCU and ECU economic data, which is missing from the SCU evidence, is the age and sex ratios at death of the faunal evidence. The data are not identical, but there is a range of variation in the SCU also and therefore, some extrapolation can be made. Similarly, there is little paleobotanical information from the SCU, which limits the level of inference that can be made about agricultural practices. Again the KCU and ECU assemblages can be referred to as the same plants were cultivated in all periods. Therefore, the following section will briefly summarise the contiguous phases, in order to add depth to the SCU evidence.

There are three KCU sites which have yielded sufficient faunal and paleobotanical evidence for comparison. Khirokitia offers the most comprehensive data. The two other sites for which we have some information are *Cape Andreas Kastros* and Tenta. The analysis of the Khirokitia faunal samples by Davis (Davis 1984a, 1987, 1989), and the paleobotanical samples by Hansen (Hansen 1981, 1989, 1991, 1994) and Miller (Miller 1984) are sufficiently well published and will form the basis of the comparison. Davis has reviewed the material from *Cape Andreas Kastros* (Davis 1984a, 1987) which will be referred to in reference to the Khirokitia evidence, but unfortunately the evidence from Tenta has yet to be published, therefore only limited information is available (Croft 1991).

Like the SCU phase, all three faunal assemblages are dominated by deer, pigs and caprines (Croft 1991, 67), however, the relative proportions of each differ over time (Table 5.5). At *Cape Andreas Kastros*, the reliance on pig and deer increases, whereas that of sheep and goat decreases (Davis 1984a, 195). In contrast, at Khirokitia and Tenta the proportion of sheep and goat increases over time, while that of pig and deer decreases.

Croft (Croft 1991, 74), notes that there is a pronounced sexual imbalance among the fused caprine bones from Tenta. Approximately nine out of ten fused bones represent females for both sheep and goats. Croft says:

Such an imbalance would be expected only if the Tenta caprines were husbanded animals exploited primarily or solely for meat: the great majority of males would have been superfluous for heard maintenance and therefore would have been slaughtered at a young age.

(Croft 1991, 74)

However, the slaughter of adult females might also indicate that they were reared to milk producing age before being culled for their meat once milk production ceased. Production of milk would not necessitate that many males were reared to adulthood. Although there is evidence that offspring must be kept alive to stimulate lactation (Clutton-Brock 1981; Legge, 1989, 226-227), the rearing of young females could have ensured maintenance of limited milk supplies for domestic consumption (Halstead 1996, 25) allowing males to be culled at a young age for meat.

Species	Site	Percentage (Early)	Percentage (Late)
Caprines	Khirokitia	34	82
	Cape <i>Andreas Kastros</i>	62	19
	Tenta	21	26
Fallow deer	Khirokitia	45	9
	Cape <i>Andreas Kastros</i>	19	47
	Tenta	56	42
Pig	Khirokitia	21	10
	Cape <i>Andreas Kastros</i>	18	35
	Tenta	23	32

Table 5.5 - Proportions of Sheep/Goat, Deer and Pig over time at Cape *Andreas Kastros*, Khirokitia and Tenta

Evidence for the ratio of sheep to goat in the three samples indicate that sheep out-number goat at Khirokitia (Davis 1989, 196) and Tenta (Croft 1982). The opposite is true at Cape *Andreas Kastros* which Davis suspects might reflect the rocky terrain of the Karpass Peninsula (Davis 1989, 196). There is also a significant amount of evidence from each of the three KCU sites that pigs were culled as juveniles. In contrast, the evidence from Khirokitia suggests that sheep and goat were culled from approximately 6 months old (11%) to 4-6 years old (18%), and deer as adults. Davis says of the Khirokitia sample:

The proportion of juvenile caprines was smaller than pig and fallow deer smaller still. There are several possible reasons why the count of juvenile fallow deer should be lower than that of the caprines. One explanation ...is that the fallow deer were hunted...

(Davis 1989, 205-206)

The evidence from the paleobotanical remains for the KCU are again best represented by Khirokitia (Hansen 1989, 1994; Miller 1984; Waines and Stanley Price 1977). The most common seed found at Khirokitia is cultivated wild einkorn wheat. Emmer wheat and barley appear in much smaller quantities. However, Hansen notes (Hansen 1994, 393) that in one particular deposit at Khirokitia (507 Level G), emmer wheat was found in substantial quantities. This is in contrast to previous analyses, where einkorn was found to dominate. Hansen suspects that this pattern indicates that emmer wheat was a separate crop from einkorn (Hansen 1994, 393). Oddly, the percentage of grain found at Khirokitia is substantially greater than that of Tenta (Hansen 1989, 237), despite the intensive water sieving at the latter site. Moreover, the proportions of plant remains differs from Khirokitia. At the former site, einkorn and emmer wheat are found in approximately equal quantities.

The paleobotanical remains Cape *Andreas Kastros* are dominated by emmer wheat, in contrast to both Khirokitia and Tenta. In addition, flax, pistachio, olives and figs are also present. Bread wheat and naked barley are not represented.

Finally, the economic evidence for the Chalcolithic sites of Lemba *Lakkous* (Lemba), Kissonerga *Mosphilia* (Mosphilia) and Kissonerga *Mylouthkia* (Mylouthkia) should be briefly reviewed. Again, much of the information awaits publication, and there is very little information yet available on the floral evidence. In contrast, Croft (Croft 1991) has succinctly summarised the faunal data and further detail can be obtained through the various reports (Croft 1981, 1982, 1985, 1988, n.d.a., n.d.b.).

Floral evidence comes from Lemba *Lakkous* where barley appears to have been the primary crop (College 1985, 297). Emmer and einkorn wheat remains are limited and College (College 1985, 297) hesitantly suggests that wheat may have been difficult to cultivate due to a combination of environmental factors.

The analysis of the faunal evidence from the Ktima Lowland sites show that deer was still a predominant meat source during the earlier ECU but percentages decline in the later phases. This pattern of deer exploitation matches the evidence for the KCU. Croft (Croft 1991, 72) suggests that the increase in popularity of pig husbandry, commensurate with the decline in deer, indicates a greater labour-intensity in animal exploitation in the 3rd Millennium. Furthermore, the tendency towards culling younger deer (or non-random culling) in combination with the changes mentioned above, reflects the various stages of an evolving system of game management (Croft 1991, 73). Table 5.6 presents a breakdown of the ages of deer, pigs and caprines at death for the Ktima Lowlands ECU sites. At Mylouthkia, there is a

tendency toward the culling of adult deer and caprines, while the age range at death for pigs is more random. At Lemba, the pattern of culling is fairly evenly distributed for both deer and caprines, although adults are still favoured. In contrast, pigs again tend to be culled as juveniles. At Mosphilia, there is still a tendency to favour adult caprines and deer, but pigs are culled non-randomly, supporting Croft's theory that they were intensively farmed. Evidence from caprine bones indicates that goats well out-numbered sheep during the Chalcolithic period.

	Deer				Pig				Caprines			
	I	J	S	A	I	J	S	A	I	J	S	A
Mylouthkia	11	1	17	71	29	2	20	49	4	8	20	68
Lemba II-III	5	20	28	47	61	0	23	16	6	29	6	59
Mosphilia	7	25	8	60	33	23	27	17	14	19	9	58

Key			
I = Infant	J = Juvenile	S = Sub-adult	A = Adult

Table 5.6 - A comparison of the kill ages for deer, pig and caprines (cf: Croft 1991, Table 4)

Croft also notes that:

The relatively slight preponderance of females over males at the Chalcolithic sites presents a radically different picture [from the KCU]. Numbers of males per female are 0.79 at Mylouthkia, 0.73 at Lemba, and 0.95 at Mosphilia, clearly denoting a different system of caprine exploitation than at Tenta. Such a large proportion of male caprines would be inefficient for either meat or milk production.

(Croft 1991, 74)

The pattern of caprine culling isn't altogether surprising considering the primary meat source during most of the ECU in the Ktima Lowlands was deer. There is also no reason to believe that caprine herds were maintained purely for dietary purposes. Subsistence strategies in the ECU had evolved quite markedly from that of the SCU or the KCU and the ECU is characterised by a burgeoning surplus and specialisation of commodities (Peltenburg 1993, 1996). There is no evidence that this was the case in the KCU or SCU. With a more evolved economy, caprine herds in the ECU might have been important economically, in ways other than as a ready available food source. For instance, caprines may have had an exchange value with herds exemplifying village wealth.

Redding (Redding 1984) looked at the sheep/goat ratios at three agro-pastoralist sites in south-western Iran, Tappeh Sarafabad, Tepe Farukhabad and Tepe Ali Kosh. His study focused on the optimum ratio of sheep and goat in herds in order to identify whether the goal

of subsistence was protein/energy or sustained yield. He found that a ratio of approximately 1:1⁴ indicated that herd security was the primary concern of the ancient agro-pastoralists, whereas a ratio of approximately 5:1, indicated herds were exploited for protein. At all three sites he found that the ratio of sheep to goat was approximately 1:1 (the ideal ratio for herd security). In his review of optimum ratios for the theoretical determinants of herder's decisions to either optimise their flocks for protein, or for flock maintenance, he found that the faunal evidence from all three sites indicated that herd security was of greater importance than meat production.

The faunal evidence for the Early Prehistoric Period indicates that fallow deer was a primary source of meat throughout the period, that deer were probably hunted, and that there is some evidence of long range management. There is variation in the predominance of deer between sites, with Khirokitia moving towards intensification of caprine husbandry in the later phases. However, on the whole, deer remained a predominant source of protein at all sites. Caprines were also a large source of protein and were most likely domesticated. The proportion of sheep and goat in herds varies between sites, as does the age of animals at death. There is no specific pattern to either, although all sites display an imbalance in the herd ratio. It has been suggested by Davis (Davis 1989) that a predominance of goats in a herd might reflect differing adaptive skills to the surrounding physical environment, and Levy (Levy 1983, 19) notes that goats are better adapted than sheep to a hot dry conditions. However, another theory might be that imbalances in the herd ratio is due to specific decisions by the ancient farmers on herd management.

Based upon Redding's model, outlined above, the Early Prehistoric faunal evidence from Cyprus suggests that the goal of subsistence was protein/energy. There is an imbalance in the number of sheep to goat at all sites, which might reflect a pattern of meat and limited milk exploitation in the Early Prehistoric period. Comparative evidence from Greece (Halstead 1996, 24) shows that the SCU population engaged in small scale, intensive mixed farming with a balanced reliance on hunting and livestock rearing complementing the production of cereals and legumes. The fact that herd security appears not to have been a primary consideration indicates that other regular protein sources were available. The continuing importance of deer throughout the Early Prehistoric period would have meant that meat was in ready supply and therefore there would have been little pressure to maintain caprine herds at optimum levels for sustained yield.

⁴ The ratio of sheep to goat in a herd will fluctuate slightly with environmental conditions and agricultural strategies. A rule of thumb is a ratio of 1:1 for sustained yield and 5:1 for exploitation of energy/protein.

The floral evidence indicates that the primary crops were wheat, barley and lentil. Although the evidence is slight, it appears that the predominance of one crop over another varied between sites and that there is temporal and environmental variation in the proportion of primary crops. Wheat, barley and lentils would have been grown for domestic consumption, although caprine herds would have fed on the wheat and barley stubble once pastures had dried out in the late spring. During the summer months, the caprine herds may have been fed grains to supplement the meagre supply of perennials and dry annuals available.

5.4.3 - Functional Studies

The wide variety of cultivated and collected flora and domesticated and hunted fauna would require a greater range of utensils than is visible in the ceramic record. It is likely that food preparation and storage involved the use of other mediums which have not survived in the archaeological record. However, the survival of saddle querns, grinders and stone bowls (interpreted as mortars) indicates that cultural items other than pottery were used in the preparation of food.

5.4.3.1 - Coarse Wares

The Coarse Wares are dominated by shallow trays with flanged bases. The dark fabric and surface finish of Coarse Ware is a product of the original firing process, but there is also some evidence of secondary blackening. It is possible that some of the more solid flanged based trays and the holemouths may have been associated with heating. In contrast, the large shallow trays with u-shaped openings are characterised by very thin fragile bases that would have restricted movement. It is unlikely that these vessels were heated for cooking purposes, although they might have been used as sorting trays for grain (E.J. Peltenburg, personal communication). Not all Coarse Ware trays have u-shaped openings, but in general the porosity and friable quality of these vessels rules out any regular heating.

In contrast, Coarse Ware holemouth vessels may have been used for the heating of liquid substances, particularly the heating process needed for the manufacture of yogurt and cheese products (Weir 1990, 32-33). Like the shallow trays, they show some traces of secondary burning but they are also characterised by thicker walls, rounded bases and constricted openings which are features commonly found in cooking pots (Magness-Gardiner 1992, 18). The presence of fire cracked stones at Kissonerga (Peltenburg 1991) might indicate that liquids were heated by placing hot stones in the container with the liquid to be heated. This practice may partially account for the limited traces of secondary burning. Fire cracked stones are absent in SCU contexts, although, this does not exclude the possibility that this practice

already existed in the SCU, and it is more likely that these sorts of stones were missed in the archaeological record.

In studies on the use life of pottery (Shott 1996; Varien and Potter 1997), it has been shown that vessels which are used repeatedly in a domestic context (particularly for cooking) are likely to have had very short use lives. It would be expected then that a greater proportion of these vessels be present in the archaeological record. In contrast with many archaeological contexts where cooking vessels are the predominant ware type (Varien and Potter 1997, 198), the proportion of Coarse Ware in the SCU represents anywhere between 7-15% of the sample. The small quantities of Coarse Wares in the SCU archaeological record does not tally with Shott's expected frequency of cooking ware in pottery assemblages (Shott 1996, 464) casting doubt upon the assumption that Coarse Wares were ever used in the cooking process. Unfortunately for our knowledge of cooking processes, Coarse Wares are the only pottery class in the SCU that display any sign of secondary burning. One conclusion might be that cooking was not a regular feature of the SCU, although this seems unlikely given the number of hearths. Another explanation might be that other mediums, such as wood and stone, were also used in the cooking process. There is substantial ethnographic evidence that large joints of meat were cooked in ash pits in the ground, and one well known example is the practice of slow cooking meat wrapped in leaves in the South Pacific Islands. Vitelli (Vitelli 1989) casts doubt upon the direct association of pottery with food. In her study of the Early Neolithic pottery from Franchti cave she says:

Sherds sometimes have sooty deposits, but always on the interior of vessels....In short, although I can not prove that pots were not used over a fire before the late Middle Neolithic, neither can I show that they were so used until that point.

(Vitelli 1989, 25)

The utilitarian nature of Coarse Ware, and its ubiquitous presence in domestic contexts implies that vessels were probably not exchanged between villages nor moved very far within the domestic context. Moreover, Coarse Ware is roughly made and poorly fired and would have taken less time to produce than the decorated fine wares. It is therefore unlikely that Coarse Ware had a secondary socio-economic or cultural function but what its true function was, we cannot yet say.

5.4.3.2 - The Decorated Fine Wares

The Decorated Fine Wares are dominated by large and small bowls, bottles and holemouth vessels, and comprise the greatest proportion of SCU pottery assemblages. None of the whole

vessels or sherds examined showed traces of burning. The proportion of open to closed vessels is approximately 60:40 at all substantial above ground sites, except Vrysi, and also the less substantial sites, where the proportions are reversed. This observation may be indicative of a number of scenarios,

- 1) that more open vessels than closed vessels were manufactured at some sites,
- 2) that open vessels were larger and break into more sherds,
- 3) that the different proportions may reflect archaeological sampling methods.

Open vessels can be divided into large and small bowls. They are always slipped and painted on both the inner and outer surface and therefore could hold both wet and dry substances. Henrickson and McDonald (Henrickson and McDonald 1983, 632) note that serving and eating bowls are usually made in two sizes, one for individual servings and one for family use. They also note that the family size bowls tend to be three times larger than individual serving bowls. This tallies with the size ratio of large and small bowls in the SCU. Large bowls have a rim diameter of between 25-50cm and a maximum height of approximately 20-25cm. Small bowls have a rim diameter between 10-25cm and a maximum height of approximately 10cm. When full, large bowls would have been heavy and unstable and were more likely to have sat on the ground. Ease of transportability is related to capacity (Schaub 1992, 11) and in the case of the large bowls, long distance transport seems unlikely. The presence of spouts on some large bowls indicates that they were used for purposes other than family serving vessels and that pouring was a feature of these bowls. The floral and faunal evidence for the SCU indicates that both grain and animal produce were a feature of the SCU diet and the addition of a spout on some of the large bowls might indicate that they were used in the preparation of wet, uncooked foods, such as milk, yoghurt, curds and whey, all produce of the domesticated ovicaprids. For example, in the souring of milk, the spout could have been used to pour off liquid which would separate from the solids (W. Andreas, personal communication). Large bowls could also have been used in the milking process. Ellis-Lopez (Ellis-Lopez 1992, 7) quotes ethnographic evidence from Egypt where large open pottery vessels are preferred to metal vessels for milking because they are thought to be cleaner. She notes that these vessels are used during the milking season only (winter to spring) and stored during the summer when not in use. It is also one of the most frequently replaced vessels in Egypt, with families buying up to ten per year. Most importantly, Ellis-Lopez notes that size varies from 20cm in diameter to 30cm in diameter but that shape never varies. Large bowls might also have been used in the process of making bread-stuffs. Bedouin women today use large bowls to mix and knead flour with water until it is the right consistency for baking (Weir 1990, 30).

Although much of what is surmised from the evidence is based on supposition, there are some clearly discernible features of the SCU economy which can be highlighted against growing argument to the contrary. In the first instance, there is no evidence to suggest that secondary products were not utilised and exploited earlier than current opinion on the beginnings of the Secondary Products Revolution (SPR) (Sherratt, 1979, 1983, 1986). Sherratt argues that substantial faunal evidence is needed before suppositions can be made about whether a prehistoric society exploited domestic herds for more than just meat (Sherratt 1983, 84). Using evidence from excavated prehistoric sites in Europe he quotes figures of adult female ovicaprid bones in an assemblage as representing 20-60% of the sample. Moreover, he says that:

This precludes their use for wool, as predicted, but leaves open the possibility that goats, in particular, were used for milking.

(Sherratt 1983, 94)

Although there is not a great deal of evidence from Early Prehistoric contexts in Cyprus to support exploitation of caprine herds for milk, there is enough ambiguity in age patterns at death, particularly at the sites of Khirokitia and Tenta in the KCU, and the Ktima lowland sites in the ECU, to ensure that this hypothesis is not ruled out. The presence of large “milk bowls” in the SCU is not evidence enough for milk production, but it is useful to note that vessels of this kind are often used to argue in favour of the SPR in contexts where the SPR is expected. For example, Knapp (Knapp, Held and Manning 1994, 418) says:

The introduction of the plough, cattle, and equids; several distinctive pottery wares (especially Red Polished); a variety of mould-cast copper tools, weapons, and ornaments; wider use of spindle whorls and loom weights; gaming stones, and terracotta models. The decline in evidence for deer hunting and the concomitant rise in the importance of cattle reflect a key economic transformation, namely the adoption of the cattle-plough complex and other aspects of the secondary products revolution, which itself facilitated further specialized economic developments. For example, the expansion of the agro-pastoral sector of the economy - indicated by terracotta models of cattle and plough, pottery products associated with the use of milk.

(Knapp, Held and Manning 1994, 418)

This is not to say that SCU Cyprus had developed all aspects of the SPR, as predicted by Sherratt for Bronze Age cultures, however, it does indicate that the SPR was may not have been a major economic revolution, universally adopted (albeit at different times) but rather a

gradual process of evolution and adoption of a range of ideas and inventions which facilitated and enhanced individual subsistence economies. Moreover, Peltenburg (Peltenburg 1996, 21) states that:

.....the presence of cattle bones on a site does not necessarily prove that the community had assimilated the SPR. and we are woefully ignorant of appropriately dated ovicaprid assemblages to assess production for milk, meat or wool....In a similar environment in Crete, the adoption of the SPR led to settlement nucleation (Manning 1994, 236-7 and n. 14), something that did not happen until much later in Cyprus and other Mediterranean islands. This contrast suggest that the SPR was only weakly entrenched in the Cypriot economy in the earlier Bronze Age.

(Peltenburg 1996, 21)

There is greater variation amongst the small bowls and this makes it difficult to speculate on their function. Small bowls are rarely furnished with spouts. They range in size from 10-25cm in diameter and, in addition, there are a number of small dishes of between 5cm and 15cm in diameter. Like the large bowls, small bowls display no signs of secondary burning, and they are always slipped and burnished on the inner surface making them impermeable to liquid. There is a greater variety of shapes and sizes in small bowls which would indicate that they were a ubiquitous utensil used for a variety of purposes, most probably to do with serving and eating food, but also for other purposes not visible in the archaeological record.

Holemouths have a greater ratio of height to diameter. The mouth of these vessels is usually constricted, either as an incurving rim, or an offset lip. The addition of a short upright or flaring lip on many suggests pouring may have been a function. Holemouths are usually small with rim diameters between 7-15cm. A few are very large, with rim diameters of 20-25cm. Magness-Gardiner (Magness-Gardiner 1992, 11) notes that vessels intended for the storage of liquid show a wide degree of morphological variation, however long-term liquid storage vessels were found to be very large. Furthermore Henrickson and McDonald (Henrickson and McDonald 1983, 633) found that in their sample, long-term storage jars for wet and dry foodstuffs had wide mouths, probably used for dipping or scooping. From this we can deduce that the smaller holemouths were probably not used for the long-term storage of wet or dry foodstuffs, but that larger holemouths might have had a storage function, either for liquids or possibly for grain. The size and shape of many smaller holemouths is commensurate with the size of individual drinking vessels. However, both the simple holemouth form or the short lipped or necked type would make the act of drinking quite difficult. It is more likely that some of these vessels were used for short-term storage. The holemouth shape is quite ubiquitous and

was probably used for a variety of purposes, including containers to hold and store liquids, ovicaprid produce, as well as dry foodstuffs.

The last shape in the Decorated Fine Wares is the large globular bottle with a short or long narrow neck. The narrow neck would make pouring of viscous substances difficult and therefore, it is more than likely that this form was used to hold water or other fluid liquids. The ratio of base diameter to greatest body circumference is large and therefore this shape would have been unstable when full if placed on a flat surface. In addition, many of the bottles have rounded bases. Pierced lugs and handles are usually associated with suspension. The large bottles do not have lugs or handles, however, suspension in woven nets is possible scenario as weaving is attested in the SCU from mat impressed bases on Coarse Ware vessels. There are many archaeological analogies from Middle Kingdom Egypt, particularly of vessels suspended in nets, sometimes also hanging from poles (Petrie 1899). Another explanation might be that these vessels were partly sunk into the ground which would ensure the contents remained cool. Furthermore, partial burial in the ground would act against instability. Modern Cypriot water jars have rounded bases for exactly this purpose. However, aside from the odd example of enigmatic pits in some huts at Vrysi (Peltenburg 1982, 247), there is no evidence for the placement of vessels in sub-surface features.

5.4.3.3 - The Monochrome Burnished Wares

The final functional class to be considered in this section is the Monochrome Burnished Wares. As with the fine wares, variations in shape should give an indication of function, but in the Monochrome Burnished Wares the small bowl is ubiquitous and gives no indication of functional variation. On the whole, MBW shapes are small and are dominated by bowls and holemouth vessels. At Philia, where MBW is best represented, it appears on its own in basal deposits and therefore is not a specialised table ware occurring in conjunction with the more common decorated wares. Even though there is greater variety within the individual classes (ie, bowls, flasks, bottles) there are no examples of large bowls with spouts and no examples of large bottles, apart from one example from Dhali with an extant height of 40cm being the exception (Lehavy 1974, 231, Figure 14a). Monochrome Burnished Ware bowls are almost identical in their repertoire of shapes and components to small bowls in the Decorated Fine Wares. Although there is a propensity for MBW bowls to have off-set disc bases. However, it may be that the function of MBW bowls and fine ware bowls is the same.

Holemouths tend to be smaller in MBW than in the Decorated Fine Wares. There are also a number of very small bowls and holemouths which have been periodically called “salt cellars”

and “thumb pots” respectively. These sorts of small vessels are much less common in the later ECU. Their function in the SCU is enigmatic.

There are also a variety of small round bottomed or “tear-drop” shaped flasks in MBW. This shape never occurs in the Decorated Fine Wares. The MBW flasks are not dissimilar to the Bronze Age dipper juglets of Palestine (Kenyon 1965, 411), however, they are never found in association with storage vessels, unlike their Palestinian counterparts.

There are no vessels in the Monochrome Burnished Wares that could be considered large enough to be storage vessels. Therefore, presumably the range of activities carried out by the earlier SCU inhabitants were very different from that of the later inhabitants who used the Decorated Fine Wares.

5.5 - Subsistence strategies and stylistic variation

The preceding discussion highlights the relationship between subsistence strategies and ceramic form and function. Knapp (Knapp, Held and Manning 1994, 411) disagrees with the extent to which Cypriot archaeologists have used the analysis of pottery to find answers to theories about regional diversity and suggests we look to examples from the surrounding eastern Mediterranean where “the partiality of such an opinion has been demonstrated”. In response to this argument, I would suggest that it is possible to approach the study of pottery holistically by incorporating the ceramic evidence into the wider material culture sphere. The study of ceramic function, in conjunction with socio-economic evidence, bridges the gap between static typologies which are inherently restricted to spatio-temporal issues, and broader social, economic and ideological concerns. Assessing the evidence for stylistic variation through the dual analysis of ceramic form and function, in conjunction with the socio-economic evidence, allows interpretation of diversity from a systemic perspective. However, social and ideological aspects of variation require that some inference of social patterning be drawn from the economic evidence.

This section summarises the evidence presented in Section 5.4 above, and proposes a number of subsistence models through which social and ideological explanations for stylistic variation can be sought. There are two aspects to economic and subsistence patterning which have a role to play in diversity,

1. the economic and subsistence interrelationships within individual villages,
2. and the economic and subsistence relationships between sites and more distant regions.

The previous review of ceramic function and subsistence indicates that SCU populations inhabited small villages and campsites, and carried out a range of activities associated with a mixed farming economy. Villages and campsites are located in areas where water is readily accessible and soils are fertile. The availability of optimum arable land in Cyprus was not unlimited in the Early Prehistoric period and settlements aggregated along river courses or around perennial springs. Peltenburg (Peltenburg 1982b, 13) quotes a radius of 2-3km as the average catchment area per village for grazing and farming, and presumably village catchment areas overlapped. The management of deer would have involved some travelling into the foothills of the Kyrenia and Troodos ranges and areas of poorer grazing away from the central village zone, therefore inhabitants of more distant villages presumably came into contact with each other on a regular basis. Villages engaged in the cultivation of cereals and legumes, and there is sufficient evidence to suggest that caprines were husbanded not only for meat, but also for secondary products, such as milk. Subsistence activities would have been carried out on a seasonal basis. The wild cereals, characteristic of the Near East, would have grown through the winter months and been harvested in the spring (Sherratt 1980, 315). Animal husbanding would have been an activity that required most effort in the winter and spring when new animals were born and milk was available. The very hot dry summer months in Cyprus may have forced farmers to move their herds into the cooler mountain foothills where late growing grasses and perennials would still be available, however, there is little evidence in support of a transhumant economy. In many regions the cooler upland areas are close enough to major sites that seasonal transhumance would not have been necessary, but foraging trips (Binford 1996) and regular periods away from villages were probably part of the seasonal subsistence strategy. Although herd survival would have been important for meat and other products, deer would have been hunted all year round, providing a regular source of energy in the leaner summer months.

The intensive agricultural activities undertaken in the winter and spring would require that activities, such as the production of pottery and general village repairs, be confined to the seasons when subsistence strategies needed less input. Summer and Autumn were presumably the seasons when domestic maintenance was carried out. Arnold (Arnold 1985) argues that climate and weather patterns would have played a major role in the scheduling of pottery production in early societies. For example he states that:

Because the environmental variables of temperature, wind velocity and relative humidity affect the drying of pottery, weather and climate can have a profound effect on the success of pottery production....Pottery making is ideally a dry weather craft: cold and damp weather and climate provide a significant limiting factor for pottery production. The most favourable weather and

climatic conditions for pottery production thus occur during a time of sustained sunshine, warm temperatures, little or no rainfall and low relative humidity.

(Arnold 1985, 62-71)

However, as pottery production and building repairs both require water, access to a yearly supply would have been imperative. Many of the villages located close to the sea had access to the quantities of water required for these tasks⁵ and it has been shown that the rendering of plaster for walls and floors requires salt in the water solution to inhibit cracking (O. Le Brun, personal communication). Furthermore, other sites located on the coastal littoral, some distance from the sea, are close to perennial springs and at least had access to yearly water supplies for pottery production, if not the salt needed for rendering.

There is no evidence for the division of labour between men and women and although there is substantial ethnographic analogy to suggest women were the primary manufacturers of pottery, there is also an abundance of ethnographic cases where the opposite is the case (London 1987, 1990). Therefore, there is no reason to presume that both men and women were not engaged in the same domestic tasks, including the production of pottery. Children were also presumably involved in the general day to day tasks of the village and might well have looked after caprine herds, taking them into the hills to feed much as the Bedouin children do today (personal observation).

Evidence for agro-pastoral practices in SCU Cyprus conform to the model established by Sherratt (Sherratt 1980) for restricted, selective agricultural exploitation whereby:

.....early agriculturists occupied only a narrow zone of maximum productivity, in an essentially small-scale though locally intensive system of cultivation. In places this was capable of supporting nucleated communities, though in others produced a pattern of hamlets following the exploited zone.

(Sherratt 1980, 315)

Sherratt also says that:

Such early horticultural systems would always have been spatially restricted, however, with locally high population levels but wide intervening uncultivated areas and with little potential for local growth without radical changes in technique. The main pattern of

⁵ G. London. (personal communication) confirms that salt water is also adequate for pottery production.

growth would be first by rapid budding-off and export of population, followed by expansion to smaller and smaller patches of the appropriate high-yielding soils within the occupied area.

(Sherratt, 1980, 318)

Exploitation of intensive agricultural zones in this way should exhibit features indicative of interaction and regional diversity. In the first instance, Sherratt's suggestion that population growth brought a rapid "budding-off" of population, followed by expansion into smaller and smaller patches of high-yielding soils, is in accordance with the pattern of settlement expansion and dislocation hypothesised by Peltenburg (Peltenburg 1993). As SCU populations expanded, new settlements broke-off and established themselves in areas within optimum agricultural catchment areas. Site clusters, such as the northern group of Vrysi, Troulli and other small scale SCU settlements on the north coast, and the Kalavassos sites, attest to this pattern of intensive exploitation of the best arable land. This process could have occurred fairly rapidly, therefore little evidence would be visible in the archaeological record for temporal divisions and discontinuities between sites. This is further supported in regions where sites exhibit a high level of conservatism, for example, Troulli and Sotira.

Certain aspects of SCU subsistence patterns also closely resemble Binford's model of foraging strategies. Binford (Binford 1996, 41-46) outlines a number of characteristics of different foraging activities. Of particular interest are those aspects which resemble SCU subsistence strategies. He notes that:

One distinctive characteristic of a foraging strategy is that foragers typically do not store foods but gather foods daily.

(Binford 1996, 41)

Presumably, the absence of storage vessels in SCU contexts indicates that seasonal storage of cereals or other food products was not part of the economic strategy of SCU populations. Therefore, resources were probably supplemented by the addition of collected plants and, of course, hunting forays. This is, in fact, one aspect of foraging which Binford singles out as being characteristic of some foraging systems; what he has called, encounter of strategy. He describes this as:

.....a hunting trip where several men leave a residential base, establishing overnight camps from which they move out in search of game, frequently using what I have termed an encounter of strategy. If they succeed in their hunting endeavours, and if the body size of the animal is large or the distance to camp is great,

and the temperature is warm, they may elect to dry the meat in the field and transport processed meat back to camp.

(Binford 1996, 44)

Although there is no evidence that meat was dried away from the residential base, there is a reasonable amount of evidence from Vrysi (Section 5.4.1 above) that deer were killed and possibly butchered away from the residential base.

The absence of storage facilities would have contributed to agricultural gluts in some years, while regular drought years (Christodoulou 1959, 28-30) would have encouraged agricultural famine in other years. Poor economic yields combined with limited population size would have necessitated exogamic community structures which, in turn, would have presumably brought about regular interchange of ideas and possibly produce with surrounding populations, and even more distant populations.

Personal and group relationships in the SCU would have been influenced by economic and subsistence factors. Interaction within and between sites was likely to have been structured around the seasonal activities of the village. Within individual villages, group maintenance would have been fundamental to the survival of the village and seasonal subsistence tasks would have been rigidly followed to ensure continuation of the population. Competition for resources within site clusters would have governed the types of relationships which existed between villages. However, the close kin ties between village groups, formed by the budding off of new villages once the parent village outgrew its critical population level, would mean that this competition was tempered by personal and clan based interactive processes.

On a wider level, there would also have been contact and interaction between distant groups engaging in foraging activities and social interactive activities based upon the greater survival of the clan or cluster. These groups could have comprised both men and women and there would have been numerous opportunities for casual meetings *en route* to hunting sites or to seasonal grazing areas (Jacobsen 1984, 35). This sort of interaction would have brought about a different set of relationships to those between village clusters. The competition for resources should be less between distant groups but social and economic boundaries would be stronger because kin ties would be less distinct and periods of direct interaction less frequent.

It has been argued that retaining walls and ditches were defensive features built to delimit village boundaries and to impede or dissuade intrusion from other groups (Stanley Price 1977a). This seems unlikely given that villages outgrew their retaining walls relatively

quickly. It is more likely that these walls were built early in the sequence to obstruct incursions by the remnant KCU populations⁶ but that once the KCU inhabitants had been assimilated into the SCU culture, these walls and ditches were no longer necessary. This seems the most likely explanation given that there is no evidence of defensive weapons in the stone tool kit, and all bone and antler objects appear to have been used for domestic and subsistence purposes.

5.6 - Social interaction and village maintenance

Clearly, the continuity of individual village groups depended on rigorous scheduling of seasonal subsistence activities, and the maintenance of optimum areas of soil and water. Whether villages competed for land and resources is uncertain, but at the level of the village cluster, interaction fields would have been directed by wider exchange and kin-based networks which would have ensured survival of the group. Madden (Madden 1983, 192) notes that two sets of variables are important in the structuring pattern of regional inter-relationships, 1) the spatial organisation of the subsistence economy and, 2) exchange relationships. Under the latter Madden includes the exchange of energy (ie, food resources), services, information and personnel.

Village size in SCU Cyprus probably never exceeded 500 individuals (Stanley Price 1977). Wobst (Wobst 1976) calculates that the minimum size for a mating network is 475 people and rarely do SCU villages reach this number of inhabitants. It might be surmised that the larger villages, such as Vrysi and Sotira, may have held sway over smaller sites within the village cluster because of the greater number of individuals of child rearing age, assuming that village clusters partook in inter-marriage. The unpredictable economic conditions of egalitarian, non-surplus producing societies would also require wider inter-marriage between regions, not only for the acquisition of personnel, but also to obtain goods and information.

Madden (Madden 1983, 193) looks at three models for the organisation of social network systems within hunter-gatherer societies. Although we are concerned with sedentary village society, her third model can be adjusted for egalitarian village community structures. This model states that:

If the distance between groups in a region decreases to the point where there is much overlapping of exploitation territories and competition for finite resources, then the advantages of

⁶ Held (1992c, 1993) has argued that the KCU population did not suffer total extinction but that remnant KCU populations were assimilated into the SCU "booster" immigration.

maintaining an open network system which offers relatively unrestricted access to personnel, services and resources across a wide area may no longer be cost efficient. In such a situation an imposed division within the social network system may occur to preserve the exclusivity of the exploitation territories and/or resources.....

(Madden 1983, 193-194)

Under Madden's model, we might presume that intensive social interaction occurred at the village cluster level, but with time, divisions between sites became more pronounced. Evidence from Vrysi and Troulli suggests that early in the sequence, the maintenance of individual village boundaries, (ie, village walls) lost their importance. However, later in the sequence there is evidence for stronger village unity demonstrated by the greater divergence in ceramic decorative schemes (see Chapter 8). The economic and social structure of the village cluster might therefore, have decreased in favour of the village unit. However, Madden also suggests that:

Social boundaries are expensive to maintain both with respect to the risks incurred in limiting the range and flexibility of linkages, and the time and energy necessary for boundary maintenance. We may assume that in many cases there would not only be a continuation of certain social alliances across the imposed barriers, but an elaboration or development of formalised and probably extensive communication and exchange linkages or other sorts (such as trading connections and political alliances) to offset the economic risks incurred by putting limits on the social network system.

(Madden 1983, 194)

Therefore, although individual village identity may be increased with time, extended kin relationships based upon the village cluster, would have been the optimum social unit for population maintenance. Moreover, there probably continued to be a range of less structured social interaction networks between village clusters and between regions, based upon exchange of information. Madden argues that as the level of internal integration and external differentiation increases, as in the case of her Model 3, outlined above, there would be increasing evidence for stylistic behaviour, within clusters and between regions due to 1) reduced inter-regional communication and 2) developing social boundaries. She infers that regional styles would increase under Model 3.

What of the social interaction networks that may have existed between regions? Again we can turn to the models of Wobst (Wobst 1974, 1976) and Madden (Madden 1983). Where intensive interaction networks within village clusters would have aided in the continuation of

the community, extensive exchange relations between regions would have contributed to the interchange of information, exotic goods, and possibly utilitarian goods and personnel.

We have already seen that the extended management of deer would have brought roving foragers into contact with each other and it might be that through this contact other exchange systems evolved. The widespread distribution, albeit on a small scale, of luxury items such as carnelian and picrolite, were probably moved about through such forms of contact. Furthermore, evidence from the Urfimis regions of the southern Peloponnese (Jacobsen 1984), indicates that utilitarian objects, such as pottery, may have moved about via seasonal pastoralist activity. Therefore, there is no reason to assume that pottery items were not transferred via long distance forays and that although the primary aim of these forays was for subsistence purposes, secondary exchange was carried out at the same time.

Jacobsen says of secondary exchange via seasonal pastoralism:

There would have been numerous opportunities for casual meetings between different pastoral groups while en route to their seasonal pastures or as a result of their utilization of common or at least adjacent grazing areas.....The exchange of certain speciality products as well as information must also have taken place between the pastoralists and the more sedentary communities, and it is quite possible that the pastoralists need for (ceramic) containers was satisfied in that manner.

(Jacobsen 1984, 35)

In summary, stylistic variation in SCU Cyprus should reflect interactive processes determined by seasonal subsistence patterns. Early in the sequence, the survival of the village group would have been more important than the survival of the individual but with time, the primacy of the village would be replaced by the village cluster. The closely tied inter-relationships within village clusters would eventually result in the need for personal or village identity. Within clusters, highly structured exchange networks would develop, based upon kinship and inter-marriage, while also preserving the boundaries of the agricultural catchment area. Moreover, a structured pattern of stylistic behaviour would evolve derived partly from evolutionary patterns of settlement formation, but also from internal social networks. Between regions social interaction networks would be less structured, involving the casual exchange of information and possibly goods. Between distant regions there would be greater stylistic diversity because contact would be rare, but at more proximate sites, where regular contact happened through foraging trips, closer stylistic patterning should be evident.

In the following chapters, the ceramic tradition will be analysed for patterns of stylistic variation, within site clusters and between regions. The results illustrate that stylistic behaviour is strongest at the level of site clusters, with broader similarities occurring between closely located regions, while more distant regions become more disparate. The implications of the analyses will be assessed in Chapter 9, in relation to the discussions in this chapter, and in Chapter 6.

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Figure 5.1/5 - Orga. Red on White. open vessel. outer surface
Figure 5.1/6 - Orga. Red on White. closed vessel
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- Figure 5.2/1 - Philia. 68.2/4. PCb. open bowl. outer surface
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Figure 5.2/5 - Kalavastos A. Hut XI. 30-80mm. Cb. open bowl. Type 02
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- Figure 5.7/1 - Philia. 67.3. MBW Variant. flaring neck of unknown shape
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Figure 5.8/4 - Philia. 209.4. MBW. "tear-drop" shaped flask

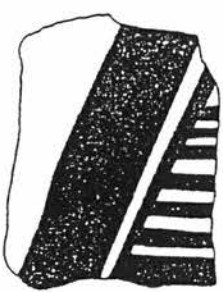
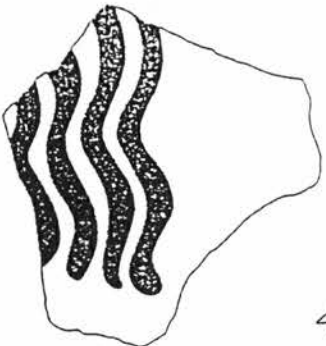
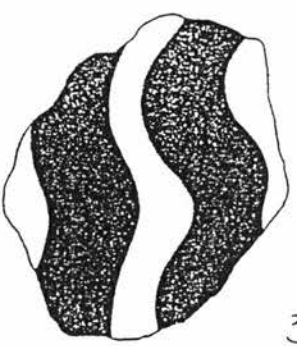
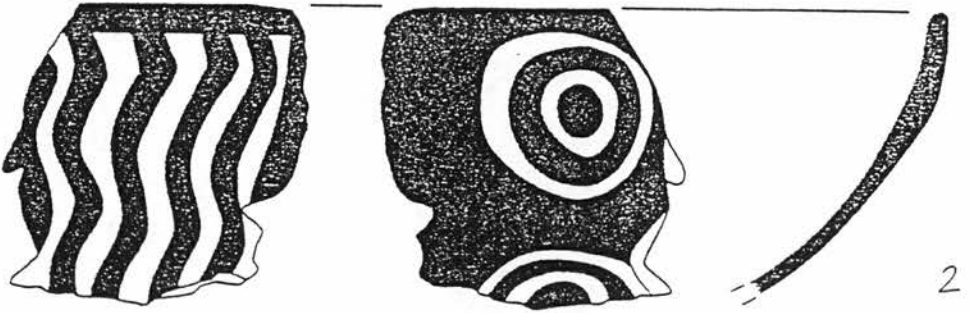
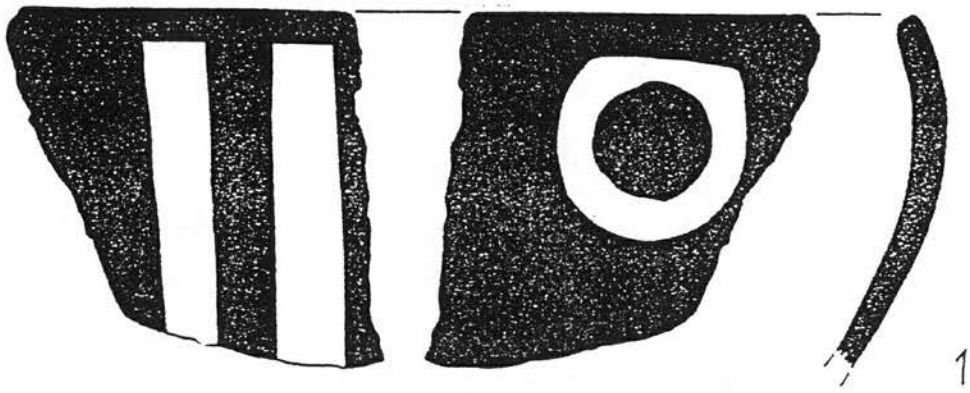


Figure 5.1

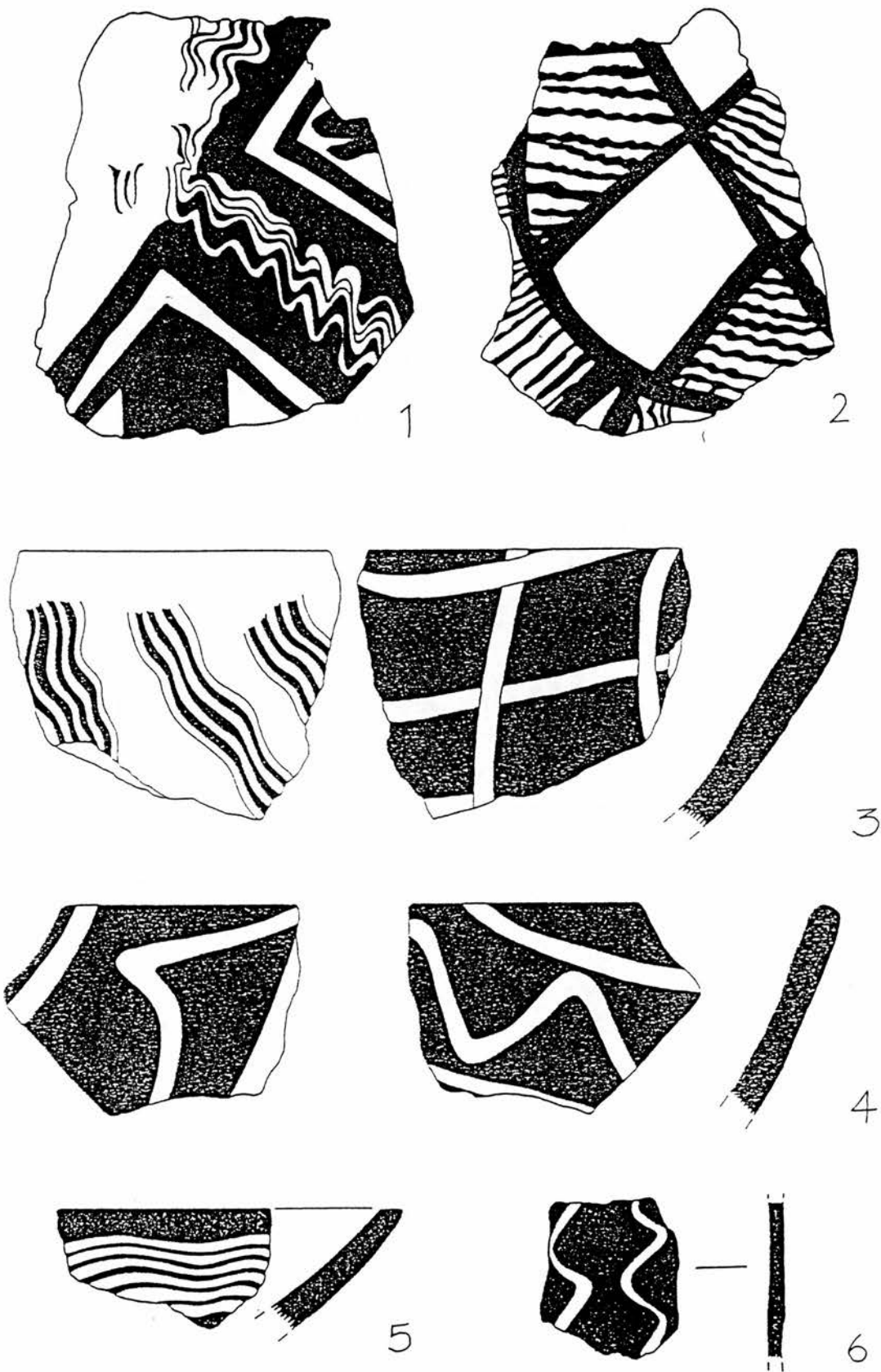


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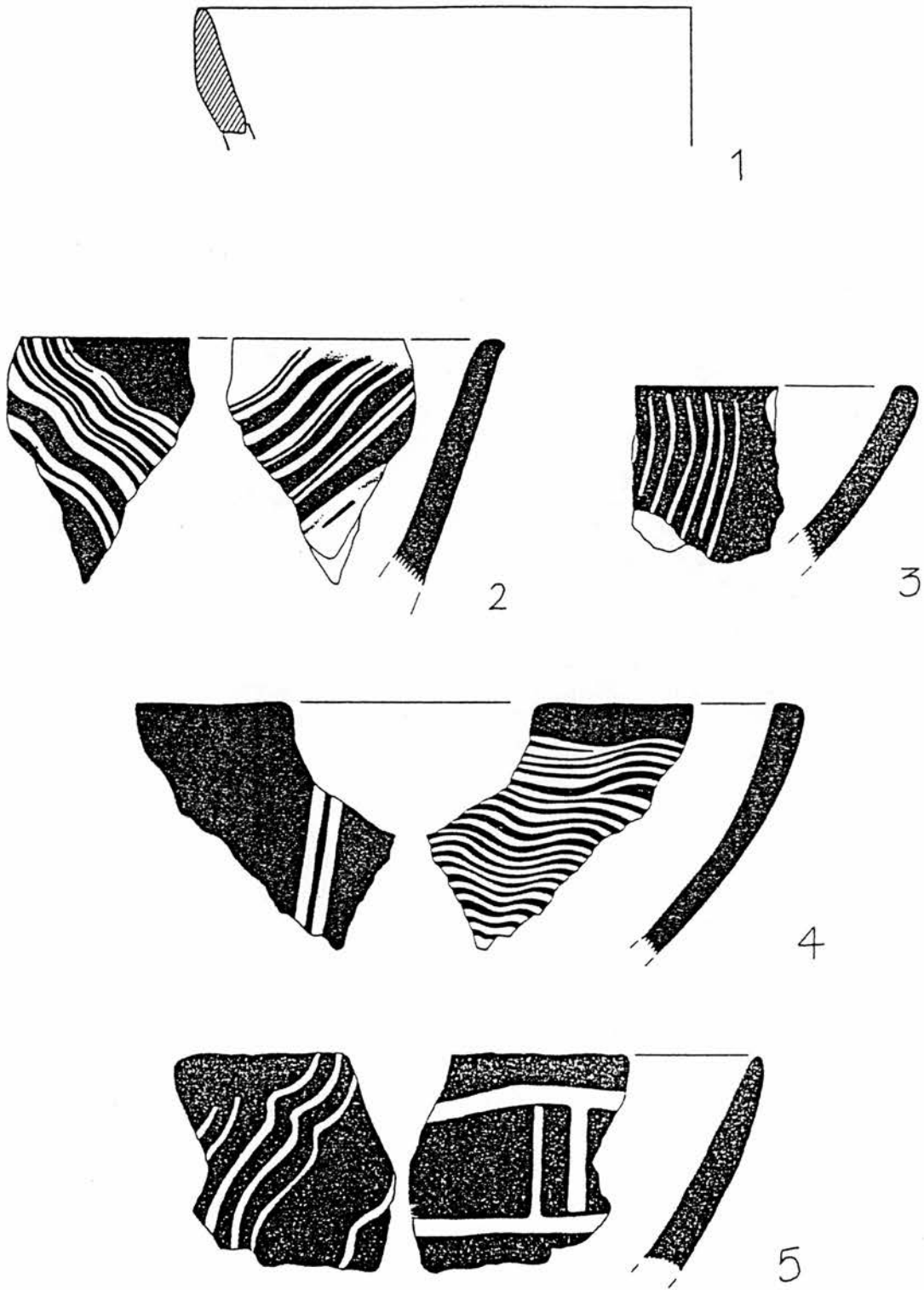


Figure 5.3

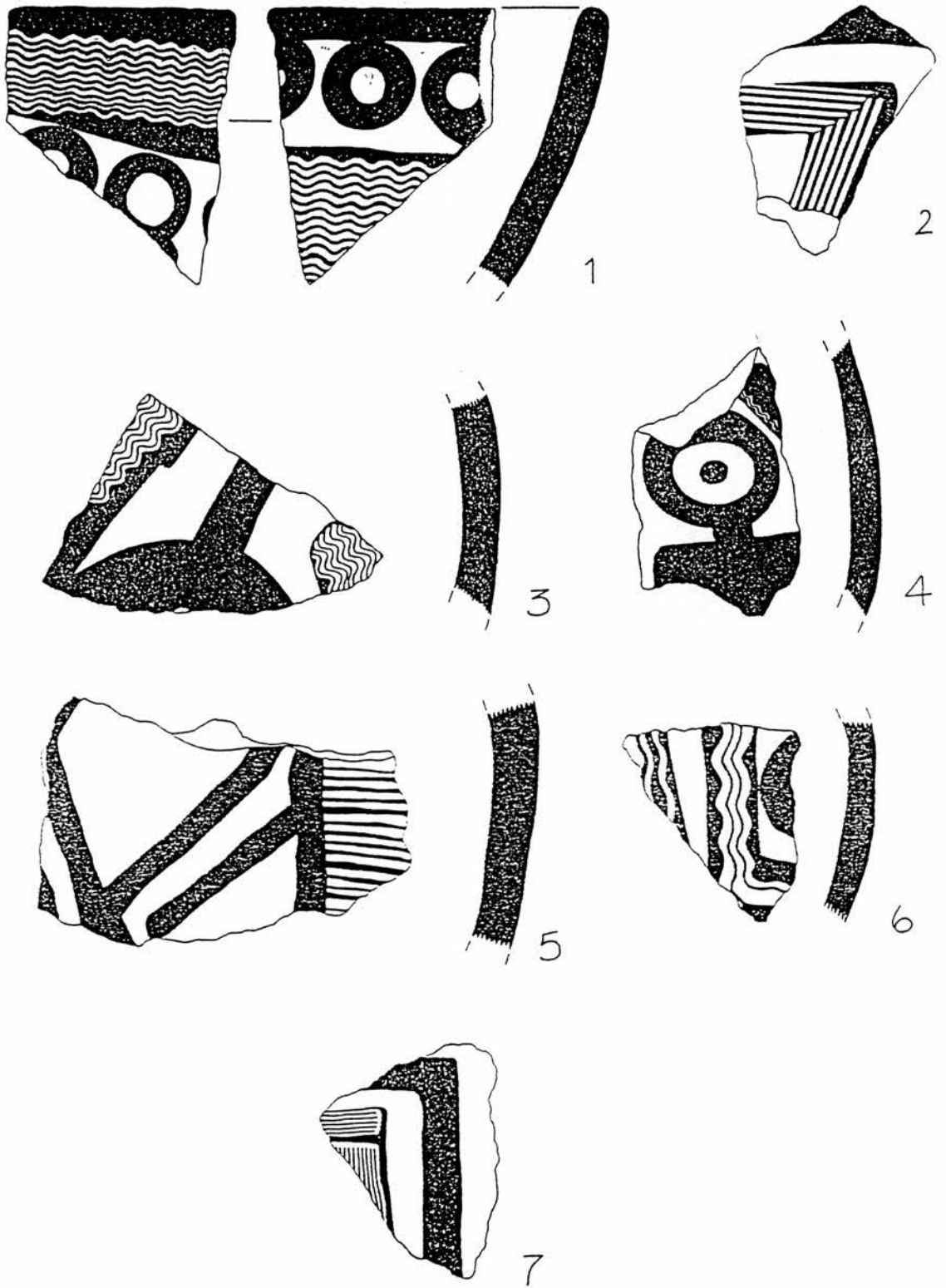
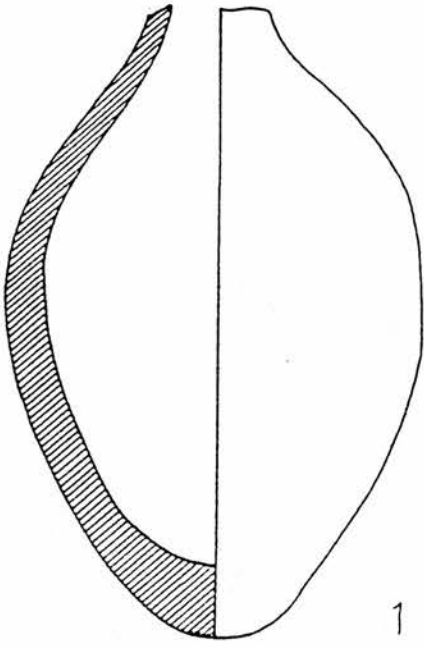


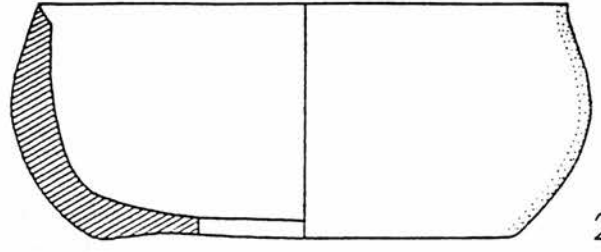
Figure 5.4



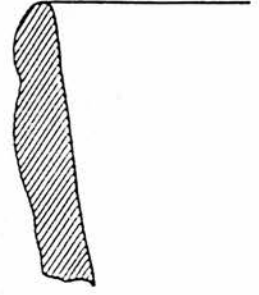
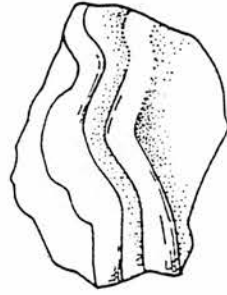
Figure 5.5



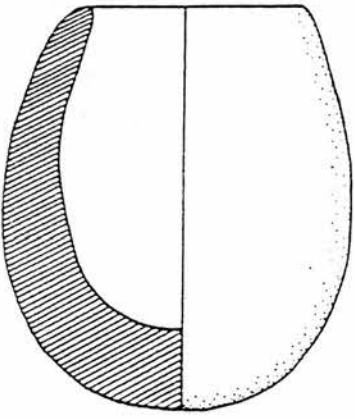
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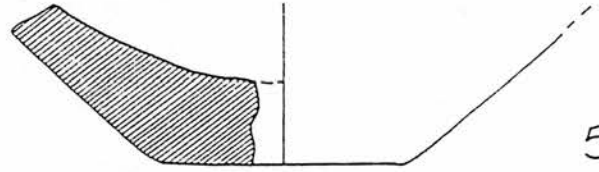
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3



4



5



6

Figure 5.6

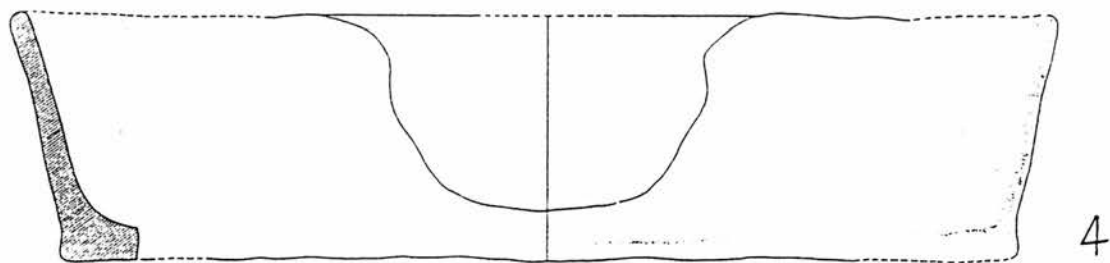
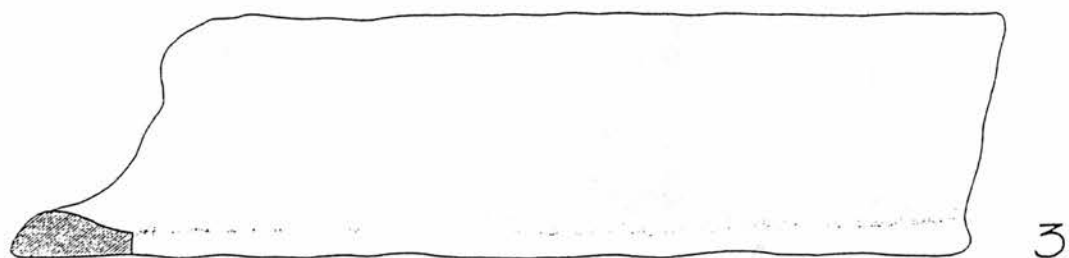
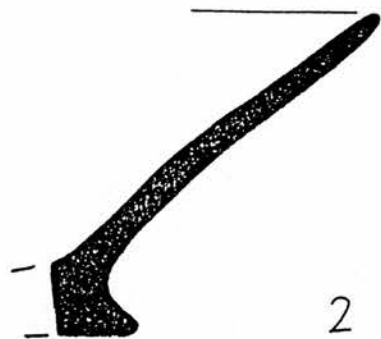
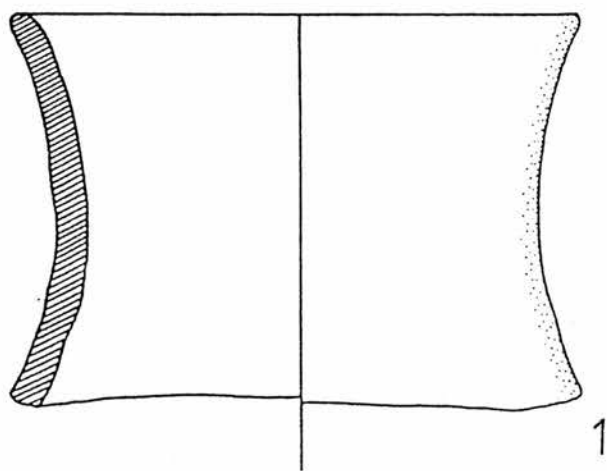


Figure 5.7

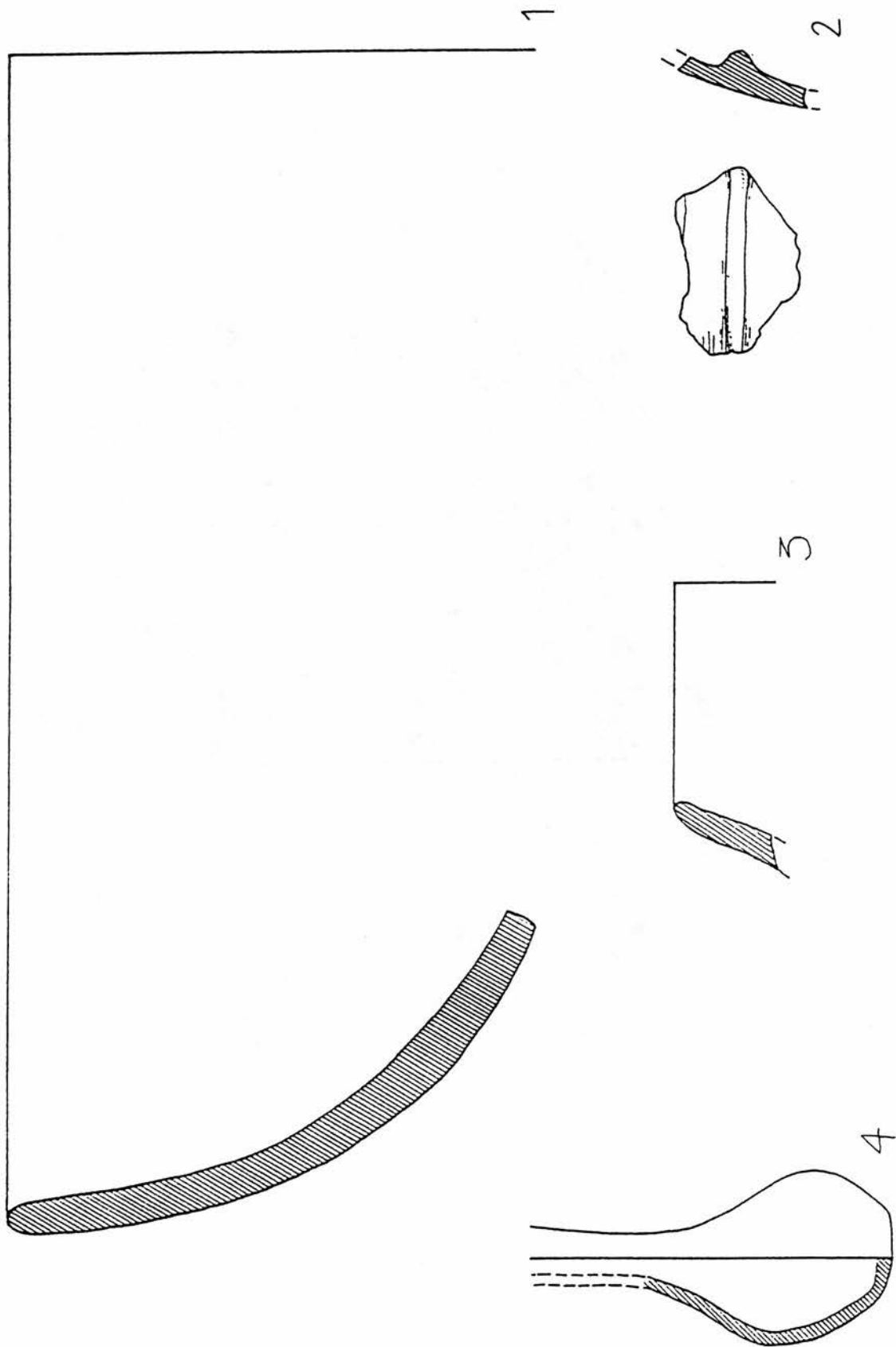


Figure 5.8

Decorated Fine Wares

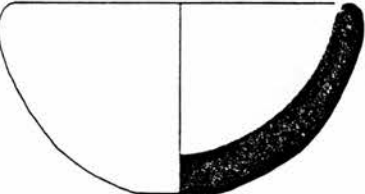



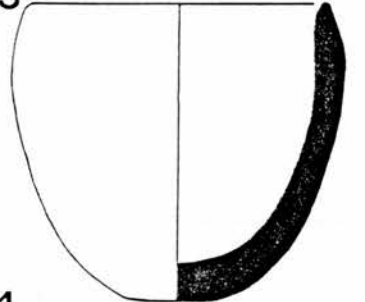

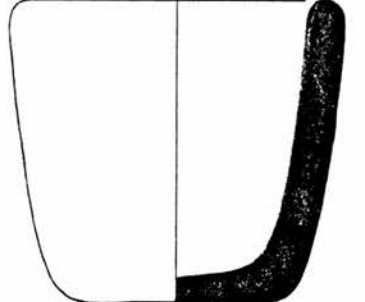
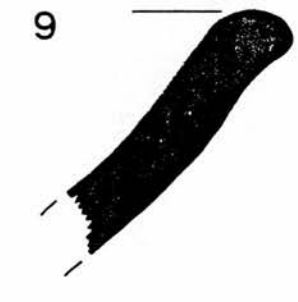
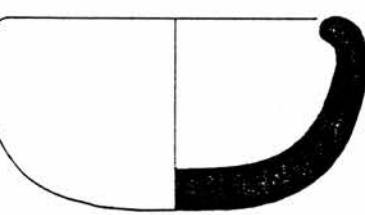

<p>1</p> 	<p>Standard hemispherical</p>	<p>6</p> 	<p>Flaring straight sided (Platter)</p>
<p>2</p> 	<p>Shallow hemispherical</p>	<p>7</p> 	<p>Vertical sided</p>
<p>3</p> 	<p>Deep hemispherical</p>	<p>8</p> 	<p>Carinated</p>
<p>4</p> 	<p>Deep straight</p>	<p>9</p> 	<p>Outward flaring</p>
<p>5</p> 	<p>Concave hemispherical</p>	<p>10</p> 	<p>Dish</p>

Table 5.1/1 - Shapes

Decorated Fine Wares (continued)

21



Simple holemouth

24



Out-turned rim #1

22



Small collared
holemouth

25



Straight sided

23



Short necked

26



Out-turned rim #2

Monochrome Burnished Ware

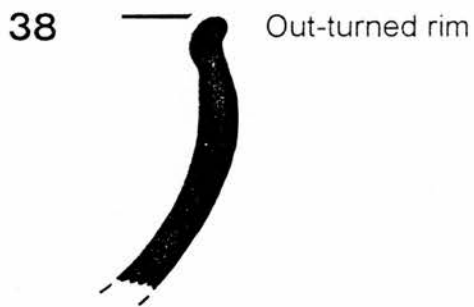
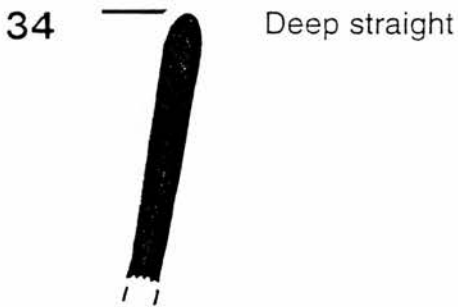
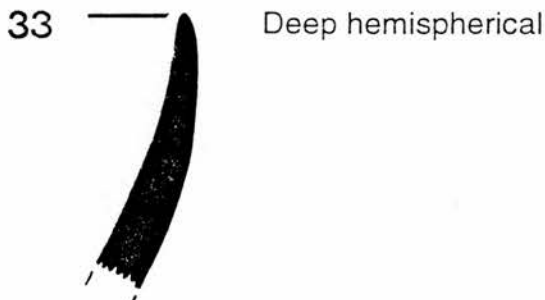
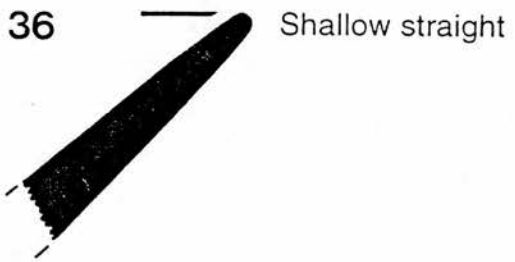
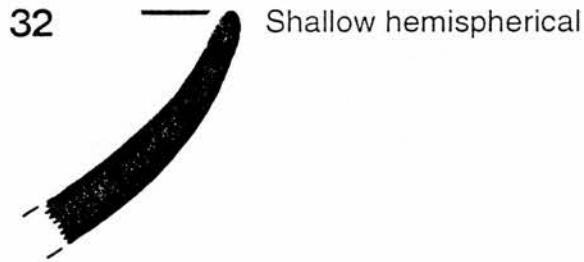
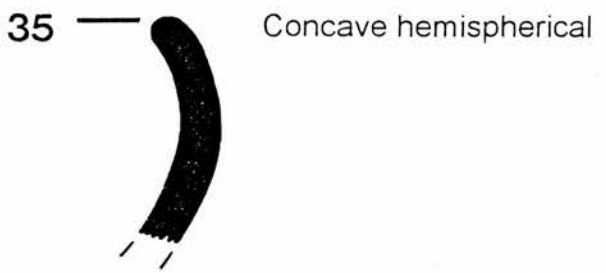
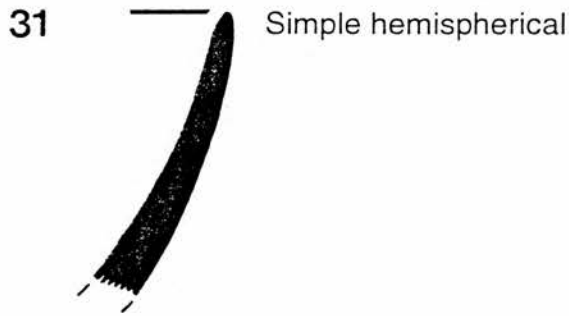


Table 5.1/3 - Shapes

Monochrome Burnished Ware (continued)

41



Straight sided with out-turned rim

45



Straight sided

42



Globular with short neck #1

46



Straight sided with short neck #2

43



Vertical sided

47



Jar

44



Flat, out-turned rim

Table 5.1/4 - Shapes

Coarse Ware





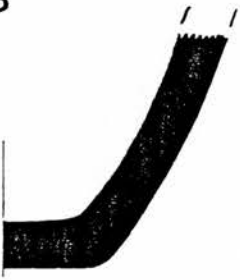
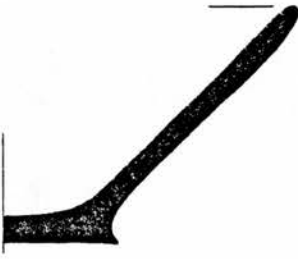
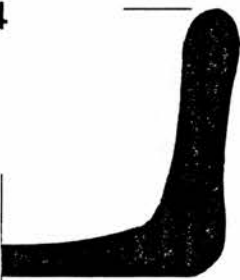
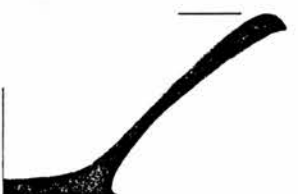

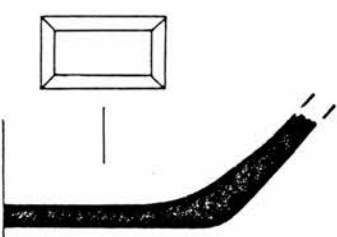


51	Unflanged	57	Thumb pot #2
			
52	Straight sided, flanged	58	Small Jar
			
53	Thumb pot #1	59	Flared flanged
			
54	Coarse Buff-ware variant	60	Out-turned flanged
			
55	Holemouth	61	Rectangular dish
			
56	Small dish	62	Unflanged, flared
			

Table 5.1/5 - Shapes

Coarse Ware (continued)

65



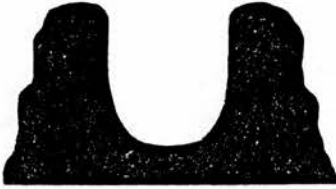
Straight sided

66



Disk base

67



U-shape opening

68



Thumb pot #3

Table 5.1/5 - Shapes

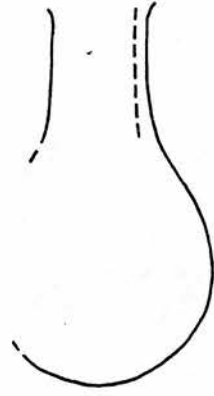
Monochrome Burnished Ware (flasks)

71



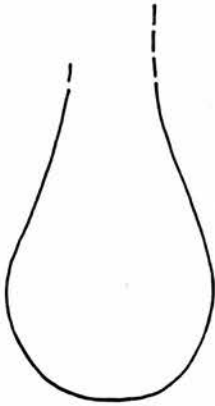
Small flask #1 (MBW)

72



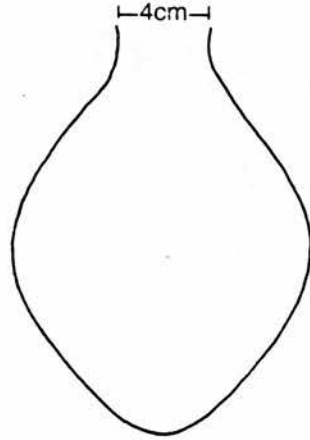
Small flask #2 (MBW)

73



Small flask #3

74



Small flask #4

75



Handled flask

Table 5.1/6 - Shapes

Decorated Fine Wares













1		Rounded	7		Flat
2		Fined	8		Outward sloping #1
3		Rounded, thickened	9		Enlarged lip
4		Flat, inward sloping	10		Outward sloping #2
5		Flat, thickened	11		Bulbous
6		Out-turned	12		Thickened, inward sloping

Table 5.2/1 - Components

Decorated Fine Wares



21 Flaring #1



27 Long, straight neck tapering inwards #2



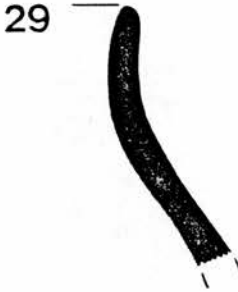
22 Flaring #2



28 Flaring with articulation



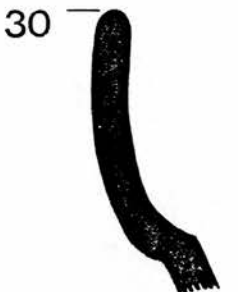
23 Straight sided, thin walled #1



29 Short collared neck #1



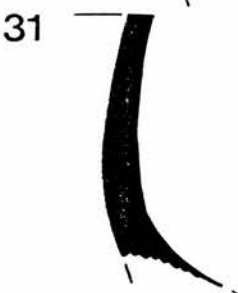
24 Straight sided, thick walled #2



30 Short flaring neck of bottle with carinated shoulder



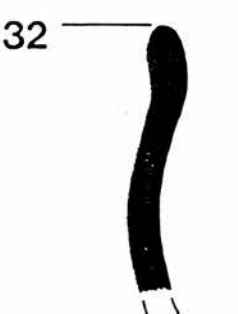
25 Short, straight, tapering inwards #1



31 Outward flaring



26 Wide flaring neck of unknown MBW vessel



32 Convex

Table 5.2/2 - Components

Decorated Fine Wares



Short collared neck #2



Refined lip

Table 5.2/2 - Components

Monochrome Burnished Ware

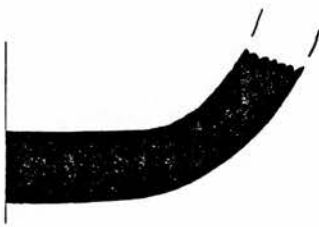
41 Round



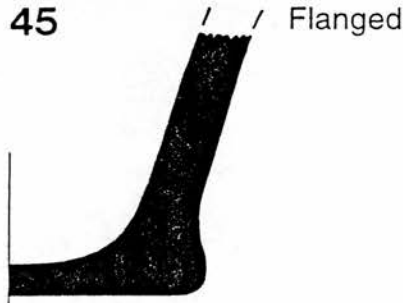
44 Disk



42 Flat



45 Flanged



43 Omphalos



46 MBW variant



Table 5.2/3 - Components

Decorated Fine Wares

51

Wide omphalos



55

Flat



52

Rounded



56

Disk base



53

Narrow omphalos



57

Button base



54

Pointed



59

Flanged



Table 5.2/4 - Components

Decorated Fine Wares

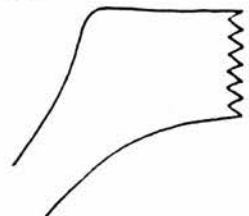
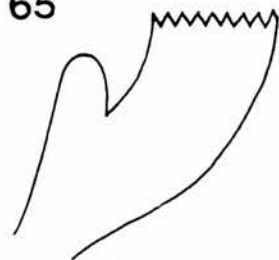


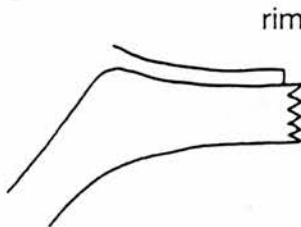
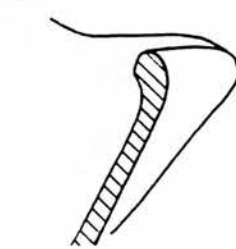
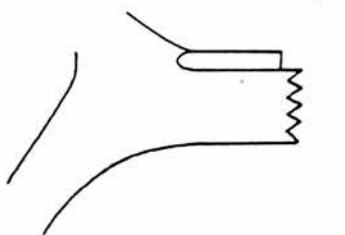
<p>61</p> 	<p>Tubular, level with rim</p>	<p>65</p> 	<p>Tubular spout rising above rim level</p>
<p>62</p> 	<p>Tubular, rising from below rim</p>	<p>66</p> 	<p>Spouted holemouth</p>
<p>63</p> 	<p>Trough, horizontal from rim level</p>	<p>67</p> 	<p>Short pinched spout</p>
<p>64</p> 	<p>Bridge</p>		

Table 5.2/5 - Components

CHAPTER 6

MODELS FOR STYLISTIC VARIATION IN THE ARCHAEOLOGICAL RECORD: A REVIEW OF THEORIES AND DEBATES

6.1 - Introduction

In the previous chapter it is argued that SCU subsistence strategies are characterised by two systems of seasonal activity, 1) intensive, restricted agro-pastoralist farming and 2) foraging. It is also suggested that the interactive processes which ensue from these subsistence strategies might be reflected in the ceramic record as stylistic variation. In the first instance, the SCU is characterised by concentrated intensive farming in limited areas of high-yielding land, and in the second, the intensive agricultural activities are supplemented by regular hunting of deer and the collection of wild cereals, fruits and grasses. Sherratt's model for intensive restricted agro-pastoralism argues that as populations expand, smaller communities will "bud off" from the parent community, and establish themselves in settlements close to the original village, within the catchment area of good arable land. In stylistic terms, this pattern of settlement dislocation is called stylistic drift. Binford has described stylistic drift in the following manner:

With demographic increases daughter populations are likely to bud off from the parent communities with the result that random sampling error may arise in relation to some attribute classes. consequently covariation relationships should overlap in regular spatial patterns discernible in radiating linear distributions.

(Binford 1963, 93)

However, Binford's thesis on stylistic drift predates the work of the proponents of active, intentional style and therefore the importance placed upon stylistic variation is secondary to other aspects of interactive processes. Shanks and Tilley have said of Binford's thesis that:

The entire thesis assumes that the execution of stylistic attributes (and style in general) is of no particular importance to social groups simply because it has no adaptive importance or functional significance. Style is considered to be peripheral, opposed to an asserted primacy of function.

(Shanks and Tilley 1987, 139)

In this Chapter it is suggested that style is an important feature of SCU socio-economic relationships, that it resides in SCU ceramic design, and that it takes many forms, both active and passive. Before discussing stylistic variation in the SCU pottery, current theoretical debates on style in material culture will be reviewed.

In order to give meaning and cohesion to the analysis undertaken in Chapter's 7 and 8, a problem specific framework was established on which the analyses could be carried out. The framework is based upon the premise that style and stylistic variation exists within and between the assemblages, that it is governed by interactive processes arising out of socio-economic activities, and that it takes many forms depending upon the types of relationships which transpire. By style in this context I do not mean the more traditional archaeological definition: "a form of appearance, design, or production; type or make" such as would be used for classical sculpture or Roman wall painting; but rather, I use the term style in its more active sense of purveying socio-cultural meaning and representation. With this framework in place the object of the analyses in Chapter's 7 and 8 is to elucidate whether the patterns of variation evident in ceramic form and design map existing theories on stylistic variation and, if so, to determine the social causes governing stylistic variation, whether it be learning and interaction, information exchange, stylistic drift or a combination of each.

The literature that exists on the nature of style in archaeological material culture is vast. It is often difficult to synthesise and distil the different arguments and theories which abound. In every area of research, whether it be Europe (Shanks and Tilley 1987, 137-171), North America or the New World (among many see, Plog 1978, 1980, 1995; Sackett 1977; Wiessner 1990; Wobst 1977); agrarian or complex societies, and in every related discipline; archaeology, anthropology, ethnography (Hodder 1991; Longacre 1981, 1991; Sackett 1984; Wiessner 1983) and sociology (Tajfel 1978, 1982), the question of style in material culture is considered and debated. The object is to extract from the vast and conflicting literature, theories and debates relevant to an agrarian, agro-pastoralist, non-hierarchical society. These theories can then be used as models which can be tested against the patterns of variation recorded in the pottery to see whether any or all apply to SCU Cyprus.

In the next section a summary will be given of the various relevant themes on stylistic variation. First, style will be considered from a number of perspectives, beginning with the debates on meaning and definition of Wiessner and Sackett, and Wiessner's predictions on how to recognise

style in the archaeological record. Secondly, a number of normative aspects which affect material culture variation will be considered, and thirdly, the various conceptual studies of the major stylistic schools of thought will be summarised. In the second section a number of models will be outlined which will be used as the framework for the analysis of the pottery undertaken in Chapter's 7 and 8.

Again, it is important to remember that archaeology is the interpretation of human refuse and by its nature precludes absolutism in the study of human social interaction and culture change. However, an absence of absolutism does not subtract from the importance of the need for interpretation. Van der Leeuw (Van der Leeuw 1991, 14) has said that building a wide range of models of the behaviour of ancient potters is a more valuable focus than looking for the 'one' truth. With this in mind, the conclusions reached in this thesis, through the interpretation of stylistic variation in the ceramics, are but some of many alternative explanations which exist. Given the limitations of the data currently available the emphasis has been placed upon matching the most likely explanations with the evidence.

Current theory and debate on style can be broadly divided into three major themes, definitions of style and stylistic variation (Plog 1990; Sackett 1985, 1990; Wiessner 1983, 1985, 1990), normative factors which affect material culture variation (Plog 1980), and systemic theories which consider how style is transmitted (Deetz 1965; Hill 1970, 1977, 1978; Hill and Gunn 1977; Hodder 1978; Longacre 1970; Schiffer 1997; Shennan 1996; Whallon 1968; Wobst 1977). Each of these themes, in turn, can be broken down into a number of parts. First, stylistic variation takes many forms, the three primary being emblematic, symbolic and isochrestic variation. Secondly, there are many normative factors which affect variation in the material culture record and these are outlined below. Thirdly, there are a number of systemic theories which consider the social and ideological processes governing stylistic variation. The following section considers each of these themes in turn and questions why the study of style in archaeology is fundamental to understanding processes of human behaviour and interaction.

6.2 - Definitions of style in archaeology

In its broadest sense style can be described as a form of non-verbal communication through doing something in a certain way that communicates information about relative identity (Wiessner 1990,

107). Stylistic behaviour is an extension of this theme where it relates directly to ways of doing things:

When people compare their ways of doing things with those of others they also compare themselves with those others and decide whether to simulate, differentiate, emulate, etc.: they decide how to negotiate their relative identity.

(Wiessner 1990, 107)

The concept of style is diffuse and many different definitions for stylistic variation exist. In some instances, the terminology used to describe different types of style is based upon different sets of criteria used in the study of material culture (Wiessner 1990, 107). In other instances, terminology overlaps making the concept of style harder to grasp. Style has been defined as stochastic (Franklin 1986) or isochrestic (Sackett 1982, 1984, 1990), which essentially means passive, inferred and indirect; assertive (Wiessner 1983, 1985, 1990) or symbolic (Plog 1990), which implies it is active, although not necessarily consciously intentional; or iconological (Sackett 1982, 1984, 1990) or emblematic (Wiessner 1983, 1985, 1990) which assumes it is enforced. Importantly, none of these categories are mutually exclusive and can appear together in the same stylistic context. Moreover, none are static but are elements of a dynamic, ever changing process within human behaviour systems. As social systems evolve in complexity, likewise the determinants of stylistic variation evolve and become more complex (Plog 1990, 62).

To complicate matters, other factors effect the nature of style and its interpretation. First, the terms stylistic variation and symbolic variation are often interchanged (Plog 1990, 62; Wiessner 1983, 60). However, others would maintain that the two terms signify subtly different aspects within the nature of style (Plog 1990, 65). I would support the second view, arguing that style can exist within material culture without necessarily being symbolic (ie, Sackett's isochrestic style) and furthermore, that the term symbolic style should be used cautiously as it infers active or intentional variation, rather than passive variation. Secondly, it must also be decided how style should be categorised, that is, the role it is perceived to play within the dynamics of human behaviour. For example, style may appear to express individual identity (*panache*) or group identity (*protocol*), or both (Macdonald 1990). It is affected by temporally or spatially evolving social and economic systems (Hodder 1979, 1990) and can be dualistic (Sackett 1990), that is, contained in both the function and the decoration of an artefact assemblage.

Although many definitions exist, essentially style can be divided into three main categories: passive, active or emblemic. It is these three categories to which I will refer and use as identifiers of stylistic variation in the pottery of SCU Cyprus. The most definitive explanations for these three categories of style are expressed by James R. Sackett and Polly Wiessner.

6.2.1 - Emblemic or iconological style (Sackett 1985, 1990 and Wiessner 1983, 1990).

Wiessner states that emblemic style is:

formal variation in material culture that has a distinct referent and transmits a clear message to a defined target population about conscious affiliation or identity'. Emblemic style carries information about the existence of groups and boundaries and not about the degree of interaction across or within them.

(Wiessner 1983, 257)

Sackett's iconological style, explained by Wiessner, equates with emblemic style:

stylistic statements conform to certain spoken ones, containing clear, purposeful, conscious messages aimed at a specific target population.

(Wiessner: 1985, 161)

Modern examples of emblemic style would include such items as flags, jockey colours or football jerseys. Wiessner (Wiessner 1983, 253) makes the analogy with the typical American Western movie where the scout pulls an arrow from the side of a wagon and confirms immediately the tribe, the type of arrow and the information the arrow is conveying. Although the task of recognising where style resides and what information it is carrying is more difficult in social anthropology than the analogy leads one to believe, it is a substantially more difficult task in prehistoric archaeology. Quite significant variation may be recognised in material items with expected high visibility or ease of transportation but the social information contained in these items cannot be known in a prehistoric context. An example of emblemic style in the archaeological record is the red and white crowns of upper and lower Egypt, but without written and pictorial texts, the information carried in these objects is unknown. Although emblemic style is difficult to substantiate, indicators of this type of style can be mapped in the archaeological record. Objects which would be most likely to carry emblemic style would be those which have a less personal referent. Some items of clothing, but not all. Luxury objects and items associated

with religious or cult practices; items of war or hunting which denote status, such as blades and arrow heads.

6.2.2 - *Symbolic or assertive style* (Plog 1990, 62 and Wiessner 1983, 1990).

Assertive style is formal variation in material culture which is personally based and which carries information supporting individual identity.

(Wiessner 1983, 258).

Assertive, or symbolic, style has no distinct referent and therefore has the potential to diffuse with acculturation and enculturation, and may be employed either consciously or unconsciously. Symbolic style presents information about similarities and differences that can help reproduce, alter, disrupt, or create social relationships (Wiessner 1983, 258).

Many examples of what I will call symbolic style (after Plog 1980) can be recognised in the archaeological record. Weapons, as well as being imbued with emblematic style, may also contain symbolic traits. A weapon may contain information about its ownership without the owner consciously recognising that this information is being displayed. For example, in Wiessner's study of Kalahari San projectile points (Wiessner 1983), she noted that differences existed between the size, form and decorative elements of spears made by three language groups (the G/wi, the !Xo and the !Kung) even though they shared about 90% of each others' material culture, and were remarkably homogeneous in their economic base, technological level and social organisation. Differences also existed in decorative features, body shape and quality between different bands of the same language group. At the language group level she noted that each group recognised their own spears and also those spears that were not made by their own group but were made by people "who did things in a different way" (Wiessner 1983, 269). When arrows from two groups who did not know of each others' existence were shown to each, they were regarded with suspicion and anxiety. Wiessner interpreted this as emblematic style. Alternatively, different bands within the same language group were shown spears from other bands. No band regarded arrows from other areas as different even though they included some elements of personal expression which aided in identification. This, she interpreted as assertive or symbolic style. Symbolic style therefore, is subtle in its concept. It can express individuality, or it can express social relations but never in a way that is structured and unyielding. Therefore, it is quite distinct from emblematic style, although the two may reside together in the same object.

6.2.3 - *Passive or isochrestic style* (Sackett 1985, 1990)

Isochrestic variation is variation resulting from behaviour that is acquired by rote learning and imitation and is employed automatically. It can reside dually in function and in decoration:

because there normally exists a spectrum of equivalent alternatives, of equally viable options, for attaining any given end in manufacturing and/or using material items.....style only enters the picture when the artisans of any given group are aware of only a few alternatives and often choose but one.

(Sackett 1990, 33)

Isochrestic variation is not clearly defined and is hard to differentiate from symbolic variation in the archaeological record. Ultimately the difference lies in the definition. Symbolic style purveys an unconscious message. For isochrestic style, the presentation of information about similarities and differences is ancillary and therefore an object which carries isochrestic style may or may not carry information about its owner. Isochrestic style lies in the idea of an individual or group of individuals doing things. The ability to make pottery must be learned and in the learning process an individual will copy the way in which they have been taught. Differences in how the finished product looks may be due in part to employing only some of the different paths by which one arrives at the end product.

Almost all material items in the archaeological record are imbued with isochrestic style. In the manufacture of SCU pottery, for example, the artisan has more than one method of creation and design available to him and these options may be technologically or functionally generated. A potter may choose to build a pot by coil or slab technique, often depending on the nature of the clay. He may choose to either slip or not, depending on the colour and porosity of the clay. Size and shape may be reliant on the quality of the clay and design may be governed by the pigments and tools he has available to him and decorative motifs may bear the signature of different hands. All of these factors contribute towards differences in the finished product and all of these differences may be described as isochrestic style.

Each of the three forms of style outlined above can be conceptualised as representing different social and cultural processes. For example, isochrestic style represents behavioural and evolutionary processes in material culture patterning. Symbolic style represents primarily learning and interaction, but also information exchange, and emblematic style represents information

exchange. The trick is to identify which of the three types of style are represented in any socio-cultural setting. With this in mind, of equal interest to the current study, are Wiessner's predictions about how each form can be recognised in different patterns of attribute association. Of emblematic style she says:

Through time, emblematic style would be expected to change gradually only with errors in reproduction and to undergo rapid change only when its referent changes or when it is detached from its referent.

(Wiessner 1983, 257)

Therefore emblematic style would exhibit evidence of direct copying, and variation would be due to mistakes, or the inability to copy form exactly. When change occurs it would be significant, due often to a change in referent, easily recognised and quantified. Attribute associations which map emblematic style would show sharp regional boundedness. Patterns of distribution would be non-random and highly structured. Conversely, with symbolic style, characteristics would be less likely to exhibit consistent patterns of attribute association (Plog 1995, 373). Variation would be more random with evolving and changing referents over time and space, and rates of stylistic change through time should be more marked.

Finally of isochrestic style Wiessner says:

...artefacts resulting from isochrestic choices would vary around one standard mean type, with range of variation depending on functional requirements, materials standards set by society, etc.

(Wiessner 1985, 162-163)

Therefore, isochrestic style should be characterised by strong patterns of association among different attributes. Where variation exists, spatial distribution should be clinal (Plog 1995, 380) and rates of stylistic change should be slow.

Given these arguments, Plog says that:

...we should be able to define clearcut artefact types only when the stylistic variation is largely a component of isochrestic or iconographic behaviour. When, however, aspects of style are

symbolic behaviour such types should not be expected.
particularly when variation over a period of time is considered.....

(Plog 1995, 373)

This last point is extremely important as it can be applied directly to the SCU pottery. In earlier chapters it was suggested that broadly contemporary shapes and ware types are homogeneous throughout the island and that significant variation is only present at the design level, which can be recorded between regions and sites. If we accept Plog's model, then variation in SCU ceramic ware types and shapes corresponds to either emblematic or isochrestic variation. That is, we can recognise clear types, and there is no significant variation between regions through time. Moreover, variation in tempering agents, surface treatment and component types are likely to be functionally dictated.

In Chapter 5 it was suggested that ceramic variation might reflect certain aspects of interaction deriving from patterns of subsistence and socio-economic activities. It was further suggested that variation within individual villages should not be necessarily conspicuous, but that variation within site clusters or between regions will reflect different patterns of interaction and information exchange. The hypothesised kin relations that would emerge from the "budding off" of daughter communities, as argued in Sherratt's model for intensive exploitation of land and resources (Sherratt 1983), would establish highly structured relationships between site clusters and this could be represented as symbolic variation in ceramic design. Moreover, the more distant relationships that would form through foraging forays would presumably be characterised by social and economic boundaries based upon regional zones of economic activity. These sorts of relationships might be represented by emblematic style in the ceramic record, particularly if items of pottery are highly visible, for example, through transportation. However, we are not sure that SCU pottery moved around the island. Barnett, in a study of Early Neolithic pottery of the west Mediterranean says:

While pottery vessels have utilitarian value for cooking, storage and carrying, their less obvious roles in society frequently include more than function. It is easy to imagine that the first ceramic tradition in an area, a relatively novel technology and material class, would also have non-utilitarian value.

(Barnett 1990, 863)

Barnett's thesis can be combined with the thinking of Vitelli (Vitelli 1989) who suggests that it is inappropriate to assume that the pottery of the earliest ceramic cultures is naturally associated with the preparation and storage of food. In this way, it might also be premature to make the same assumption of SCU pottery.

It was stated above that variation in design modes between site clusters is likely to be attributable to symbolic variation in that styles evolve through time. Moreover, different regions are characterised by subtly different decorative techniques, design execution and structure. However, one would expect isochrestic variation to be present in decorative modes as well. For example, intra-site variation in the application of designs might possibly be due to behavioural or learning processes rather than symbolic representation. An example of isochrestic variation in design execution might be the steepness of the angle of wavy combed bands across the body of a pot. Another example might be whether the wavy combed bands turn back on themselves in a sharp hairpin bend, or whether, the bends are gentle. Therefore variation in SCU shapes and wares can be attributed to isochrestic variation whereas, design motifs should contain isochrestic, symbolic and emblematic variation.

It has been illustrated above that general statements about the pattern of variation in the pottery of SCU Cyprus can be put forward without recourse to analytical methods. In summary, it is likely that some of the variation seen between regions, in particular the differences between RW and Cb painted design, might be due to emblematic style brought about by the enforcement of economic boundaries and limited formal interaction. Variation in ware types and morphology is unlikely to be attributable to symbolic variation because clearcut types can be identified, characteristic of Plog's theory for recognising isochrestic variation. Finally, symbolic and isochrestic variation in decorative schemes appear to be present within site clusters, and also between regions.

Before assessing the analytical evidence presented in Chapter's 7 and 8, it is also necessary to review the normative and systemic processes which contribute to stylistic variation. It has been clearly illustrated that two forms of style exist in the SCU ceramics, symbolic and isochrestic style. It is also suspected that emblematic style is present between regions. However, there are a number of other factors which contribute to material culture variation. In the following section these are discussed and their relevance to the SCU in Cyprus is assessed.

6.3 - Normative variation: the archaeological record and material culture patterning

Plog (Plog 1980), in his seminal study on stylistic variation, considers design variation in terms of material culture patterning. He puts forward four models for why design variation can occur in ceramic assemblages on the basis of archaeological patterns of deposition (Plog 1980, 13-25). The models are:

1. subsistence/settlement systems,
2. vessel shape and use,
3. exchange systems,
4. and temporal variability.

He states, quite correctly, that design variation may be the result of a number of these (and other) factors working together, and no single factor alone can necessarily explain why variation exists within and between sites. Plog's four categories consider the normative processes which might affect material culture variability. That is, he outlines the archaeological processes which contribute to material culture variation as opposed to interpretative explanations about how the ancient mind considered its environment. Therefore, Plog looks at subsistence strategies, for example, from the viewpoint of the traces left in the archaeological record. In the following section, Plog's four models are summarised and their appropriateness to SCU Cyprus is discussed.

6.3.1 - *Subsistence-settlement systems*

Plog states that because of the differential distribution of natural resources, different types of activities will be carried out in different parts of a region (Plog 1980, 15). Differential distribution of natural resources will influence shape and design in a variety of ways, as exploitation strategies of different groups of people vary enormously. Plog predicts that entire groups of people may move seasonally as resources become available, the result being that one social group may inhabit a number of sites in a short space of time and thus the artefacts manufactured by a group will be deposited on a number of different sites. The natural result is that:

...in attempting to measure the similarity of pottery designs found at the communities, ...we could in fact be dealing with pottery from two communities which were both inhabited by the same group of people.

(Plog 1980, 15)

Plog argues that a site or group of sites which are occupied for a relatively short period of time and are in close proximity, are more likely to be occupied by the same group of people. Archaeologists, interpreting material culture by phase, may be failing to recognise that the abandonment of one site and the shift to another may all have occurred within one temporal phase.

Methods of determining whether sites were occupied seasonally include, comparing differentials in site size, site function and artefact assemblages. Evidence on the relative size and function of SCU sites in Cyprus suggests some differentiation. In the South, the differences between the settlement patterns of Sotira and the Kalavastos sites are distinctive. Sotira, and now Kandou and Nissia, are the only sites in the South for which rectilinear above ground architecture survives, while Kokkinoyia is characterised by pit dwellings. As mentioned previously in Chapter 2, Baird (Baird n.d.a) has reported, on the basis of pottery studies, that there is firm evidence of a shift in the SCU/ECU transition from the site of Tenta, to the nearby site of Ayious and then back again to Tenta. Baird uses temporal seriation of the pottery to predict these shifts, but it has been suggested in Chapter 5, Section 3.3, that settlement shift might have been more regular than originally predicted. At Tenta there is no surviving evidence of architecture in the SCU/ECU transition and it is only during the later occupation at Ayious that subterranean architecture is present. However, this form of architecture is already known from the SCU site of Philia and the geographically closer site of Kokkinoyia.

There is another factor, already identified at Khirokitia, which might contribute to site differentiation between Tenta and Ayious. Tenta, like Khirokitia, probably suffered extensive erosion episodes post deposition. Therefore, it is not certain that architecture was not present at Tenta in the SCU phase, and evidence of SCU structures have been found at Khirokitia (Figure 2.9-2.11). However, there is also no evidence of pit dwellings either, and by and large Tenta's ceramic assemblage places it later than that of Khirokitia. So the question still remains whether the mainphase SCU was characterised primarily by rectilinear above ground architecture, while the later period was characterised by subterranean pit dwellings, or whether the two types of site existed together.

Because woefully few SCU sites have been excavated and properly published, variation in artefact assemblages is more difficult to determine, and Peltenburg (Peltenburg 1978) has convincingly shown the similarities between the artefact assemblages of Sotira in the South and Vrysi in the North. Even so, there are subtle patterns of differential distribution in artefact assemblages from

one site to another. For example, there is a reversal in the percentage of open to closed vessel shapes at some sites. This might be attributable to differential distribution, although this is unlikely given that all other sites, including unstratified sites and survey sites, are characterised by a proportional breakdown of approximately 60:40 open to closed shapes. Traditionally, differences in architecture, and to a lesser extent artefact assemblages, have been assumed to reflect temporal variation, however, sites such as Khirokitia and Kokkinoyia Pit V, which are clearly SCU, suggest that settlement patterns during the SCU were not homogeneous, and sites may have been used for different purposes either at different times of the year, or at different times within the life of a site. If this were the case, one might expect variation in the types of vessels present and therefore in the types of decorative motifs found. As stated above, it is likely that pottery was produced during the dry season when outside drying and firing were possible. Therefore, one can hypothesise that most of the pottery used by a village was made annually during specific months of the year. Access to springs or other water sources would be necessary for the levigation process, but most sites were located close to good sources of water which would have provided village needs all year round. The pottery produced at one location could then be transported to other sites where different subsistence tasks were undertaken. The pottery transported would reflect the tasks being carried out at each site and therefore patterns of deposition should also reflect these tasks.

6.3.2 - Vessel shape and use

In his second hypothesis, Plog (Plog 1980, 17) cites Friedrich's study of pottery making in the Mexican village of San Jose where she found that:

...the decorated area of a jar was subdivided into areas such as the neck, shoulder, and bottom.....in analysing the design configurations of the different spatial divisions, some configurations were found only in particular divisions.

(Friedrich 1970, 334-335)

Plog also notes that the use of different designs on vessels of different shapes has been documented in several regions. Amsden (Amsden 1936, 5), in his study of Hohokam pottery from the prehistoric Southwest of America notes that the inner and outer surface of open shapes have a different character. The significance of these observations for stylistic variation in the SCU is that different vessel forms may have different painted motifs arranged in ways that highlight the shape of the vessel. For example, bowls might be decorated in a different manner from jars. Moreover,

the inner and outer surfaces of bowls might display different associations of motifs. If this is combined with variation in the proportion of jars to bowls between sites (for example, Khirokitia), then variation in the frequency of motifs at different sites can be expected.

Bolger has noted design structure variation in the SCU. She says:

In the south, the influence of the monochrome tradition is attested by the restricted range of RW motifs (straight bands, zigzag bands, rings, and curvilinear bands only). On open vessels such as shallow bowls, those elements are arranged in patterns that appear to be closely related to the reserve designs of some Combed Ware vessels. Closed vessels in RW, however, contain decorative elements that occasionally diverge from their reserve counterparts, suggesting that vessel morphology played a significant role in the early development of RW design. Several globular and ovoid jugs, for example, have design fields divided vertically or horizontally. Static and dynamic composition are both attested, and in both cases symmetry is an important compositional feature.

(Bolger 1991, 82)

Variation in subsistence patterns between sites might be reflected in the proportional representation of vessel forms. This, in turn, could be reflected in the types of motifs that are found.

6.3.3 - Exchange

Plog's third hypothesis (Plog 1980, 21-22), argues that it should not be assumed that the ready availability of clay sources in prehistoric contexts necessarily indicates that pottery was made locally. He cites examples where the very opposite might be the case. For example, pottery vessels may have been traded for the purpose of aiding the distribution of essential utilitarian goods brought about by differential distribution of natural resources. Alternatively, he quotes ethnographic evidence (Ford 1972; Specht 1974) where trade may be the result of culturally imposed artificial differences in the production of craft goods.

There is no evidence for craft specialisation in SCU Cyprus. It would be expected that if specialisation in the production of craft goods existed, there should be some evidence of it in the archaeological record, for example, intra-site specialisation, or a disproportionately high quantity of one material culture item. The absence of any such evidence rules out the relevance of Plog's

third model to SCU Cyprus. However, it is not known to what extent vessels travelled between sites as a result of exchange in essential utilitarian goods or food stuffs, or moreover, as a result of social inter-change across the island

It was illustrated in Chapter 5, Section 3.1, that analysis of the clay paste using a x10 magnifying glass indicated that most of the pottery was made locally. While variations in fabric exist, without petrographic analysis, it cannot be argued that this reflects the presence of imported vessels from other sites. Pottery fabrics are extremely heterogeneous, both within site clusters and sometimes within sites themselves, indicating that most sites exploited different clay beds, different tempers and experimented with different firing conditions. However, in the absence of petrographic analysis, design variation may be used to identify (in limited instances) movement of pottery between sites. Certain intricate motifs have been identified in reasonably large numbers at Philia while at other sites, they are found only once or twice. This distribution pattern may indicate that an unusual motif is indigenous to the site where it occurs in numbers and travelled to other sites by way of the movement of ceramics, or of potters. Conversely, it may indicate that the motif was copied. Whichever route applies, contact between sites is confirmed.

6.3.4 - Temporal variability

There are two aspects of temporal variation which will influence stylistic variation:

1. comparisons of design motifs between sites with large temporal distributions.

When comparing ceramic variation between sites, temporal disparities can have a marked skewing affect on the results if the rate of change in the ceramic repertoire over time is large. To counteract this, where possible, similar ceramic phases, clearly determined through stratification and seriation should be independently compared. The measurement of ceramic variation over time can also indicate whether or not variation between sites significantly converges or diverges.

2. Comparisons of intra-site variation over time.

The analysis of intra-site variation can determine whether there is greater variation within a site over time than between sites at any given time. Ceramic variability within a site might indicate other aspects of socio-cultural development which, in turn, will affect the types and proportion of stylistic variation present.

Ceramic designs are known from studies carried out at Vrysi, Philia and Troulli, to change over time. In the earliest phases, curvilinear motifs are common. Linear motifs appear to become more prominent in the middle phases but the longevity of their use makes it difficult to quantify the exact rise and decline of their popularity, and multiple brush techniques appear late in the sequence. It might be argued that these changes in design character represent normal evolutionary processes, however, there could also be other socio-economic factors which are responsible for the changes. Peltenburg (Peltenburg 1993a) argues that socio-economic change occurs at Vrysi in the Middle Phase and that this is evident in the dichotomy between the North Sector and South Sector in the size of structures and the number of artefacts found on house floors. Changes in design character might therefore be affected by evolving socio-economic relationships.

6.4 - Conceptual models for stylistic variation: how style is transmitted

The review of deposition patterns above, illustrates that inter-site and intra-site ceramic variation can be influenced by a number of normative factors. Unlike systemic factors, most normative processes can be quantified in the archaeological record. For example, it is easy to recognise variation in design distribution if it is brought about by proportional differences in the types of vessels present between sites. The systemic processes that govern variation are more difficult to define. Previously in this chapter, and in Chapter 5, it was argued that SCU pottery contains isochrestic, symbolic and emblematic style and that the level to which each type of style is present is governed by interactive processes arising from subsistence strategies. Isochrestic style is primarily normative, whereas, symbolic and emblematic style, exist because human populations live and interact within inter-relating social, cultural and economic systems. In the next section I will review a number of systemic models which explain how populations interact with their environment and with each other. Many of the earlier models are based upon inference, which has no firm grounding in archaeological evidence. It is argued that archaeologists should be more rigid in their interpretation of the material culture record and that analogical evidence can be a useful comparative tool but can also cloud the factual evidence.

6.4.1 - Social Interaction Theory

Louis Binford, working in the 1960's, was the first to apply theories of social interaction to material culture variation. However, it was Deetz, Whallon, Longacre and Hill in the 1960's and 1970's who formulated specific theories on how social interaction facilitated the transfer of ideas

within and across boundaries. Their theories concerning how ceramic designs diffuse, within and between sites, were based on arbitrary assumptions arrived at through their research on ceramic assemblages in the American Southwest (for the Arikara ceramics see, Deetz 1965; for Broken K Pueblo see, Hill 1970; Hill and Gunn 1977; for the Carter Ranch site see, Longacre 1970; and for the Owasco-Iroquois ceramics see, Whallon 1968). Their assumptions were:

1. that women made pots,
2. that techniques of pottery manufacture and decoration were learned before marriage and passed down from mother to daughter,
3. that the degree to which designs diffuse is directly proportional to the amount of interaction between individuals, and
4. that all households made the pottery they used.

Therefore the Deetz/Longacre model assumes that a matrilineal endogamous or exogamous society, where little contact between potters occur, should display a non-random distribution of ceramic designs. Conversely in a patrilineal exogamous society, where new potters are continually bringing new ideas to the village, there should be a random distribution of designs. Not surprisingly, their theories have been the subject of substantial criticism in the last twenty years (see among many, Allen and Richardson 1971; Friedrich 1970; Plog 1976, 1980). Ethnographic and archaeological studies have shown that it cannot be assumed arbitrarily that women made pots, nor is there direct correlation between similarity in design motifs and the level of contact or distance between sites. Fry and Cox (Fry and Cox 1974), and Plog (Plog 1976) have demonstrated that the reverse can be true. In the first instance, there is no way of identifying female artisans in the archaeological record without continuity from prehistoric contexts to historical contexts. Secondly, there is also no way of knowing whether patterns of learning were passed down within family groups or through other residence groups. Thirdly, there is no relationship between design similarity and degree of interaction, as noted above. Therefore, the first three premises of the Deetz/Longacre model cannot be substantiated by prehistoric archaeological evidence.

6.4.2 - Social Boundary Theory and Information Exchange

The second theory deals with the concept of social boundaries and the varying dynamics of cross-boundary interaction in agro-pastoralist societies (Wobst 1974, 1977). Hodder (Hodder 1978) in his ethnographic study of the Baringo district in north-central Kenya, says that:

it cannot be assumed that material culture reflects degrees of interaction, because the nature of the interaction and the degree of the competition between groups also plays a part.

(Hodder 1978, 35)

Therefore, inter-regional variation can be affected by many social, ideological, economic and geographic factors, and the degree of variation between two regions will not be governed solely by geographic distance.

During his fieldwork, Hodder studied over 400 hut compounds, of three separate tribes who share borders, and to a certain extent, resources. His research illustrated that not only did competition for resources play an important role in the degree of material culture similarity between sites, but also social strategies within a particular group. Therefore, female associated items, such as the calabash, varied significantly within and between sites as the decoration of calabashes was a symbolic reflection of the tightly controlled male dominated societies (Hodder 1978, 60). The calabash was decorated by individual women and contained strong symbolic messaging. Alternatively, spears were made by one or two specialist craftsmen and young men used the similarity of designs to show group cohesion against the domination of older males (Hodder 1978, 62).

In a second ethnographic study undertaken in the Kalinga region of the northern Philippines, Longacre (Longacre 1981, 1991) and Graves (Graves 1981, 1991) argue that intra-site, inter-site and inter-regional variation is the result of a different set of factors to those outlined by Hodder. The social organisation of the Kalinga is less structured than the Baringo district and the female manufacturers of pottery are conveying different messages, within and between sites. Within the village, vessel morphology is homogeneous and functionally based. Decorative motifs on the vessels display some intra-site variation but this, they argue, is due to the female artisans taking "pride in their work". Good potters are recognised, and on the whole older women decorate their vessels more intricately than younger women, suggesting that design variation is more a behavioural factor than a symbolic factor. Alternatively, between regions there is marked variation in vessel morphology and design. The Kalinga is made up of a number of different regions, each comprised of a number of villages. Certain regions will form 'peace pacts' with other regions and there is strong regional solidarity. Therefore the marked variation in pottery between villages and between regions it is argued:

...does not reflect the material manifestations of individuals exchanging information.....but rather. they serve as subtle icons for individuals linked to a common polity.

(Graves 1991, 119)

6.4.3 - Evolutionary Theory and cultural variation

In his 1996 article on cultural transmission and cultural change, Shennan advances a third theory for cultural variation. Developed originally by Boyd and Richerson (Boyd and Richerson 1985), Shennan argues that cultural variation and transmission can be attributed to a large extent to the process of inheritance through learning of ideas and ways of doing things (Shennan 1996, 286). He outlines four methods by which cultural variation can occur:

1. random errors or unintentional mistakes in the learning or copying process,
2. guided variation, where individuals acquire a pattern of behaviour from their (cultural) parents and then modify it in the light of their own experience,
3. direct bias, or cultural selection where an individual will have a number of different models from which to choose and decides on the basis of the properties of the models themselves, and
4. indirect bias, where an individual adopts an unrelated aspect of a model as opposed to the desired properties themselves.

Although in Shennan's paper the above theories have been formulated within the framework of evolutionary theory, and the cultural transmission of ideas and ways of doing things, all four can also be applied to material culture variation.

6.4.4 - Motor Habit Theory

A fourth theory, put forward by Hill suggests that:

differences between individuals in motor habits are the primary source of variation in a number of attributes such as the angle at which designs intersect. the relative heights or lengths of portions of a design, the widths and distances between lines and the area and shape of parts of designs.

(Hill 1977, 86)

Hill proposes that variation in the execution of designs is subconscious and therefore not affected by other factors such as the intensity of interaction between individuals or social strategies as outlined above.

6.4.5 - Behaviourist theories and cultural variation

Behaviourists, such as Schiffer (Schiffer 1997), have identified other aspects which may affect the degree of variation within and between assemblages. This is not so different from Motor Habit Theory, which falls within the boundaries of behaviourist views, but Schiffer's theory takes the model one step further. In Schiffer's view, technical choices such as clay type, hardness and finish will affect formal properties such as size, porosity and form, therefore:

The complex effects of technical choices on performance characteristics, mediated by formal properties, impose technological constraints....Thus, any artefact design is based on trade-offs or compromises in performance.....any activity on an artefact's behavioural chain can, through feedback to the artisan about performance, lead to changes in the nature and sequence of technical choices.

(Schiffer 1997, 31-32)

This means that, in effect, the sequence of activities in an artisan's life history will influence his or her performance characteristics relevant to assessing feedback and especially, creating and carrying out procurement and manufacture activities. The result is that artisans have different repertoires of potential technical choices and therefore degrees of potential variation.

6.5 - Discussion and general conclusions

The principal problem with many of the theories for variation in material culture outlined above, is that they either arise out of ethnographic study or, analogical ethnographic evidence is applied to the archaeological record. In the case of the Deetz/Longacre theory of Social Interaction, the ethnographic evidence happened to fit the archaeological patterning, and as a result, Deetz and Longacre were able to state that their hypotheses had been supported by the archaeological evidence.

Recent archaeological method now asks for more rigorous interpretation of the archaeological record and stricter controls in the use of analogy. Renfrew (Renfrew 1994) argues that the process of interpretation should begin with a series of statements firmly grounded in fact. From the facts, a framework is established upon which inferences are formulated in increasing order of hypothetical content. Furthermore, each level of inference should follow clearly defined paths which in turn, should be based upon the previous set of statements being true or false. The

following Chapter's assess the pottery analytically, and this is then related back to the models and theories put forward in this, and the previous Chapter. In this way it is considered that the conclusions reached in Chapter 9 are based on firm inference from clearly defined evidence in the archaeological record.

CHAPTER 7

IDENTIFYING VARIATION IN THE NEOLITHIC CERAMICS: A QUALITATIVE SUMMARY OF FORM AND DECORATION

7.1 - Introduction

The previous Chapter argued that three forms of stylistic variation reside in SCU ceramics, emblematic style, symbolic style and isochrestic style. All three forms occur in varying combinations and to different degrees within the pottery assemblages. While decorative schemes exhibit the most clear stylistic patterning, it is suspected that stylistic variation in morphology is more often functionally and technologically determined, and therefore isochrestic (Sackett 1990, 33). There are exceptions, such as spouts, which tend to display variation unrelated to functional or technological considerations, but on the whole, shapes are homogeneous and exhibit less stylistic variation than decoration.

In Chapter 5.5, it is suggested that ceramic variation reflects aspects of human interaction, and that subsistence activities played an important role in directing the types of interaction that took place. Within site clusters, the “budding off” of daughter communities, from one or more primary sites, would have given rise to strong kin ties between villages (Sherratt 1980, 318). Conversely, competition for resources would be increased within site clusters, where optimum agricultural zones were intensively utilised. This would have led to highly structured relationships within and between villages, and these relationships could be represented as symbolic variation in ceramic design. Between regions, long distance foraging forays (Binford 1996, 44) may have resulted in different types of interaction. Presumably, competition for certain resources could have created tensions between different groups. This might be represented as emblematic style in the ceramic record, particularly if pottery were visible through the exchange of commodities (for movement of pottery through pastoralist activity, see Jacobsen 1984, 35). Regional variation, on all levels, is tempered by other forms of social interaction. In Chapter 5.6, it is suggested that exogamic community structures, typical of agro-pastoralist societies (Wobst 1974, 1976; Peltenburg 1991b, 108), are characterised by movements of people, and this, in turn, might be reflected in the ceramic record as different forms of style. Finally, in addition to systemic factors, which affect style within and between regions, a substantial amount of variation can be attributed to

behavioural and evolutionary patterns, which might be represented as isochrestic style in the ceramic record.

In order to define the systemic processes that might be responsible for stylistic variation in the ceramic record, it is necessary to test some of the more relevant models, outlined in Chapter 6, against the ceramic data from SCU Cyprus. There are a number of fundamental questions which underpin the analysis in the next two chapters;

1. Do pottery assemblages become more homogeneous or more heterogeneous over time?
2. Is there more similarity in ceramic assemblages between site clusters than between regions?
3. How significant is the North (RW)/South (Cb) divide?
4. Is the Cb ceramic tradition more internally homogeneous than the RW ceramic tradition?

It has been argued above that subsistence strategies were closely linked to interaction, and that some of the diversity evident in ceramic design probably arose directly from subsistence related patterning, through the budding off of “daughter” communities. However, identifying the social and ideological processes that might have also contributed to diversity is difficult. The models outlined in Chapter 6 all presume certain patterns of variation associated with different types of interaction. Testing these models against the ceramic data cannot prove or disprove the various interaction theories, but rather, can help to assess whether any of the models are valid when applied to SCU Cyprus. In other words, the Deetz/Longacre model for post-marital residence rules, cannot be proved or disproved, but patterns of ceramic diversity which underpin this argument can be tested for the appropriateness of this model to the SCU Culture. In the end there are always going to be a range of interactive processes which probably existed, including post-marital residence patterns, but identification of these processes is limited by the archaeological evidence. In this chapter, it is argued that patterns of ceramic diversity in prehistoric Cyprus cannot support or negate specific socio-cultural theories, but rather, can help to highlight a number of more general factors which contribute to diversity in prehistoric populations.

The aim of this chapter then, is to test whether the subsistence hypothesis outlined in Chapter 5, and any of the various models outlined in Chapter 6, fit with the pattern of diversity evident in

SCU ceramics. Using exploratory descriptive statistics, variation in the ceramic assemblages is identified and described, then compared against the various models. The initial objective is to gain a holistic sense of the variation that exists. Data are presented in the form of contingency tables and graphs. In order to cut out lengthy classification names, attributes are given a number in accordance with the classification system presented in Table 4.1. For the purpose of this chapter, and Chapter 8, only the Decorated Fine Wares are analysed. Monochrome Burnished Ware has been excluded, because it only appears in quantity at Philia, and the Coarse Wares are excluded because they are too fragmentary for use in the analysis. Both MBW and Coarse Ware have been reviewed in Chapter 5.

7.2 - The structure of the analysis

The analysis of the pottery is divided into two chapters. Chapter 7 is a qualitative study of the museum collections that were examined for this thesis. Chapter 8 is a qualitative and quantitative study of the large, representative samples from Vrysi and Philia, as recorded by the excavators¹. The museum sample from Troulli is included in the analyses of both Chapter 7 and Chapter 8, because of its proximity to Vrysi, and its likelihood of being within the same site cluster. Two factors account for the division of the analysis into two chapters. First, the museum assemblages were recorded using a very detailed classification system, and therefore, in some ways more information can be obtained from the museum samples than from the total excavated collections. However, the total collections analysed in Chapter 8 are more statistically useful, because they are larger and more representative of the total pottery assemblages. Secondly, neither classification system can be properly correlated with each other, and therefore, must be analysed independently.

In order to deal with this material effectively, it was decided to summarise the museum data from each site using two-way contingency tables and graphical representation, where appropriate. Percentage frequencies of different attributes are compared between sites to look for patterns of variation in the data set. In Chapter 8, where the information from percentage frequencies suggested further tests of association might be useful, simple descriptive statistics have been undertaken, such as tests for measures of similarity between particular variables (for a summary

¹ I wish to thank Professor E.J. Peltenburg and Dr T.F. Watkins for providing me with primary data from the Vrysi and Philia excavations.

of simple statistics see, Fletcher and Lock 1991; Lock 1991). Inferential statistics are not used at all in this thesis because of the variation in sample size, and sampling criteria. Even in Chapter 8, where the data samples are representative, and the sampling criteria used are virtually identical, it was not possible to undertake inferential statistical analyses, because of a range of ambiguities which will be explained in more detail in the following chapter. Consequently, the objective has been to concentrate primarily on summarising the data in a way that will show trends in the pottery assemblages. Where there is obvious variation between sites or regions, further descriptive statistics have been undertaken.

The continual problem with differential data is how best to represent statistically, a variety of pottery assemblages, arising from vastly different contexts and sampling criteria. For example, the Philia collection in the Cyprus Museum totals some 2500 sherds, but all were chosen specifically for shape and decoration. Therefore, the sample could not be more biased. The only information which can be extracted is subjective². In contrast, the Sotira sample is almost certainly complete,³ and therefore more reliable results can be obtained from analysis of the pottery. It is important that, where possible, like is compared with like. Statistical comparison of the museum samples from Sotira and Philia is useless because the Sotira collection, of some 30,000 sherds, represents the total sherdage, whereas the Philia collection represents considerably less than 10% of the total sherdage excavated. It was not possible to remove the skewing effect of sample size upon the results, without removing the Sotira assemblage from the analysis, but it was possible to match certain criteria so that samples of similar integrity could be compared separately. A concordance table for the museum collections was created which links (as far as possible) similar assemblages, and this is summarised in Table 7.1⁴.

² It should be noted that the Philia museum sample differs from the total sample analysed in Chapter 8. The museum sample was analysed for this thesis using the recording methods and measurement of data used for other museum samples, whereas the analysis in Chapter 8 is based on the original observations and measurements of the excavator.

³ The Sotira report does not give details on sampling and storage of pottery. However, the presence of quantities of worn and abraded sherds in hut contexts, and the large collection of surface survey material in the Limassol Museum, strongly suggests that all the pottery was kept.

⁴ See also, Chapter 2.

Site	No. Sherds	Current location	Nature of Sample	Integrity
Klepini Troulli	c1800	Nicosia Museum	total sample?	Category 1
Sotira Teppes	c31400	Limassol Museum	complete	Category 1
Kalavastos A (exc)	c1500	Nicosia Museum	total sample?	Category 1
Kalavastos Kokk.	c200	VVP Survey store	total sample	Category 2
Kalavastos Tenta	c2000	Lamaca Museum	partial sample on SCU only	Category 2
Khirokitia Vounoi	c6800	Lamaca Museum	unstratified, complete	Category 2
Orga Palialonia	c165	Cyprus Survey	no information	Category 2
Kalavastos survey	c2200	Kalavastos	total sample	Category 3
Kalavastos Pamb.	c600	Nicosia Museum	Hut VIII only	Category 3
Philia Drakos A	c2500	Nicosia Museum	10% of total sample	Category 4
Dhali Agridhi	c100	Lamaca Museum	less than 10% of total sample	Category 4

Table 7.1 - Description of the sampling criteria for the major museum collections

The classification of a site's integrity is based upon a number of simple observations which group sites into four categories, from good integrity (Category 1), to dubious or biased integrity (Category 4). The criteria for each category are as follows:

- Category 1 - large/or complete excavation samples from stratigraphically phased contexts.
- Category 2 - large/or complete excavation samples from unphased contexts and large survey collections
- Category 3 - small survey collections
- Category 4 - biased museum samples comprised of diagnostics and representing a fraction of the original sample

There are other, more analytical techniques of arranging assemblages into groups of similar integrity, such as the bootstrapping method (Lipo et al. 1997, 312), but this method assumes that all assemblages are sampled in the same way and the only independent variable is sample size.

Looking specifically at morphology, the most telling aspect of the data is that the "richness" of the sample (Lipo, et al. 1997, 316) is concomitant with sample size. In other words, the larger the sample, the greater the variety of shapes. For example, Figure 7.1⁵ illustrates the relationship between the sample size and the "richness" (or number of types) in each of the museum samples. In every case, except Philia, the sample size directly reflects the richness of the sample. Philia is the anomaly because it represents less than 10% of the total sample, but all sherds were chosen to be representative of the total collection. Because Philia is an aberration, it was decided not to use

⁵ Figure Numbers 7.1-7.16 are located in the body of the text. Figure numbers 7.17-7.21 are located at the end of the chapter.

the sample in the data analysis. The Philia sample is presented, for what its worth, in the summary tables, 7.2 - 7.7, but characteristics of the sample are only referred to in the main analysis when it is necessary to do so.

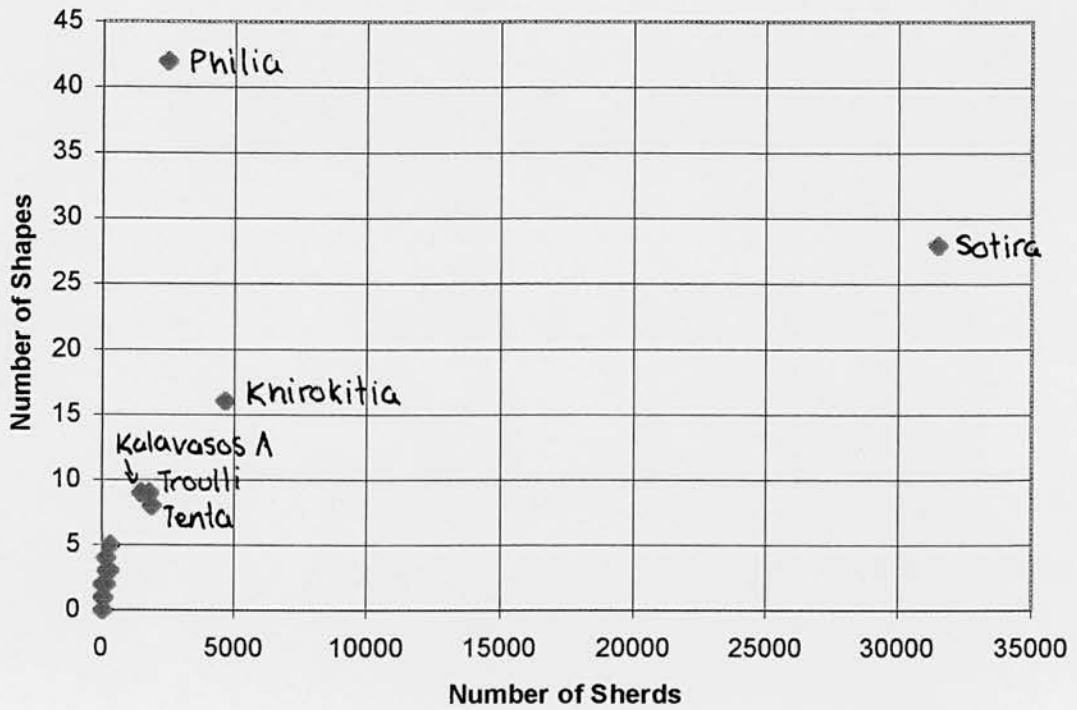


Figure 7.1 - Scatter plot showing the relationship between sample size and sample “richness”

Around 50,000 sherds make up the total data set from museum collections. In the first half of the chapter, the assemblages are summarised in relation to each other on the basis of different attributes. The assemblages are initially analysed on a broad level disregarding phasing, sample size and integrity. Although not statistically meaningful, this was necessary for a wider understanding of the collections as a whole. Where appropriate, assemblages are then analysed on a more detailed level within their various categories of integrity. Simple univariate analyses (presence/absence counts and percentage frequencies) are tabulated by attribute class (by shape, and by component etc), and then by combinations of attributes (for example, hemispherical bowls with round rims).

7.3 - Summary statistics

The simplest way to display summary data is by site and by attribute, that is, univariate tabulations of the data from each site. In Chapter 4, a hierarchy of attributes was established on the basis of cognitive stages in the manufacturing process. It was postulated that decisions about the shape of a vessel are made early in the manufacturing process (in conjunction with type of clay and temper used). Secondary decisions, such as rim shape and decoration, are usually made after primary decisions, because rim shape and decoration are directly affected by the choice of clay and morphology. The data has been analysed to reflect this assumed decision process. First, frequencies of different shapes at each site are summarised without recourse to ware type, component type, or mode of decoration and this is undertaken at two levels: a broad comparison of vessel morphology across the island, and a finer comparison of vessel morphology using the evidence from the phased museum samples. The same is then done for component types, decoration and finally, ware types.

The analysis of the pottery at a broad level, disregarding phasing, allows for *all* sites in the sample to be compared, but it also means that temporal variation is ignored, even though some of the collections span the SCU/ECU transition. I have tried to compensate for temporal variation by excluding, where possible, later SCU/ECU pottery. This proved relatively easy with the survey samples, as later sherds could be separated from the SCU sherdage. Excavation samples were more problematic because correct chronological interpretation relies upon the sample being complete. However, in some instances, such as Tenta and Pamboules, adjustment was possible by excluding from the analysis upper mixed deposits. Therefore, the O16B sample from Tenta includes only levels 4.1-8.1, and the Pit VIII sample from Pamboules includes only floors III-VI. In other instances the whole sample is analysed on a broad level and then later ECU/SCU aspects are removed for finer analysis. For example, all the pottery from the excavations at Kalavastos A⁶ has been used in the broad analysis, even though Pit XI appears to date to the SCU/ECU transition. Later, Pit XI may, or may not be included in the data sample, depending on the type of analysis undertaken, and whether the results of the analysis would be considerably biased by temporal distance.

⁶ In order to differentiate between the excavation sample and the survey sample from Kokkinoyia in this chapter, I have chosen to use Dikaïos' original site name, Kalavastos A, for the excavation sample, and continue with the correct name, Kokkinoyia, for the survey sample.

7.4 - Morphology

7.4.1 - Shape

7.4.1.1 - Broad analysis of all sites, disregarding phasing

Previous studies of SCU pottery have generally assumed that vessel morphology does not vary substantially between sites or between ware types, and that the variation that exists can be attributed to functional differences resulting from differences in subsistence economies (Peltenburg 1978, 59). The frequency occurrence of each shape by site, (disregarding phasing), is tabulated in Table 7.2⁷ and corresponding counts are given in Table 7.3. Percentages are calculated on the basis of the complete sample, including unrecognised shapes and body sherds. This gives an overall picture of the nature of each sample. Survey sites and eroded excavated sites, for example, will have a high percentage of unrecognised sherds and body sherds. Similarly large collections will have a greater variety of shapes. In order to show the frequency and variety of shapes more clearly, body sherds and unrecognised sherds are excluded in Tables 7.4 and 7.5, and only morphological diagnostics are tabulated. This enables relative frequencies of diagnostic shapes to be compared between sites.

Looking first at the overall frequency of sherds, the amount of variation in vessel morphology at a site is proportional to the size of the sample, confirming the pattern obtained in the scatter plot (Figure 7.1). The anomaly, as discussed above, is Philia, which has a museum sample of 2427 sherds but a similar degree of variation to the much greater sample from Sotira. The principal difference between Philia and other sites is the quantity and variety of MBW. Unfortunately, it is not possible to compare the presence/absence ratio of MBW shapes at Philia with Dhali because the sample from Dhali is only a fraction of the original sample. However, Leheavy (Leheavy 1989) makes no mention in his report of the same variety of holemouths or bowl types as recorded at Philia (Watkins 1970a, 4-5).

There is a noticeable preference for open shapes at the Kalavastos survey sites, including Kokkinoyia. In some instances the ratio can be as high as 3:1. In contrast, the Kalavastos excavated sites, Kalavastos A, Pamboules and Tenta, are all dominated by closed shapes. Given that Kalavastos A should have a similar ratio of open to closed vessels as Kokkinoyia, because they are the same site, the difference between the excavation sample and the survey sample

⁷ Tables 7.1, 7.8-7.11 and Tables 7.13-7.14 are located in the body of the text. Tables 7.2 - 7.7, Table 7.12, Table 7.15 and Table 7.16 are located at the end of Chapter 7.

highlights the problems inherent in sampling strategies. Therefore, one can ask whether even total survey collections accurately reflect the true ratio of attributes, and whether sampling bias in both excavation and survey collections can markedly skew the results.

One observation is that all excavated sites with substantial “above” ground structures (Sotira and Troulli for example), have a greater ratio of open to closed vessels, whereas sites which are characterised by insubstantial structures (Kalavastos A and Pamboules), and the eroded sites of Khirokitia and Tenta, have a greater ratio of closed to open vessels. This might reflect sampling biases, but it may also indicate variations in subsistence strategies between the settlement sites and other sites.

A broad feature of Tables 7.2 and 7.3 is the high frequency body sherds. This clearly reflects the character of settlement samples. Even though this observation should be self-evident, it is important to point out that sherd based assemblages significantly alter the overall picture of a collection. For example, one would perceive a collection of whole vessels very differently to how one would perceive a sherd based collection, because sherd based samples do not give a complete picture of a pottery assemblage as it existed in antiquity. For example, only diagnostics can indicate the true shape of a vessel. Therefore, the large quantities of ubiquitous open and closed sherds may originate from large or small bowls, holemouths or bottles, and there is no way to tell which form is represented. Furthermore, there is very little evidence of the structure and orientation of motifs on a vessel, or of the relationship of one motif to another. This has implications for the overall nature of variation between samples, particularly in regard to design variation, and it should be reiterated that the aim of this thesis is not to determine overall differences but to indicate trends in the variation between sites.

Other trends in the sample are less significant but should be mentioned. Unsurprisingly, the platter shape (Figure 7.19/7), a marker of the SCU/ECU transition, is more common in the Pamboules sample, and this reflects the fact that Pit VIII dates slightly later than the end of the SCU. Pamboules has none of the classic SCU hemispherical bowls, which are a feature of all the excavated samples, and most of the survey samples. Trench O16B at Tenta however, has a very low representation of the platter shape, although Baird (Baird n.d.a.), recorded a propensity for the platter shape (Type 6) in the later levels (4.1-5.1), and the deep and hemispherical bowl in level 6.1. The Kalavastos A sample, including Pit XI, has no platter shapes, nor can it be

morphologically distinguished on a broad level from other SCU sites, suggesting that morphology might not necessarily be an accurate indicator of temporal variation.

The most common shape is the hemispherical bowl (Type 1), and it represents between 1-4% of all diagnostic open sherds at most excavated sites, except Pamboules. The absence of hemispherical bowls at some of the survey sites can be explained by the small overall number of sherds in the sample. At Pamboules, its absence appears to be related more to diachronic variation, especially considering that the platter shape is represented in roughly the same proportions as hemispherical bowls at other sites.

The concave hemispherical bowl (Type 5) occurs in very small percentages at Khirokitia, Orga, Sotira and Troulli. This shape is also present in the Philia sample. It has been suggested that the concave hemispherical bowl is an early feature of SCU pottery (Clarke 1992a, 8). At Troulli, it is more common than at other sites, and it is certainly more common in the lower levels of Pit A (Figure 7.21/4). Furthermore, Peltenburg (Peltenburg 1982b, 65) noted that this shape becomes less common in the Middle Phase at Vrysi. Unfortunately neither Peltenburg, Watkins, nor Dikaïos differentiated between standard hemispherical bowls (Figure 7.21/1) and concave hemispherical bowls in their analysis, therefore the occurrence of this form cannot be properly mapped over time. However, it is important to note that the concave form does not appear to be a regional variety as it occurs in similar quantities at Sotira and Khirokitia in the South, to Philia and Orga in the North.

Holemouths (Types 20-27) are more common at Khirokitia than at any other site, including sites with higher proportions of closed to open sherds (Figure 7.18/1-2).

Table 7.4 presents the percentage frequency of each shape relative to its morphological category. By removing ubiquitous open, closed and unknown sherds from the counts a more representative picture is obtained of the actual frequencies of each shape. Counts are given in Table 7.5. The most common bowl shape is again, the hemispherical bowl, which now accounts for between 62.8% - 88.9% of all bowl types at Kalavassos A, Kokkinoyia, Khirokitia, Orga and Sotira. At the survey sites it accounts for 100% of bowl types, except Kafkalia VI, and those sites with no diagnostic bowl sherds. However, a 100% frequency rating from survey sites is not a true reflection as it might represent only one sherd.

In contrast, Tenta and Troulli are dominated by the deep bowl form (Type 3) and the concave bowl form (Type 5) respectively. The deep bowl form is not common in the mainphase of the SCU and its dominance at Tenta, in conjunction with a good representation of platters, confirms that most of the Tenta contexts date to the SCU/ECU transition. In contrast, the presence of a high proportion of concave hemispherical bowls at Troulli, may indicate that the sample is dominated by material from earlier deposits. It is unfortunate that it is not possible to compare the ratio of concave hemispherical bowls with other bowl types at Vrysi and Troulli, particularly given the shape is considered to be chronologically early. Such a comparison might help to elucidate the chronological relationship between Vrysi and Troulli with a greater degree of accuracy.

At Kafkalia VI and Pamboules, the platter shape is most common and this ties in well with the relatively late dating for the two sites (see Chapter 3).

Not surprisingly, Sotira and Philia have the greatest variety of bowl shapes, but at Philia there is a higher representation of the rarer forms such as the shallow hemispherical bowl (Type 2). Given that the Sotira sample is complete, this suggests that Philia has a greater variety of forms generally, than any other site.

The total number of holemouths at most sites is too small to make any meaningful conclusions regarding the distribution of forms, but generally speaking the simple globular form of holemouth (Type 21) is most commonly represented. There is a more even distribution of holemouth forms at Sotira than at Khirokitia, where the globular form dominates. Holemouths, in general, are not well represented at most sites.

The large “bottle”, another common form of closed vessel, is recorded at the component level and is recognised in the material record by neck sherds (see Table 7.6 and 7.7). Necks are poorly represented, even at Khirokitia, in comparison with unidentifiable open rim sherds, and therefore will be discussed in Section 7.4.2.

7.4.1.2 - Analysis of shape variation at the phased sites

Having looked broadly at patterns of morphological diversity in the total museum sample, it is now possible to consider variation in the assemblages which have internal phasing. Some analyses of the phased collections were undertaken in Chapter 3, where morphological presence/absence counts could indicate a site’s diachronic position, relative to other sites. In this chapter, the aim is

to look for variation in the degree of homogeneity over time, in order to assess levels of intra-site variation. Only Sotira and Troulli have been included in this analysis. Kalavassos A also exhibits temporal diversity, but the deposits are divided into discreet archaeological units, (ie, pits), and therefore, are unreliable as a chronological gauge.

Looking first at Sotira (Table 7.8). The richness of the samples (ie, number of shape varieties) from Phases 1, 2, and 3 reflects the size of the sample. However, in all three phases there is noticeable homogeneity between the variety of shapes that occur and the frequency of each shape over time. There is very little variation in the percentage of open to closed vessels, and although hemispherical bowls are not as well represented in Phase 2, they are still the most common bowl shape. Therefore, at Sotira, there is evidence of little intra-site variation in overall morphology through time, and this might suggest little variation in the types of activities which were carried out at the site over time, or it might suggest that the chronological span of the site is relatively short.

	Sotira Phase 1	%	Sotira Phase 2	%	Sotira Phase 3	%
Shape						
Open	893	51.4	6688	53.3	1413	52.7
Closed	785	45.2	5586	44.5	1184	44.2
1	50	2.9	200	1.6	72	2.7
2			2	<i>trace</i>	1	<i>trace</i>
4			18	0.1		
5	7	0.4	45	0.4	9	0.3
6			1	<i>trace</i>		
7			1	<i>trace</i>		
10			2	<i>trace</i>		
20			1	<i>trace</i>		
21			3	<i>trace</i>	1	<i>trace</i>
23	1	0.1	2	<i>trace</i>		
26			5	<i>trace</i>		
Total	1736	100	12554	99.9	2680	99.9

Table 7.8 - Percentage of Decorated Fine Ware shapes at Sotira in each of the three phases

Troulli exhibits slightly more intra-site morphological variation through time than Sotira (Table 7.9). At Troulli there is greater comparability between the sample sizes of the Early and Late Phases and this is reflected in the range of shapes present. However, there are some noticeable changes in the frequency of shapes at Troulli between the two phases. In the first instance, open shapes become more popular in the Late Phase, out-numbering closed shapes 2:1. It was

mentioned above that concave bowls are more popular in the Early Phase than in the Late Phase, and this probably reflects temporal variation. The greater range of shapes in the Early Phase is most likely a feature of sample size rather than greater variety. However, the change in the proportion of open to closed shapes might reflect a shift in the types of activities which were undertaken at the site.

	Troulli Early	%	Troulli Late	%
Shape				
Open	434	49.2	178	62.2
Closed	413	46.9	96	33.6
1	12	1.4	7	2.4
2	1	0.1	3	1
4				
5	18	2.1	1	0.4
6				
7				
10				
20	1	0.1		
21	1	0.1	1	0.4
23	1	0.1		
26				
Total	881	100	286	99.9

Table 7.9 - Percentage of Decorated Fine Ware shapes at Troulli by phase

7.4.2 - Components

7.4.2.1 - Broad analysis of components, disregarding phasing

Components are the various types of rims, necks, bases and spouts which are found in both open and closed shapes. The frequency of different component types in the Decorated Fine Wares is summarised in Table 7.6, and corresponding counts given in Table 7.7. Again, each component is given a number corresponding with its number in the classification table (Table 4.1) in Chapter 4.

In the open shapes, rounded rims (Type 1) predominate at Kalavastos A, Khirokitia, Philia, Orga, Sotira, Troulli and all of the Kalavastos survey sites. In contrast, fined rims (Types 2 and 4) predominate at Pamboules and Tenta, and are well represented at Kafkalia VI. The flat rim type (Type 7), often thought to be representative of the SCU, as it disappears in later periods, is found at all sites, except Pamboules, Markotis and Spilios. However, its absence at the latter two survey sites might be due to sampling bias. Most excavated sites have a wide variety of rim types on open bowls, which leads one to suspect that variation is a feature of the manufacturing and shaping process. For example, most variation could result from the drying or firing process if bowls are turned upside down (London 1990, 62). The only rim type that could not have been the result of

the manufacturing process is the fined rim type, as it would have required careful treatment to maintain the form throughout the drying process. Therefore this form presumably represents a cognitive decision by the artisan. This tallies with its predominance at later sites, indicating that the fined rim type came into vogue towards the end of the SCU, or the beginning of the SCU/ECU transition. In the case of flat and rounded rims, I would suggest that this variation is wholly due to manufacturing differences as many whole, and nearly whole vessels, exhibit both flattened sections, and rounded sections of the rim on the same vessel.

There is less variety in closed neck types than open rim types, and at most sites the numbers of necks are so low (Table 7.7) that very little can be deduced from the sample. In most instances it is not possible to identify the shape of a neck, and this is reflected in the high proportion of unknown neck sherds (Type 20). The only sites that have representative samples of neck sherds are Khirokitia, Sotira and Troulli, presumably because the original samples are large. At these sites, long narrow necks (Types 21, 24 and 27) predominate, while all other shapes, including the short neck with narrow aperture (Type 25) are rare. At Philia, the long neck type is also a common form.

Open base types are dominated by the slightly rounded (Type 41), flat (Type 42), and omphalos (Type 43) forms. Again, all three types are well represented, but unlike bowl rims and necks, there appears to be no clear pattern to the popularity of one form over another. Rounded bases appear to be less common than the flat and omphalos form. They are found at only six sites and represent 26% of the total for the three forms. Flat bases are found at eleven sites and represent 35% of the total, while omphalos bases are found at seven sites, but represent 39% of the total. Again, it is possible that varieties of open bases are the result of the forming process and, in most instances, are governed by the shape of the surface upon which the vessel is built.

Sites that have larger samples also have a greater variety of closed base types. Closed bases also exhibit variety arising from temporal considerations. For example, the pointed base (Type 54), known to be an SCU/ECU and ECU feature (Baird n.d.a., n.d.b.; Bolger 1988, 191; Kromholz 1981, 27), is found at Pamboules, Tenta, and Kafkalia VI. It also occurs at Philia (personal observation), which probably indicates that the last phase of Philia spans the SCU/ECU transition. Unfortunately, none of the pointed bases from Philia were found in stratified contexts, so this conclusion cannot be confirmed. The other three principal closed base types are the omphalos (Type 51), rounded (Type 52) and flat (Type 55) forms. At Khirokitia, rounded bases

predominate, whereas at Sotira, omphalos bases predominate, however numbers are too small to make any categorical statements regarding the popularity of one type over another. At all of the major excavated sites, the three principal closed base varieties are represented. As with open base forms, it is difficult to gauge whether proportional differences arise from the forming process, or represent a real functional difference.

Spouts function as pouring apparatus and are found predominantly on large bowls, although small tubular spouts can be found on small bowls and holemouth vessels. Variation in spout form will not usually affect a vessel's pouring ability, and therefore, variation is unlikely to be an aspect of function. Moreover, the variation between spout forms is too great to be the result of manufacturing inconsistencies. Therefore, spouts might contain elements of stylistic diversity. Three principal forms of spout occur on large bowls, the tubular spout (Types 61, 62 and 65), the trough spout (Types 63 and 69) and the bridged spout (Type 64). Philia is included in this section because it has a much greater variety of spout forms than any other site, and this cannot be a factor of sample bias. Sotira has a predominance of tubular spouts, either flush with the rim or rising above the rim. Khirokitia has a predominance of trough spouts, including a short version not found at other sites. Kalavastos A has both trough and bridged spouts but no tubular spouts, while bridged spouts on the whole, are uncommon at most sites. Therefore, there are clear differences in the preference of spout types at different sites. Figure 7.2 below, gives a breakdown of spout preferences for the four sites where spouts are well represented on large bowls.

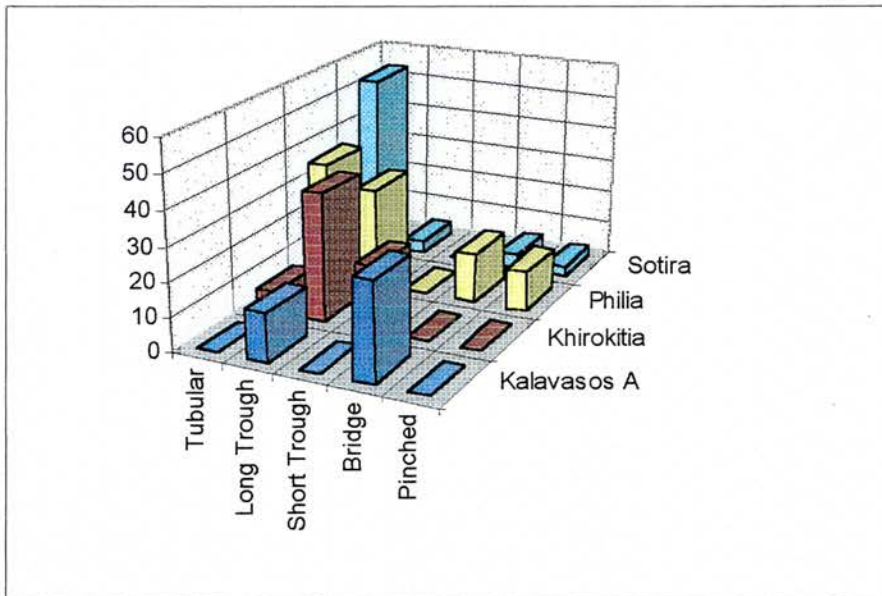


Figure 7.2 - Common spout types at four major sites

The graph shows that no two sites are alike and that at each site, different spout forms predominate. The percentage frequency of spouts at Philia is not representative of the total pottery assemblage, but it is important to note that unlike other sites, more spout forms are represented in significant proportions, relative to the total count of spouts in the Philia museum sample in general. Although the degree of variation at each site suggests that spouts might contain stylistic variation, the number of spouts represented is too small for detailed analysis.

7.4.2.2 - Analysis of component variation in the phased sites

The sample size of most component groups is also too small to look for patterns of diversity or change over time. Open rim shapes are the only component with large enough samples at both Troulli and Sotira.

Table 7.10 illustrates the proportion of various open rim types in each of the three phases at Sotira. The proportion and variety of rim types remains constant throughout. The slight variation in the percentage of round rims in Phase 3 is offset by the greater proportion of unknown rim types.

	Sotira Phase 1	%	Sotira Phase 2	%	Sotira Phase 3	%
Rims						
0	5	2.4	58	4.8	49	15.3
1	141	68.4	792	65.5	164	51.1
2	11	5.3	50	4.1	15	4.7
3	1	0.5	11	0.9	2	0.6
4	5	2.4	26	2.2	6	1.9
5	2	1	11	0.9	4	1.2
6						
7	41	19.9	260	21.5	80	24.9
8					1	0.3
11			1	0.1		
Total	206	99.9	1209	100	321	100

Table 7.10 - Rim types by phase at Sotira

Table 7.11, below, illustrates the proportion of open rim types at Troulli. The greater proportion of round rims in the Early Phase is offset by there being more unknown rims in the Late Phase. A greater variety of rim types in the Late Phase might suggest greater heterogeneity, but the proportion of newly represented types is small.

	Troulli Early	%	Troulli Late	%
Rims				
0	13	13.8	22	45.8
1	61	64.9	16	33.3
2	8	8.5	2	4.2
4			3	6.3
5			4	8.3
7	12	12.8		
11			1	2.1
Total	94	100	48	100

Table 7.11 - Rim types by phase at Troulli

7.4.2.3 - Analysis of combined attributes (shapes and components)

Having looked broadly at individual aspects of morphology, it is possible to consider combinations of morphological attributes to check whether certain shapes are found more regularly in combination with certain component variations. For example, do hemispherical bowls tend to have rounded rims, while concave hemispherical bowls have flat rims? The only combination for which there is enough data is rim types on bowls. For other groupings of shapes and components, the sample is too small to be meaningful.

At Sotira (Figure 7.3 below), the predominant combination is rounded rims on hemispherical bowls, accounting for 57.2% of all possible combinations. Other significant combinations are flat rims on hemispherical bowls, accounting for 22.1% and round rims on concave hemispherical bowls, accounting for 8.8%. Together, these three combinations make up 88% of the sample. Although, occasionally other combinations occur, the frequency is too low to be significant.

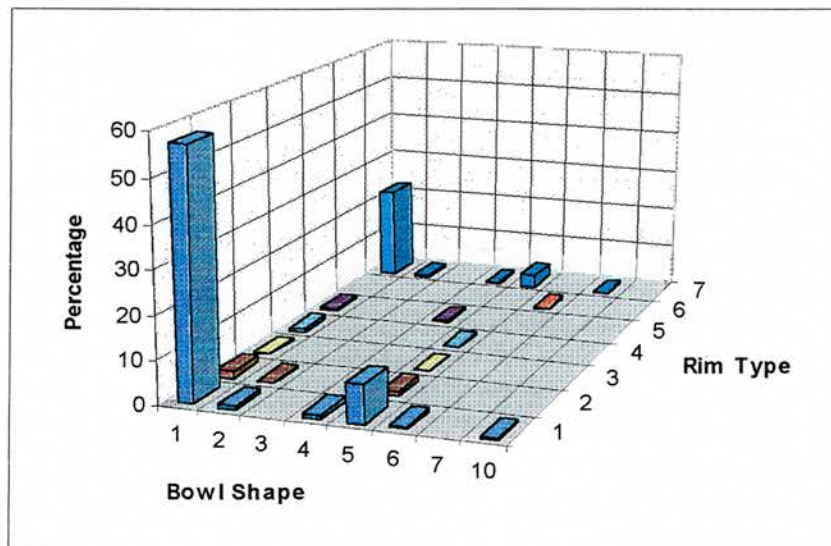


Figure 7.3 - Distribution of rim types on open bowls at Sotira

At Khirokitia (Figure 7.4 below), hemispherical bowls with round rims account for 60.4% of all possible combinations, while hemispherical bowls with flat rims account for 11.3% of all possible combinations. Less well represented are concave hemispherical bowls with inward sloping flat rims, and platters with round rims. Together, these combinations account for 87% of the total.

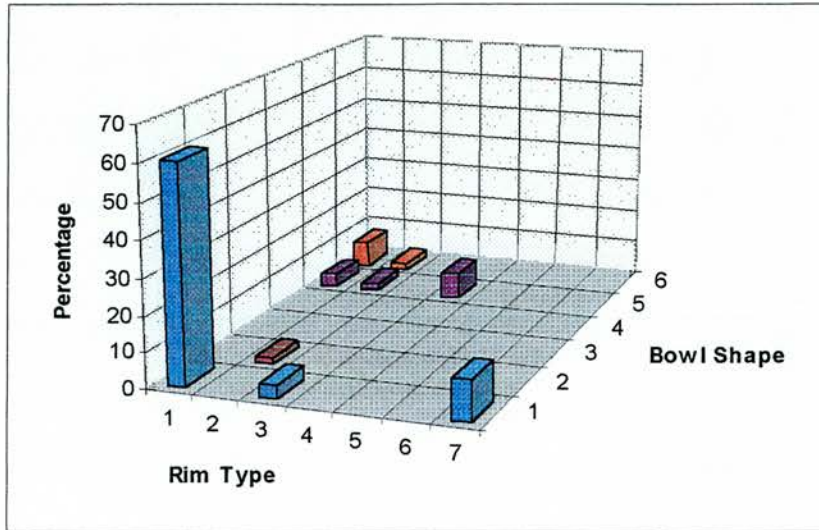


Figure 7.4 - Distribution of rim types on open bowls at Khirokitia

At Tenta (Figure 7.5 below), the pattern is different from Khirokitia and Sotira above, reflecting Tenta's later temporal position. Here, the predominant combination is deep bowls with fined rims, accounting for 61.5% of the total. Platters with fined rims account for 19.2% of the total.

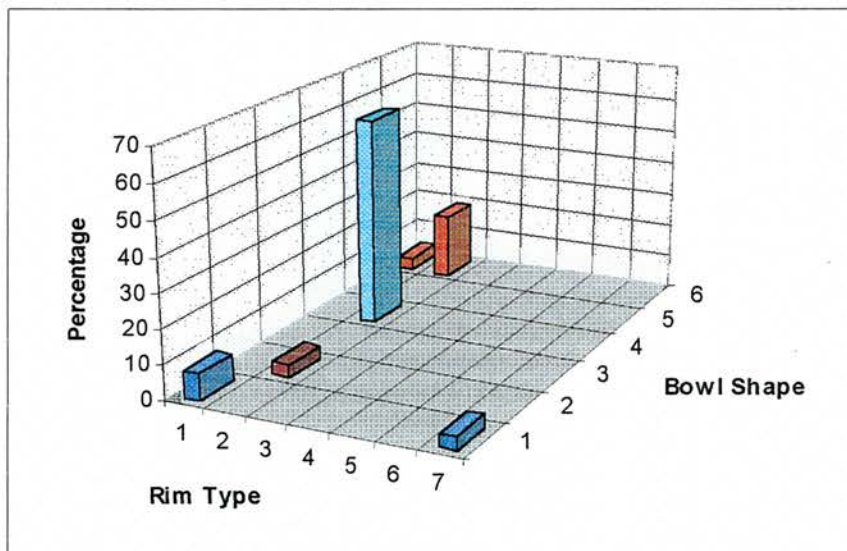


Figure 7.5 - Distribution of rim types on open bowls at Tenta

At Troulli (Figure 7.6 below), concave hemispherical bowls with round rims predominate (35%), while concave hemispherical bowls with flat rims (18.2%) and hemispherical bowls with round rims (27.3%) are also well represented.

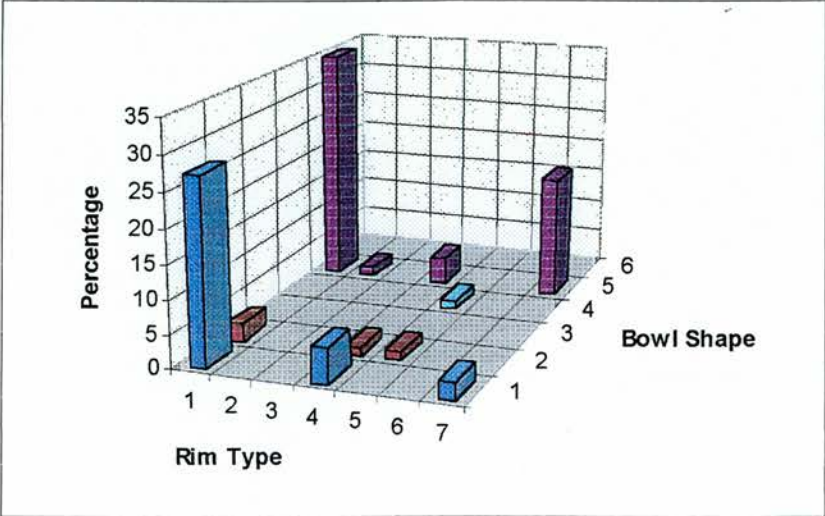


Figure 7.6 - Distribution of rim types on open bowls at Troulli

Finally, Philia (Figure 7.7 below), again exhibits greater heterogeneity in its combinations of rim types and bowl types. Hemispherical bowls with round rims appear to dominate, but a variety of rim types are associated with hemispherical bowls, including fined rims, flat rims, and thickened rims. Shallow hemispherical bowls are well represented here, in contrast to other sites, and usually have inward sloping flat rims.

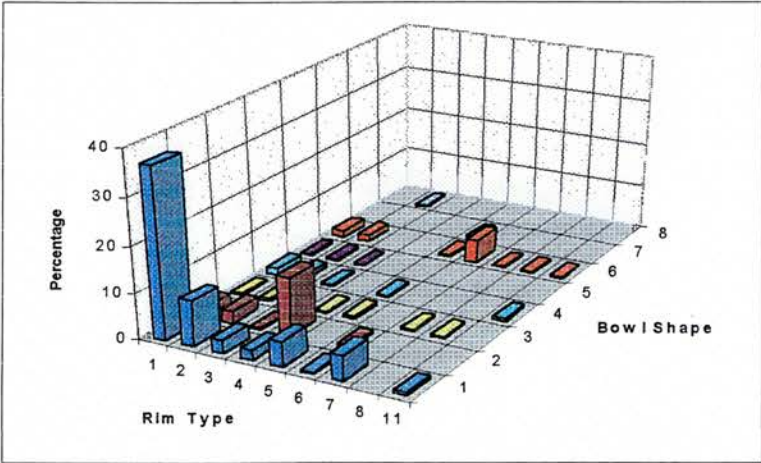


Figure 7.7 - Distribution of rim types on open bowls in the Philia museum sample

The overriding feature in the above analysis, is that in every instance combinations of bowl types with particular rim types reflect the popularity of the individual attributes. For example, hemispherical bowls with round rims are popular at Khirokitia and Sotira in the South, at Philia in the Morphou Bay, and also at Troulli in the North, and this is because hemispherical bowls, and round rims are the most popular shape and rim type at these sites. At Troulli, concave hemispherical bowls with both round and flat rims predominate, and this is because concave hemispherical bowls, and round and flat rim types, are the most frequently occurring shape and component classes. Philia has the greatest variety of combinations, and Tenta has atypical combinations, reflecting temporal differences. In each case the pattern of bowl shape and rim type is mirrored in the percentage frequency tables, (Table's 7.2-7.7). Therefore, the data reflects random patterning which is directly proportional to the frequency of individual attributes. In effect, this means that the SCU phase in Cyprus is characterised by a handmade ceramic tradition, where variation in shape and component type bears no relationship to inter-site preferences. It is a homogeneous tradition but it reflects the high degree of variation which is common to handmade traditions.

7.4.3 - Summary

The principal point to arise from the analysis is that patterns of diversity in morphology are random. The standard hemispherical bowl is the most common open shape, and at many sites predominates over other shapes. At sites where other bowl shapes predominate, temporal variation is the responsible factor. At sites where there is greater morphological variety, this is primarily a function of sample size. Component types also exhibit random patterning similar to that of vessel shape. The round rim predominates at most sites, but the flat rim is also common. There is no relationship between bowl shape and rim type and often a flat and rounded section of the rim can be found together on the same bowl. In instances where flared rims are more common, this appears to be a function of temporal variation. At sites where there is more variety in components, this is a function of sample size. The only exception to this rule are spouts. Where samples are large enough to make comparisons, one type of spout predominates at each site and in most instances it is a different form at each site. The exception again, is Philia, where there is a more even distribution of tubular, trough, bridged and pinched spouts. At Sotira, tubular spouts dominate all other forms. At Khirokitia trough spouts dominate all other forms, and the short trough spout is unique to this site. At Kalavassos, bridged spouts dominate all other forms. Therefore, spouts do appear to exhibit non-random patterning across the island.

There are other general patterns that arise from the analysis. Philia generally has a greater range of shapes than any other site, including Sotira. It has 42 individual variations to Sotira's 28, and it has 33 different combinations of bowl and rim types to Sotira's 21. Moreover, Philia generally has a more even distribution of shape and component types as compared with any other site. This may be a factor of sample bias, but a comparison of sherd counts with other sites, indicates that Philia generally has a greater degree of variety in all aspects of morphology. Although Sotira has a comparable range of component types to Philia, the former site usually has only one or two dominant forms.

7.5 - Decoration

There is a considerably greater range of variability in decorative motifs than in shapes and components, and this has necessitated a different approach to the analysis of the motifs from that used in the analysis of morphology. There are 126 RW motifs, 33 PCb motifs, 26 Cb motifs and three applied motifs found only on MBW. In many instances, some of these motifs are the same, but have been given a separate number to denote different orientation on a vessel (for example, see Motif 2 and its variants, Motifs 3, 4 and 400). In other instances, some of these motifs have been given a separate number to denote subtly different variations on a general theme (for example, see Motifs 24-29, Motifs 30-32, Motifs 33-35 and Motifs 37-44). There are also a wide range of rare motifs. Some occur only once at Philia or Sotira, while others are represented by sherds from unknown surface contexts. Every motif that was encountered has been recorded in the motif classification table (Table 7.16), but to avoid idiosyncrasies, very rare motifs have been excluded from the analytical process.

The analysis is divided into a number of stages. First, in order to gain a holistic view of the types and frequencies of motifs that occur, a general overview of the motif repertoire is presented. Motif frequencies are then reviewed for broad patterns of non-random variation, taking into consideration individual motifs from all sites, but disregarding phasing. The object is to look for patterns of regional similarity or variation between sites on the basis of the types and frequency of motifs that occur at each site. Initially, motif variations are kept discreet in order to distinguish subtle diversity between similar motifs. Later, variations on general motif "themes" are lumped together into 41 motif groups, in order to look for the simple presence or absence of broad motif groups. The Sotira sample of over 30,000 sherds tends to skew the overall frequency counts, and this is illustrated later in this section. However, the collection from Sotira is fundamental to the

study of regional variation in SCU Cyprus, therefore, the inclusion of the assemblage is paramount to this study. Because it has been impossible to avoid the hazards of varying sample sizes, the results presented in this chapter should be considered as no more than trends in the data.

In an effort to counteract the skewing affect of the Sotira sample on the data, separate frequency counts are undertaken for sites with predominantly RW motifs, and sites with predominantly Cb motifs. It was hoped that this would help to identify trends in the degree of diversity within regional zones. Concurrently with this, where appropriate motifs are also analysed by phase and according to their levels of integrity, and the relationship between shape and designs is briefly reviewed.

7.5.1 - Analysis of motifs, disregarding phasing

At the most general level, a frequency seriation of every motif is illustrated in Table 7.12⁸. The percentage of each motif is calculated for open shape/outer surface occurrences, open shape/inner surface occurrences, and closed shape occurrences. The total percentage of all motifs at each site is then calculated as a percentage of all motifs overall⁹. The counts from Philia are also included in Table 7.12, however, they should not be assumed to be representative of the total sample. The table clearly illustrates how the size of a sample can directly affect the percentage frequency of a motif. In Table 7.12 the percentage frequency of all motifs is reduced by the enormous number of separate occurrences of Motif 618, (primarily from Sotira). Therefore, although there is a greater range of RW motifs, they account for only 41.8% of the total museum sample, PCb motifs account for 4.2% , whereas Cb motifs account for 53%, with Motif 618 making up 31.4% of the Cb motif total. Although there are numerous problems in quantifying such diverse assemblages, this section attempts to draw some general conclusions about design variation.

Figure 7.8 below, illustrates the relationship between sample size and sample “richness” with regard to the decorative motifs. Unlike the relationship between sample size and morphological “richness”, the relationship between sample size and design motifs is not cumulative. The smaller samples from the Kalavassos survey sites exhibit cumulative progression between themselves, but

⁸There are a number of motifs which have zero corresponding entries in Table 7.12. The motifs with zero entries are either rare examples recorded on unstratified surface material or unknown surface material. and have not been used in the present analysis.

⁹ Many of the Kalavassos survey sites have been excluded from the percentage frequency count because the number of motifs recorded for these sites is so low that their inclusion would be meaningless against the larger samples of Sotira and Khirokitia .

they exhibit a greater sample “richness” than the survey site, Orga, even though the Orga sample is comparable in size. This might be a result of differential preservation of samples, however, it is interesting to note that other survey samples cluster together, with similar sample sizes and degrees of richness. Also of some note is that Kalavassos A, Tenta and Troulli have very similar degrees of sample “richness” to the Kalavassos survey sites, even though the sample sizes of the three excavated sites are approximately 10 times larger than the sample sizes from the survey sites. Therefore, there does not appear to be the same degree of homogeneity between sample size and sample “richness” within design motifs, as was evident in morphological attributes. Again, Philia is included in the scatter plot, mostly to emphasise that the range of variation in motif types at this site is significantly greater than other sites, regardless of the size of the sample.

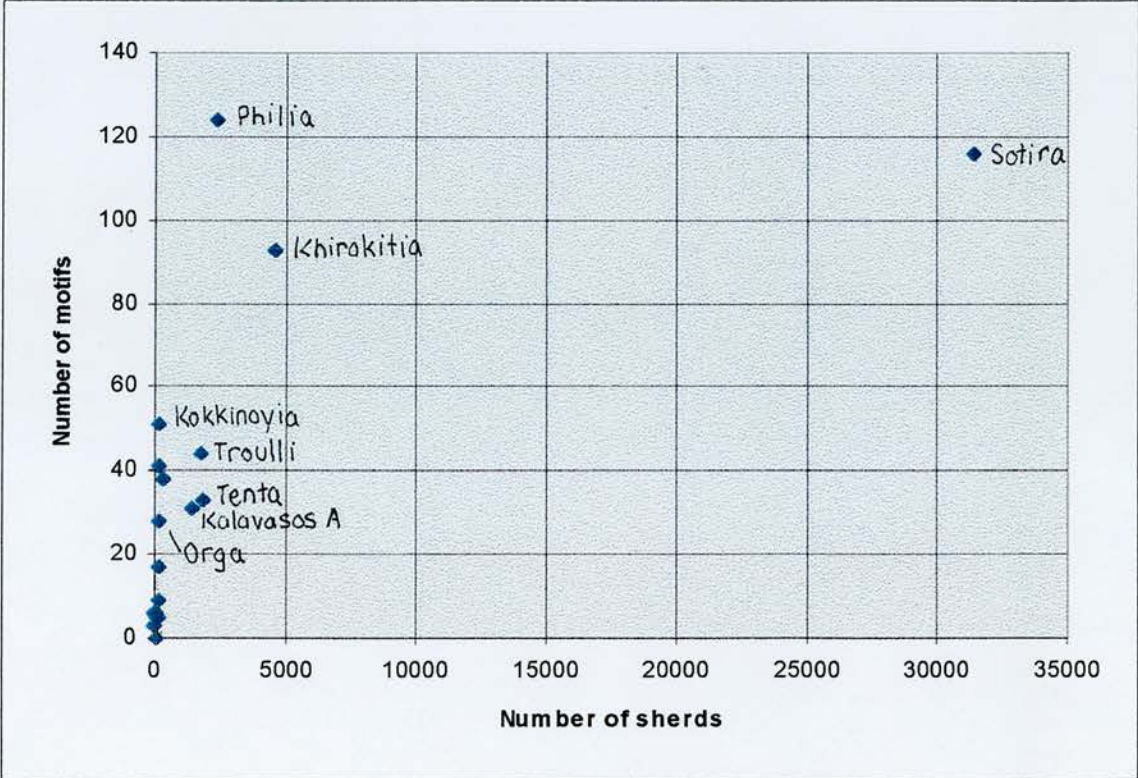


Figure 7.8 - Relationship between sample size and variety of decorative motifs

There is a discrepancy between the proportional representation of RW motifs in the South and Cb motifs in the North, which does not seem to be directly related to the number of motif forms which occur in each class. There are 126 variations of RW motifs and only 26 variations of Cb motifs. Therefore, although it would be expected that there should be a greater variety of RW motifs at Cb sites in general, the variation is disproportionate to the number of motifs. Sotira and Khirakitia

have a much larger proportional representation of RW motifs than Philia and Troulli have Cb motifs. Sotira and Khirokitia, have 73 and 50 examples of RW motifs respectively, while Philia and Troulli have 6 and 2 examples of Cb motifs respectively. In proportional terms, Sotira has 58% of all RW motifs represented at the site, whereas Troulli has only 8% of Cb motifs represented.

It was suspected that the inclusion of RW motifs found on PCb sherds might have contributed to the discrepancy. However, looking at the frequency of PCb motifs at some of the major sites (Figure 7.9 below), it appears that there is no correlation between the frequency of PCb sherds and the range of RW motifs which occur. All sites have relatively equal proportions of PCb sherds, with Khirokitia having a slightly higher representation than other sites.

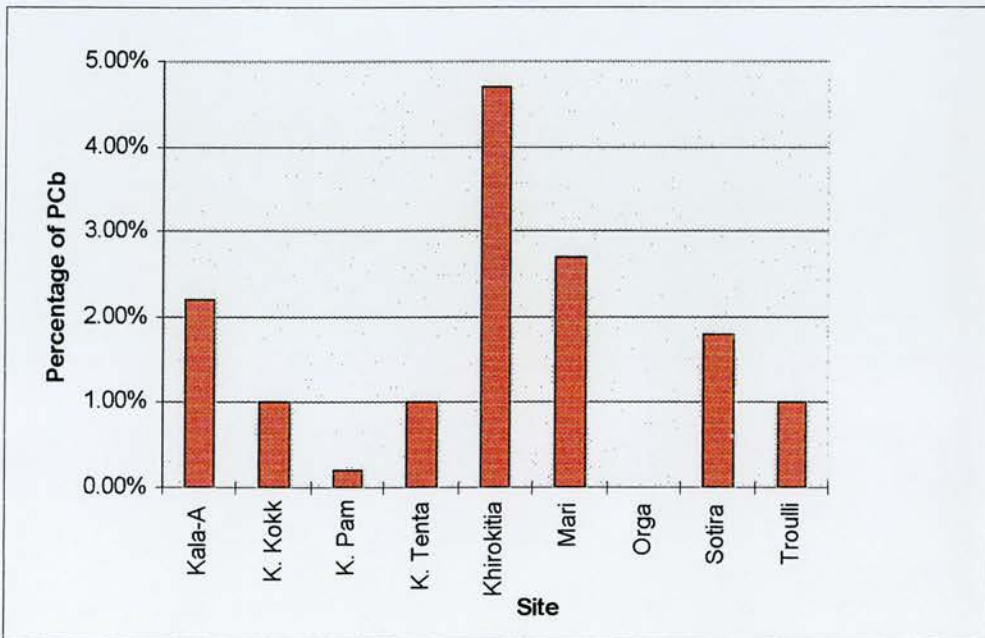


Figure 7.9 - Percentage frequency of PCb at the major SCU sites

The reason for the discrepancy is presumably partly due to there being a larger proportion of RW Ware at Cb Ware sites than vice versa, however, why this should be is not known. It could be that RW Ware was generally more popular in the South than Cb Ware was in the North, but it might also be that the answer lies in the argument broached in Chapter 3, that the northern RW tradition is chronologically earlier than the southern Cb tradition. If this were the case, it would be expected that RW Ware was in circulation on the island for a greater length of time than Cb Ware.

Moreover, if Cb Ware sites are chronologically later than the northern sites, then RW would be common at these sites earlier in the stratigraphic sequence. This in fact, appears to be the case at Sotira.

Because of the large number of motifs, and the equally large number of motif occurrences, very few individual motifs represent more than 1% of the total frequency occurrence of all motifs across the island. Moreover, those that do represent more than 1% of the total are usually variations on a motif “theme”. The large sample from Sotira illustrates how percentage frequency tables can be skewed by variation in sample size (Table 7.13, below). Combed motifs dominate, and thin combed wavy bands are the most common motif. Amongst the RW motifs, rim bands, broad bands and lines, wavy lines and ripple are the most common motifs.

Motif	Description	Percentage
1	rim bands	5.8
2	broad vertical bands	1.9
400	broad bands (no orientation)	5
401	thin lines (no orientation)	2.3
402	thick lines (no orientation)	1.4
16	wavy bands	1.6
19	ripple	1.2
95	curvilinear bands	1.2
106	plain red	6.9
107	plain white	1.0
501	PCb wavy combed bands	3.1
601	thin horizontal wavy combed bands	1.3
602	thin vertical wavy combed bands	2.5
603	thin diagonal wavy combed bands	2.7
618	thin wavy combed bands (no orientation)	31.4
619	thick wavy combed bands (no orientation)	3.1
620	thin straight combed bands (no orientation)	6.6
621	thick straight combed bands (no orientation)	2.6
	Total	81.6

Table 7.13 - Frequency occurrence of motifs which account for over 1% of all motif occurrences

Although it is interesting to note the proportional representation of different motifs on an island scale, sample size and sample bias undoubtedly have a great deal of influence on the relative proportions of each motif. Therefore, these figures are not helpful in any real comparative sense. In the following section, the frequency occurrence of motifs are compared by site. Therefore, rather than assessing the frequency of each motif on an island scale, the frequency is considered by site, and then sites are compared with each other.

7.5.2 - Analysis of motif occurrences, disregarding phasing

It is well known, and frequently stated above, that RW Ware is dominant in the North and Cb Ware is dominant in the South of the island, however, the actual relationship between the various RW and Cb motifs has never been graphically represented. It was noted in Section 7.5.1, that most individual motifs occur infrequently, and many are variations on a limited range of forms. It will become apparent in the following section that there is no correlation between variation in motif sub-forms and stylistic diversity. Therefore, in order to reduce the number of very low percentage frequencies arising from motifs which occur infrequently, it was decided to lump motifs into motif groups (motif groups are listed in, Table 7.14). The large number of variables (20 sites and 41 motif groups) makes graphical representation of relationships difficult. Therefore, in order to display the results in a meaningful visual form, sites with low motif counts, such as the Kalavassos survey sites, were excluded from the frequency chart, as were motif groups which represented less than 1% of the total frequency.

Figure 7.10 is a percentage frequency bar chart calculated for 23 of the most common motif groups at six major sites. The bar chart exhibits a sharp bi-polarity between those sites with predominantly Cb motifs (Sotira, Khirokitia and Kalavassos A) and those sites with predominantly RW motifs (Troulli, Tenta and Orga). This is to be expected given that the two groups are dominated by either one or other ware type (Figure's 7.17, 7.18, 7.19, 7.20 and 7.21), and therefore the frequency graph illustrates clearly the North/South dichotomy between decorative techniques¹⁰. However, there also appears to be a greater degree of homogeneity amongst the southern sites, at least in regard to the most common motif groups. The sites of Sotira, Khirokitia and Kalavassos A, for example (Figure's 7.17, 7.18, 7.19), have very similar frequency distributions of the four major forms of combing, thin wavy lines, thick wavy lines, thin straight lines, and thick straight lines. This apparent homogeneity does not extend to the northern sites where there appears to be a greater range in the proportion of RW motif groups represented (Figure 7.21). Again, it is very hard to draw conclusions on the basis of two sites, one of which is a survey site with a comparatively small sample.

7.5.3 - Analysis of motif occurrences for the phased sites

In the previous sections, general patterns of design frequency across the island were examined. It is now possible to consider the relationship between the spatial and temporal distribution of motifs

¹⁰ It has been stated previously (Chapter 3.7) that the Tenta sample is mostly later SCU/ECU transitional sherdage. hence the greater frequency of RW in the sample.

Group	Motifs	Description
1.	1	Rim band
2.	2, 3, 4, 11, 12, 400	Broad bands
3.	5, 6, 7, 13, 14, 116, 401	Thin lines
4.	8, 9, 10, 15, 85, 88, 402	Thick lines
5.	16, 17, 113	Wavy lines
6.	18, 19, 20, 21, 22, 30, 31, 32, 54, 66, 78	Ripple
7.	23, 24, 25, 26, 27, 28, 29	Ladder
8.	33, 34, 35, 45, 46, 47, 48, 53, 64	Cross-hatching
9.	36	Lattice
10.	37, 38, 39, 40, 41, 42, 43, 44, 73, 74, 75, 87, 91, 92, 104, 108, 112, 114, 125, 126	Circles/targets
11.	58, 86	Dots
12.	49, 50, 51	Triangles
13.	55, 80	Zig Zag
14.	56, 57, 59	Dot/stroke borders
15.	60, 61, 62, 63, 64, 65, 66	Squares
16.	67, 109	Philia motif
17.	69, 70, 71, 72	Neck bands
18.	76, 77	Mottle
19.	89, 90	Festoons
20.	95, 96, 97, 98	Curvilinear lines/bands
21.	101, 120	Curvilinear zones
22.	100	Reserved slits
23.	501, 502, 503, 511, 512, 514, 516, 517, 519, 529, 532, 533	PCb wavy combed bands
24.	504, 508, 510, 518, 531	PCb thin straight combed bands
25.	506	PCb broad wavy combed bands
26.	505	PCb broad straight combed bands
27.	507	PCb Hairpins
28.	513, 523, 524, 527	PCb wavy combed targets
29.	515, 525	PCb wavy combed ladders
30.	522, 528	PCb straight combed ladders
31.	520	PCb combed rim bands
32.	521	PCb combed "sausages"
33.	526	PCb combed squares
34.	530	PCb Khirokitia "tight waves"
35.	601, 602, 603, 618	Cb wavy thin lines
36.	604, 605, 606, 619	Cb wavy thick lines
37.	607, 608, 609, 614, 620	Cb straight thin lines
38.	610, 611, 612, 621	Cb straight thick lines
39.	616	Cb Zig Zag
40.	617	Cb cross-hatching
41.	613	Chequerboard
Miscellaneous	79, 93, 99, 106, 107	

Table 7.14 - Motif Groups

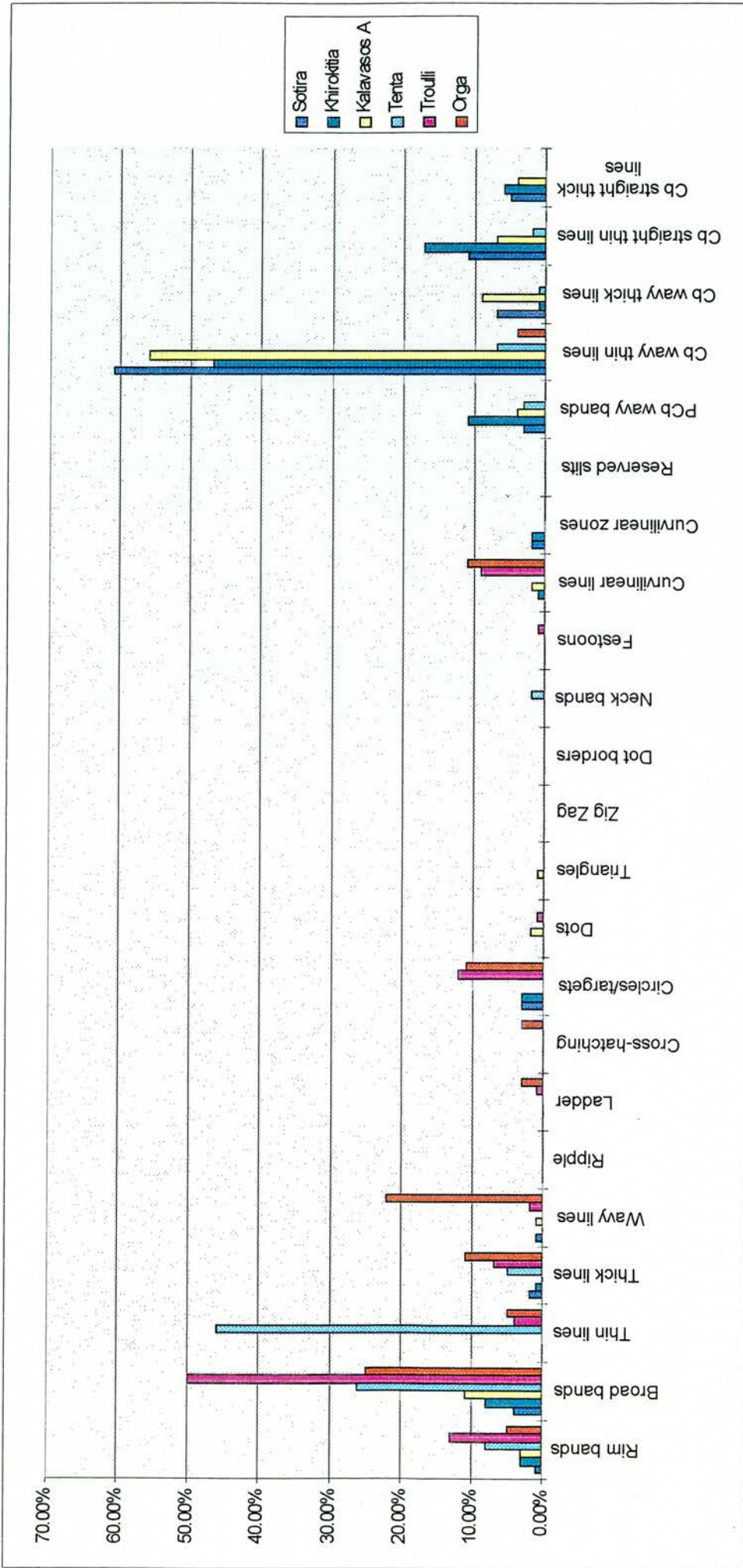


Figure 7.10 - Percentage frequency chart showing the distribution of the most common motif groups, by site and disregarding phasing

at the two phased sites which are temporally comparable. Frequency distributions of the most common motif groups are calculated for the earlier and later phases⁹ at Sotira and Troulli, and the results presented in Figure's 7.11 and 7.12, below.

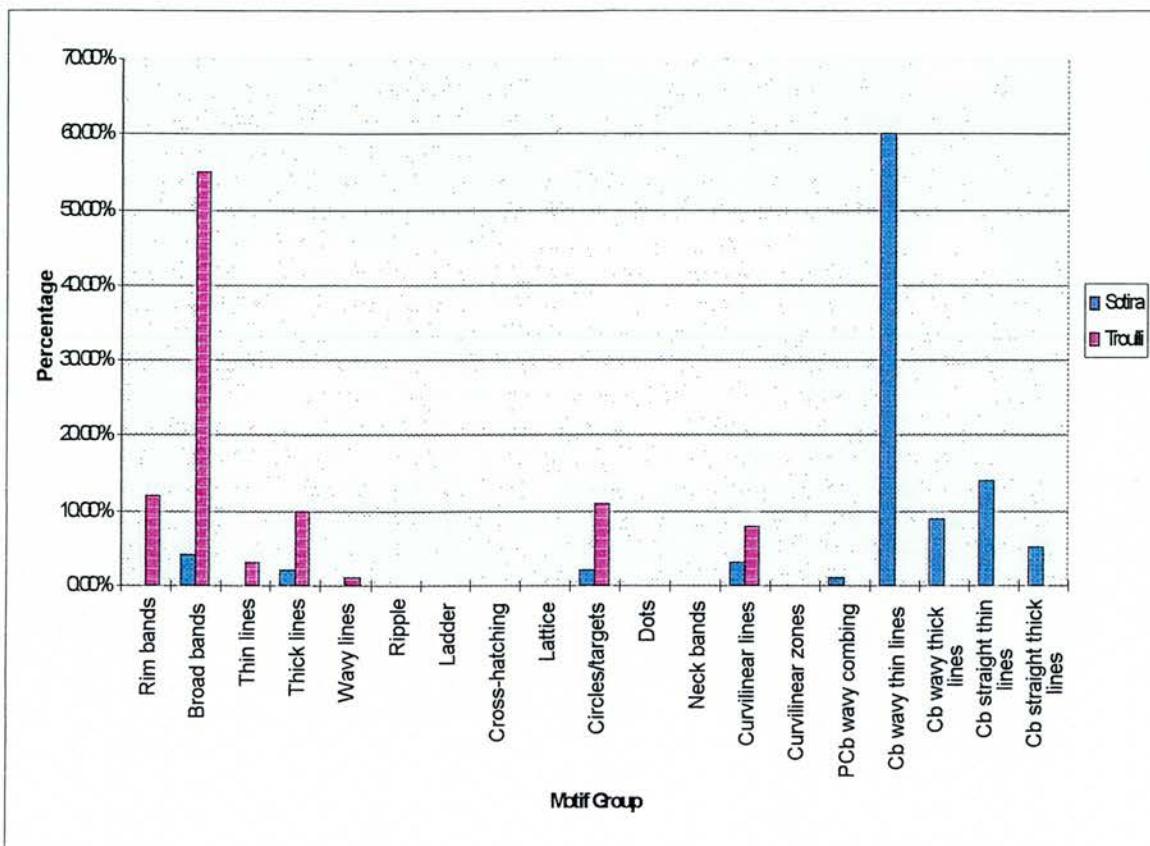


Figure 7.11 - Frequency occurrence of motif groups in the Early Phase at Troulli, Phase I at Sotira and Pit V at Kalavassos A

Again, it is clear that there is a marked bi-polarity between the northern site of Troulli and the southern site of Sotira. In the earlier levels (the Early Phase at Troulli and Phase I at Sotira) (Figure 7.11, above), there is a high degree of similarity between the frequency of motifs. Both Troulli and Sotira are dominated by one motif group, with another four or five motifs groups representing approximately 8%-10% each.

⁹ Refer to Chapter 3, Section's 5.1, 5.2 and 5.5 for the general phasing of Troulli, Kalavassos A, and Sotira, respectively.

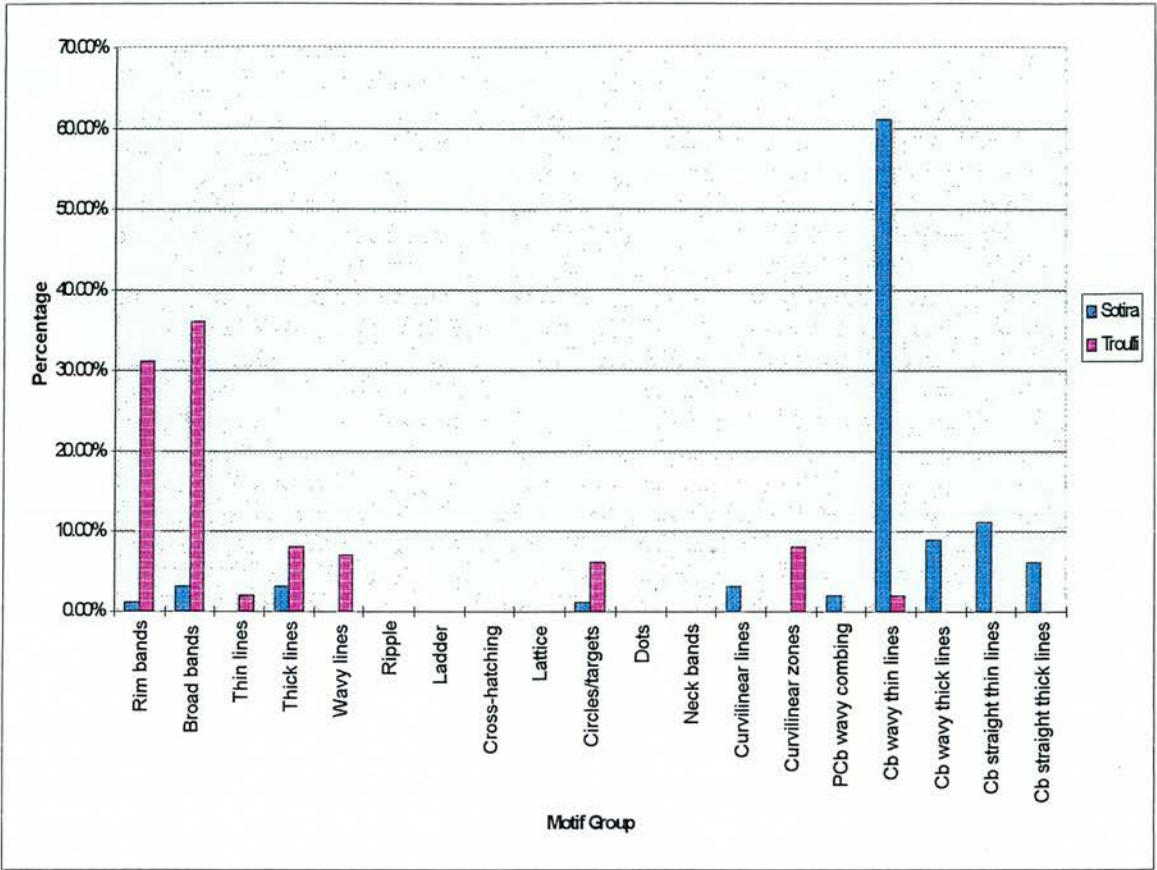


Figure 7.12 - Frequency occurrence of motif groups in the Late Phase at Troulli, Phase 3 at Sotira and Pit XI at Kalavassos A

By the Late Phase (Figure 7.12, above), there is a shift at Troulli away from the domination of broad bands, to a relatively similar frequency of both broad bands and rim bands. However, the frequency of other motifs remains unchanged. Combed motifs appear for the first time at Troulli in the Late Phase, and this is concomitant with the conclusions reached in Chapter 3, that Cb decoration is indeed a later development than RW decoration. At Sotira the distribution of motifs remains surprisingly constant, with thin Cb wavy lines still accounting for approximately 60% of the sample. This tends to add weight to the relative dating evidence, that Sotira is a relatively short lived site.

7.5.4 - Analysis of motifs occurrences by shape

There is little variation in the frequency and types of shapes that occur across the island, and this allows easy analysis of the relationship between design motifs and morphology. Motif distribution is often related to shape (Bolger 1991, 82; Friedrich 1970, 334; Plog 1980, 17-19). For example, one surface of a vessel may be more highly decorated than the other, because it is the surface that is more often seen. Similarly one vessel form may be more highly

decorated than another because it is more transportable, more visible to others, or more often displayed in public places (Barnett 1990, 860).

The following analysis considers each site individually, and assesses whether open or closed shapes have a propensity to be more highly decorated, and whether it is the outer or inner surface of open shapes that receives more attention. Again, only sites with sherd samples large enough to have a good representation of both shapes and motifs were included in the analysis. In order to further increase motif numbers, shape variations were lumped together into three categories; 1) the outer surface of open shapes, 2) the inner surface of open shapes and, 3) the outer surface of closed shapes. Moreover, motif groups were used again in favour of individual motifs. The results are presented in Figure 7.13 below.

There is almost no variation in the frequency of design motifs on either the outer surface of open vessels, or the inner surface of open vessels. The only result where there is divergence is the early levels at Tenta (Levels 7.1-8.1), and this is probably due to sample bias. On the whole, there tends to be a very small trend towards more highly decorated inner surfaces, but given the degree of sample bias, this trend is too small to be significant. There is a small trend towards greater design occurrence on open vessels, as opposed to closed vessels.

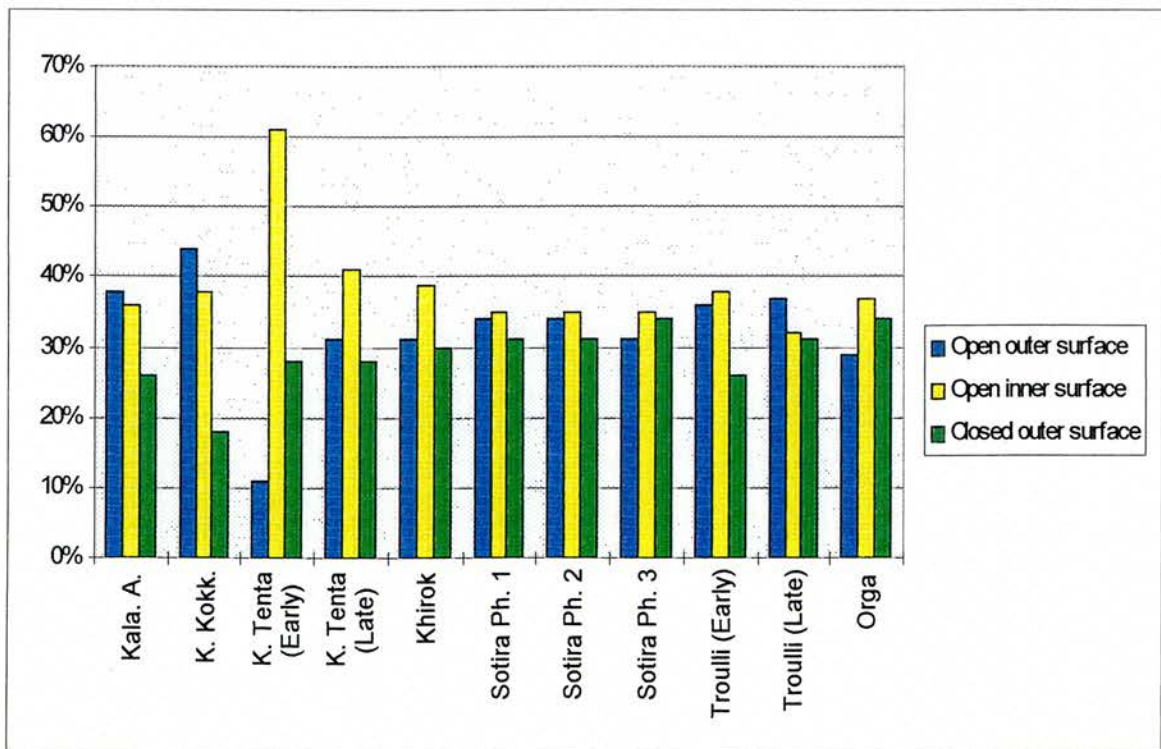


Figure 7.13 - Frequency of motif occurrences on the outer surface of open vessels, the inner surface of open vessels, and the outer surface of closed vessels.

In a related analysis, the frequency occurrence of each motif group was calculated for both open and closed vessels to see whether there is a correlation between the types of motifs that are represented on a particular vessel shape. Table 7.15 (at the end of the Chapter) lists the most common motif groups, with a breakdown of the percentage frequency of each motif group by open shape/outer surface occurrence, open shape/inner surface occurrence and closed shape/outer surface occurrence¹².

There is no instance where one motif group stands out as being more common on one or other surface of open vessels. However, there is a clear distinction in the variety of motifs that are found on open vessels and those found on closed vessels. In general there is less diversity in the motifs applied to the surface of closed vessels, and there is a greater tendency toward structural motifs. For example, the most common motif groups found on closed vessels are broad bands (Motif Group 2), thin lines (Motif Group 3), thick lines (Motif Group 4) and neck and shoulder bands (Motif Group 17). Wavy lines, and cross-hatching are rare and ladder patterns are non-existent. However, circles, targets, curvilinear bands and lines do occur. Furthermore, there is a tendency toward a more even proportional representation of Cb and PCb motifs on closed vessels, than RW motifs.

Therefore, the tendency overall is toward greater differentiation in the types of RW motifs that are found on different shapes, and that there is more variety of motifs on open vessels. Given that there is also a greater range of RW motifs at Cb Ware sites than vice versa, this suggests that there is a clear relationship between RW motifs and regional variation, but that this relationship is not so clear between Cb motifs and regional variation.

7.6 - Wares

In the analysis of motifs, recourse to ware types has been steadfastly avoided in order to reduce the degree of bias created by the artificial typing of ceramics into discreet categories. It has become apparent from the above analyses that although the North/South dichotomy is strongly reflected in the divergent popularity of RW and Cb motifs, there are also a range of other factors which account for both inter- and intra-regional variation.

¹² The museum sample from Philia is included in Table 7.15 for information only. The percentage frequency of motifs is not used in anyway in this Chapter.

That being said, ware types are still important in the analysis of broader regional diversity. In the first instance, it is ware types which are usually referred to when discussing regional variation in the SCU, and secondly, wares are not confined to the decorated classes but come in a variety of monochrome forms as well.

7.6.1 - Analysis of wares disregarding phasing

There are a number of omissions from the analysis of wares types. Philia has been omitted because the museum sample is weighted towards the decorated wares and is therefore biased. Four of the Kalavassos survey sites have been excluded because the sample is too small, or dominated by unknown sherds, and Pamboules has been omitted because the sample consists of a high proportion of SCU/ECU, and ECU ware types. The omissions have weighted the graph in favour of the southern sites, however, some general observations are possible.

The graph (Figure 7.14) shows that at most sites there is a significant percentage of unknown wares, but this is most apparent at the survey sites. Red on White Ware is predominant at Troulli and Orga in the North, but it also represents between 2-5% of wares at all sites except Angastromeni. Red Monochrome Painted Ware is well represented at all sites except Orga, and the proportion of CW is evenly distributed at all sites.

This pattern of distribution corroborates the analyses above, illustrating that RW Ware is more common in the South than Cb Ware is in the North. It also highlights the obvious divide between the North and the South, represented by the greater proportion of RW motifs and Cb motifs in each region.

The even distribution of the primarily functional wares, ie, Coarse Ware, illustrates that leaving design motifs aside, there is a high degree of homogeneity across the island. This is supported by the results from the analysis of shape and component types. It would appear that SCU sites across the island were doing much the same thing at approximately the same time.

7.6.2 - Analysis of the distribution of wares between sites over time

Finally, it is interesting to note changes in the frequency of ware types between sites over time. This was looked at as part of the frequency seriation of sites in Chapter 3, but Chapter 3 was more concerned with the gross changes in the frequency of wares over time. Here, the frequency distributions of ware types have been calculated for the two sites which have internal phasing and

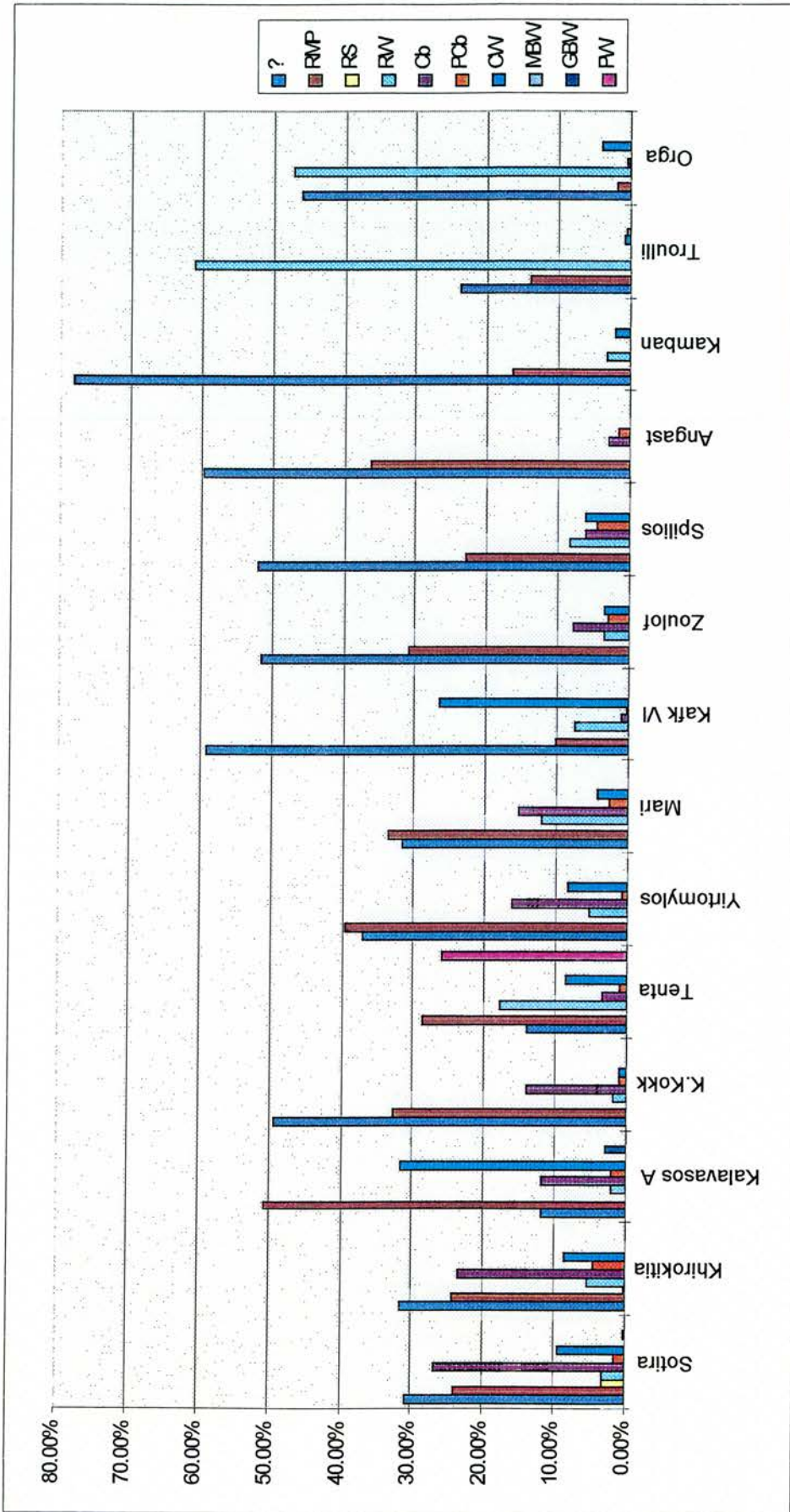


Figure 7.14 - Frequency distribution of ware types, disregarding phasing

are temporally coeval. In Chapter 3, it was shown that the Early Phase at Troulli is contemporary with Sotira Phase 1. It is also shown that the Late Phase at Troulli is contemporary with Sotira Phase 3. Figure's 7.15 and 7.16 below, illustrate the relationship between ware types over time at Sotira and Troulli.

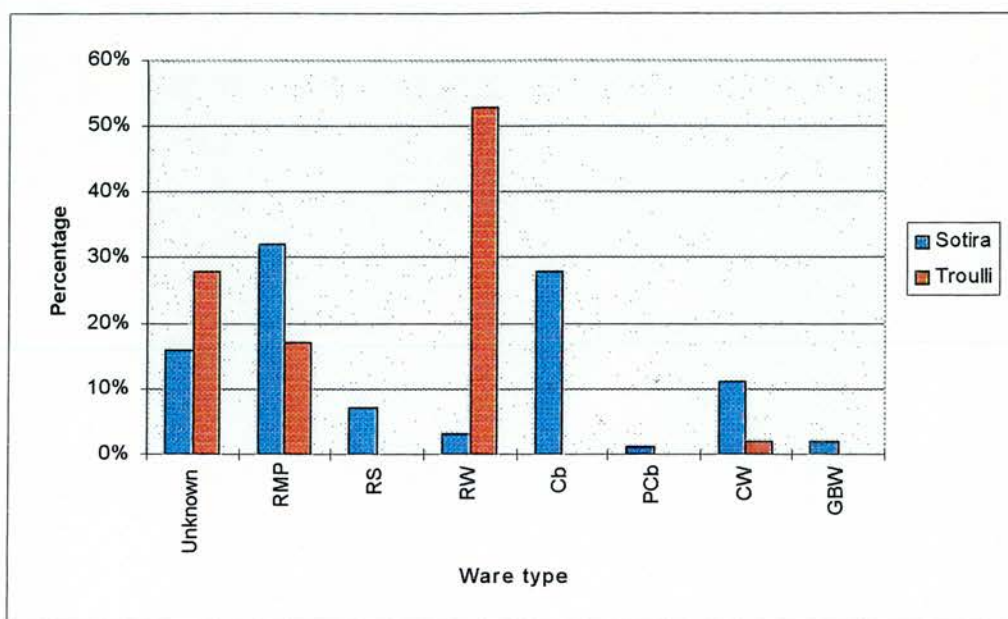


Figure 7.15 - Frequency distribution of ware types in Phase 1 of Sotira and Troulli, Early Phase

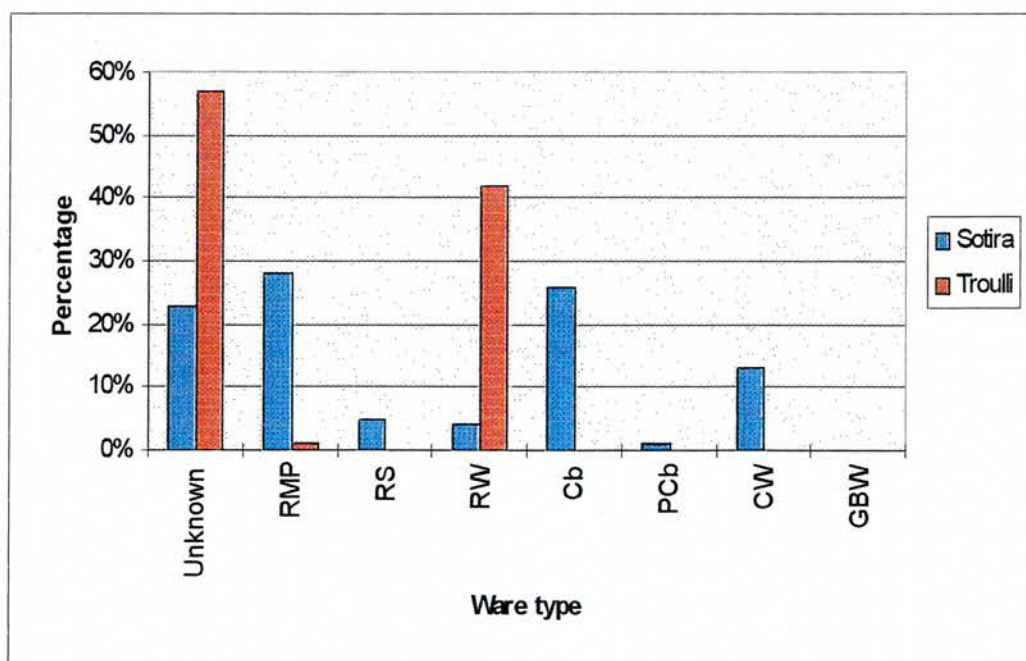


Figure 7.16 - Frequency distribution of ware types in Phase 3 of Sotira and Troulli Late Phase

Sotira exhibits almost no variation in the frequency occurrence of wares over time. The same trend was noted in morphology (Section 7.4.1.2) and in design (Section 7.5.3), indicating that Sotira is either a short lived site, or extremely conservative. Although the frequency of unknown sherds has increased between the Early and Late Phases at Troulli, it too exhibits very little variation over time in the frequency of ware types. This is in contrast to shapes (Section 7.4.1.2), which undergo a shift from equal proportions of open and closed vessels, to mainly open vessels in the Late Phase. However, motifs also do not alter significantly at Troulli over time (Section 7.5.3), an increase in rim bands being the only observable change. Evidence from Chapter 3, mentioned above, would indicate that both sites are certainly of short duration compared to sites such as Philia and Vrysi, but there is circumstantial evidence (discussed in Chapter 8) to suggest that both Troulli and Sotira were also two of the more conservative SCU sites.

7.7 - Summary

In addition to the sharp bi-polarity between the south-central region and the North, there is also small differences between sites in the frequency and distribution of particular shapes, designs and ware types. Even so, the degree of variation apparent in all other attributes is distinctly less than that in design motifs. The evidence suggests that design is the primary attribute that indicates stylistic diversity.

In the following chapter, the total sherd samples from Philia, Vrysi and Troulli will be analysed for trends in design variation. The data comes not from museum samples, but from the original excavation data, and therefore cannot be directly compared with the museum samples presented in the current chapter. However, the two chapters form the basis of a total study of all the available sherd collections from SCU Cyprus. Therefore, summary conclusions are not presented at the end of this chapter, but will be included in the overall conclusions at the end of Chapter 8.

Kalahasos Survey Sites																					
SITE	Dhall	Kala-A	K.Kokk	K.Pam	K.Tenta	Khilok	Philla	Orga	Sotira	Troull	Angast	Kafk II	Kafk VI	Kamban	Marl	Markods	Spillos	Yirtom	Zoulof	Argak	Latom
SHAPE																					
unknown	3.3%			8.7%		5.5%	0.1%	16.0%	0.6%	3.0%											
open	40.0%	37.5%	56.5%	15.5%	40.3%	32.0%	45.0%	38.0%	47.2%	46.0%	73.6%	71.8%	59.6%	64.8%	52.9%	57.5%	54.1%	57.2%	73.1%	76%	65%
closed	31.1%	42.7%	29.4%	79.1%	50.2%	52.0%	24.8%	36.0%	40.6%	45.0%	24.0%	28.2%	21.2%	33.0%	41.8%	40.0%	39.6%	33.0%	21.1%	18%	25%
1		3.1%	3.9%		0.2%	1.0%	9.7%	4.0%	1.7%	2.0%	0.8%				1.0%	2.5%		1.4%	2.3%	4%	2.5%
2		0.2%			trace	trace	2.5%		trace												
3		0.2%	0.5%				0.5%		trace												
4		0.2%			0.9%		0.8%		0.1% trace				0.3%								
5						0.3%	0.2%	1.0%	0.3%	2.5%											
6	1.1%			2.3%	0.3%	0.1%	1.6%	1.0%	trace				1.6%								
7							trace		trace												
8							trace		trace												
10									trace												
20																					
21		0.3%				0.7%	0.2%		trace	0.1%											
22							trace														
23				0.3%					trace												
24									trace												
25									trace												
26									trace												
27									trace	trace											
31	3.3%								trace												
32																					
33																					
34																					
35																					
36																					
37																					
38																					
39																					
41																					
42									trace												
44									trace												
45									trace												
46									trace												

Table 7.2 - Percentage frequency of each shape by site, disregarding phasing

Kalavassos Survey Sites																						
SITE	Dhali	Kala-A	K.Kokk	K.Pam	K.Tenta	Khirok	Philia	Orga	Sotira	Troulli	Angast	Kafk II	Kafk VI	Kamban	Mari	Markods	Spillos	Yirtom	Zoulof	Argak	Latom	
47							trace															
48							trace															
51							0.4%		0.2%						0.5%							
52		0.3%			0.3%	0.1%	1.3%		0.5%					1.1%								
53							trace		trace													
54							trace															
55					0.2%	trace																
56							0.1%															
57							0.2%		trace													
59							trace		trace					1.1%								
60							trace		trace	0.1%												
62		trace							0.2%				1.6%									
63	4.4%	4.3%			0.3%	0.7%	0.6%		0.9%				15.0%							0.6%	2%	
64	16.7%	10.9%	1.0%	2.8%	7.2%	7.0%	2.0%	4.0%	7.5%	0.7%	1.6%				3.8%		6.3%	7.6%	2.9%		7.5%	
66						0.2%			trace													
67						trace			trace													
68							1.7%		trace													
69																						
71							0.3%															
72							trace															
73							0.2%															
74							0.1%															
75							0.1%															
TOTAL %	99.9%	99.7%	100%	100%	99.9%	99.6%	99.5%	100%	99.8%	99.5%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Total no.	90	1466	207	290	1857	4624	2427	165	31440	1759	129	39	307	91	187	40	48	140	175	50	40	

KEY

Dhali = Dhali Agriadi	Khirok = Khiroktia Vounoi	Troulli = Klepini Troulli	Kamban = Kalavassos Kambanaris	Yirtom = Kalavassos Yirtomylos
Kala-A = Kalavassos Site A	Philia = Philia Drakos A	Angast = Kalavassos Angastromeni	Mari = Mari Paliambela	Zoulof = Kalavassos Zouloftithes
K.Kokk = Kalavassos Kokkinoyia	Orga = Orga Paliatonia	Kafk II = Kalavassos Kafkalia II	Markotis = Kalavassos Markotis	Argak = Kalavassos Argakia East
K.Tenta = Kalavassos Tenta	Sotira = Sotira Teppes	Kafk VI = Kalavassos Kafkalia VI	Spillos = Kalavassos Spillos	Latom = Tokhni Latomaes

Table 7.2 - Percentage frequency of each shape by site, disregarding phasing

SITE	Kalavassos Survey Sites																						
	Dhall	Kala-A	K.Kokk	K.Pam	K.Tenta	Khirok	Philla	Orga	Sotira	Troulli	SHAPE	Angast	Kafk II	Kafk VI	Kamban	Marl	Markotils	Spillos	Yirtom	Zoulof	Argak	Latom	
unknown	3		18				250	3	27	183	49												
open	33	550	117	45	749		1480	1100	61	14842	811	95	28	183	59	99	23	26	80	128	38	26	
closed	28	626	61	229	933		2411	602	60	12779	801	31	11	65	30	78	16	19	46	37	9	10	
1		46	8		3		40	235	7	543	30	1				2	1		2	4	2	1	
2		3			1		1	60		10	4												
3		3	1					13		2													
4		3			16			19		27	1			1									
5							13	6	1	82	45												
6				7	6		5	39	2	4				5									
7								1		1													
8								1															
10										2													
21		5					34	6		9	2												
22								1															
23										4	1												
24							1			1													
25							3							2									
26							1	1		5													
27							3	2		3	1												
31	4							78		1													
32	2							7															
33								2															
34							18																
35							2																
36	1						12																
37							15																
38							3																
39							31																
41							5			1													
42							1																
44							1																
45							1			1													
46							1																
47							1																

Table 7.3 - Number of sherds for each shape by site, disregarding phasing
253

Kalavassos Survey Sites																						
SITE	Dhall	Kala-A	K.Kokk	K. Pam	K.Tenta	Khirok	Philla	Orga	Sotira	Troulli	Angast	Kafk II	Kafk VI	Kamban	Mari	Markotis	Spilios	Yirtom	Zoulof	Argak	Latom	
48							1															
51							9		69						1							
52		5			6	5	32		145					1								
53									2													
54							1															
55					3	3																
56							3															
57							5		6													
58																						
59						2			13						1							
60							1		1													
62		1							50				5									
63	4	64			6	31	14		290													
64	15	160	2	8	134	330	50	7	2347	13	2	46	7				3	11	5	1	3	
66						8			6													
67						3	28		9													
68									2													
69																						
71							7															
72							1															
73							5															
74							2															
75							2															
TOTAL %																						
Total no.	90	1466	207	290	1857	4624	2427	165	31440	1759	129	39	307	91	187	40	48	140	175	50	40	

KEY

Dhall = Dhali Agridhi	Khirok = Khirokittia Vounoi	Troulli = Klepini Troulli	Kamban = Kalavassos Kambanaris	Yirtom = Kalavassos Yirtomylos
Kala-A = Kalavassos Site A	Philla = Philla Drakos A	Angast = Kalavassos Angastromeni	Mari = Mari Paliambela	Zoulof = Kalavassos Zoulofidithes
K.Kokk = Kalavassos Kokkinoyia	Orga = Orga Paliatonia	Kafk II = Kalavassos Kafkalia II	Markotis = Kalavassos Markotis	Argak = Kalavassos Argakia East
K.Tenta = Kalavassos Tenta	Sotira = Sotira Teppes	Kafk VI = Kalavassos Kafkalia VI	Spilios = Kalavassos Spilios	Latom = Tokhni Latomaes

Table 7.3 - Number of sherds for each shape by site, disregarding phasing

SITE	Kalavassos Survey Sites																						
	Dhall	Kala-A	K.Kokk	K. Pam	K. Tentia	Khirok	Philla	Orga	Sotira	Troulli	Angast	Kafk II	Kafk VI	Kamban	Marl	Marktosis	Spillos	Yirtom	Zoulof	Argak	Latom		
	SHAPE																						
Bowls	1	83.6%	88.9%		11.5%	67.8%	62.8%	70%	80.9%	37.5%	100%				100%			100%	100%	100%	100%	100%	
	2	5.5%		3.8%	1.7%	16.0%			1.5%	5%													
	3	5.5%	11.1%				3.5%		0.3%														
	4	5.5%		61.5%			5.1%		4%	1.3%		16.7%											
	5				22%		1.6%	10%	12.2%	56.3%													
	6		100%	23.1%	8.5%	10.4%	20%	0.6%	0.1%														
	7						0.3%																
	8						0.3%																
	9																						
	10								0.3%														
Total		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
H/mths	21	100%				81.0%	60%	100%	40.9%	50%													
	22						10%																
	23			100%					18.2%	25%													
	24				2.4%				4.5%														
	25				7.1%																		
	26				2.4%		10%		22.7%														
	27				7.1%		20%		13.6%	25%													
Total		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
MBW	31	57.1%					46.4%		100%														
	32	28.6%					4.2%																
	33						1.2%																
	34							10.7%															
	35						1.2%																
	36	14.3%					7.1%																
	37						9%																
	38						1.8%																
	39						18.5%																
Total		100%					100%		100%														
MBW H/M	41						45.5%		50%														
	42						9.1%																
	43																						
	44																						
	45						9.1%		50%														
	46						9.1%																
	47						9.1%																

Table 7.4 - Percentage frequency of each shape by morphological categories

Kalavassos Survey Sites																							
SITE	Dhall	Kala-A	K.Kokk	K. Pam	K.Tenta	Khirok	Philia	Orga	Sotira	Troulli	Angast	Kafk II	Kafk VI	Kamban	Mari	Markotis	Spillos	Yirtom	Zoulof	Argak	Latom		
48							9.1%																
Total							100%		100%														
C/W							6.3%		2.3%						12.5%								
52		2.2%			4%	1.3%	22.4%		4.9%					50%									
53									trace														
54							0.7%																
55					2%	0.8%																	
56							2.1%																
57							3.5%		0.2%														
58																							
59						0.5%			0.4%					50%									
60							0.7%		trace	7.1%													
61																							
62		0.4%							1.7%				9.8%										
63	21.1%	27.8%			4%	8.1%	9.8%		9.9%														
64	78.9%	69.6%	100%	100%	89.9%	86.4%	35%	100%	79.8%	92.9%	100%	100%	90.2%	87.5%	100%	100%	100%	100%	100%	16.7%	100%	100%	
65																							
66									0.2%														
67						2.1%			0.40%														
68						0.8%	19.6%		trace														
69																							
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Jars	71						41.2%																
72							5.9%																
73							29.4%																
74							11.8%																
75							11.8%																
Total							100%																

KEY													
Dhall = Dhali Agridhi	Khirok = Khirokklia Vounoi	Troulli = Klepini Troulli	Kamban = Kalavassos Kambanaris	Yirtom = Kalavassos Yirtomylos									
Kala-A = Kalavassos Site A	Philia = Philia Drakos A	Angast = Kalavassos Angastromeni	Mari = Mari Paliambela	Zoulof = Kalavassos Zoulofididhes									
K.Kokk = Kalavassos Kokkinoyia	Orga = Orga Paliatonia	Kafk II = Kalavassos Kafkalia II	Markotis = Kalavassos Markotis	Argak = Kalavassos Argakia East									
K.Tenta = Kalavassos Tenta	Sotira = Sotira Teppes	Kafk VI = Kalavassos Kafkalia VI	Spillos = Kalavassos Spillos	Latom = Tokhni Latomaes									

Table 7.4 - Percentage frequency of each shape by morphological categories
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SITE	Kalavaos Survey Sites																					
	Dhail	Kala-A	K.Kokk	K. Pam	K.Tenta	Khrook	Philla	Orga	Sotira	Troulli	SHAPE	Angast	Kafk II	Kafk VI	Kamban	Marl	Markotlis	Spilios	Yirtom	Zoulof	Argak	Latom
Bowls 1		46	8		3	40	235	7	543	30		1				2	1		2	4	2	1
2		3			1	1	60		10	4												
3		3	1				13		2													
4		3			16		19		27	1				1								
5						13	6	1	82	45												
6				7	6	5	39	2	4						5							
7							1		1													
8							1															
9																						
10									2													
Total		55	9	7	26	59	374	10	671	80		1		6		2	1		2	4	2	1
H/rmths 21		5				34	6		9	2												
22							1															
23				1					4	1												
24						1			1													
25						3								2								
26						1	1		5													
27						3	2		3	1												
Total		5		1		42	10		22	4				2								
MBW 31	4						78		1													
32	2						7															
33							2															
34							18															
35							2															
36	1						12															
37							15															
38							3															
39							31															
Total	7						168		1													
MBW H/M 41							5		1													
42							1															
43																						
44							1															
45							1		1													
46							1															
47							1															

Table 7.5 - Breakdown of the numbers of each shape within its morphological category

Kalavassos Survey Sites																					
SITE	Dhall	Kala-A	K.Kokk	K.Pam	K.Tenta	Khirok	Philia	Orga	Sotira	Troulli	Angast	Kafk II	Kafk VI	Kamban	Mari	Markotis	Spilios	Yirtom	Zoulof	Argak	Latom
Total	48						1														
C/W	51						11		2												
52		5			6	5	32		69					1							
53									145												
54									2												
55					3	3	1														
56							3														
57							5		6												
58																					
59						2			13					1							
60							1		1												
61																					
62		1							50				5								
63	4	64			6	31	14		290												
64	15	160	2	8	134	330	50	7	2347	13	2		46	7			3	11	5	1	3
65																					
66						8			6												
67						3	28		9												
68									2												
69																					
Total	19	230	2	8	149	382	143	7	2940	14	2		51	2	8		3	11	6	1	3
Jars	71						7														
72							1														
73							5														
74							2														
75							2														
Total							17														

KEY

Dhall = Dhali Agrithi	Khirok = Khirokittia Vounoi	Troulli = Klepini Troulli	Kamban = Kalavassos Kambanaris	Yirtom = Kalavassos Yirtomylos
Kala-A = Kalavassos Site A	Philia = Philia Drakos A	Angast = Kalavassos Angastromeni	Mari = Mari Paliambela	Zoulof = Kalavassos Zoulofididhes
K.Kokk = Kalavassos Kokkinoyia	Orga = Orga Paliatonia	Kafk II = Kalavassos Kafkalia II	Markotis = Kalavassos Markotis	Argak = Kalavassos Argakia East
K.Tenta = Kalavassos Tenta	Sotira = Sotira Teppes	Kafk VI = Kalavassos Kafkalia VI	Spilios = Kalavassos Spilios	Latom = Tokhni Latomaes

Table 7.5 - Breakdown of the numbers of each shape within its morphological category

SITE	Kalavasos Survey Sites																				
	Kala-A	K.Kokk	K. Pam	K. Tenta	Khirok	Philla	Orga	Sotira	Troulli	Angast	Kafk II	Kafk VI	Kamban	Marl	Markotis	Spillos	Ylirtom	Zoulof	Argak	Latom	
COMPONENT																					
Rims 0	8.3%				1.3%	17.6%		5.1%	20%												
1	40.8%	71.4%		11%	71.4%	34.7%	35.7%	65.8%	52.5%	86.7%	67%	45.7%	50%	88.2%	100%	100%	23%	91.30%	40%		
2	14.2%		42.9%	66.9%	4.5%	14.7%	14.3%	3.8%	6.7%	6.7%		40%	33.3%					4.30%			
3	1.4%				2.4%	3.9%	14.3%	0.5%	0.8%								7.7%				
4	10.1%		57.1%	0.6%	0.8%	11%	7.1%	1.4%	4.2%					5.90%							
5	0.50%					4.8%		0.7%	4.5%												
6					0.3%	4.3%	7.1%	0.1%													
7	21.1%	28.6%		7.8%	19.3%	6.2%	21.4%	22.7%	9.2%	6.7%	33%	8.6%	16.7%	5.90%			69.2%	4.30%	60%	100%	
8						0.6%		0.1%													
9						0.2%															
10	1.8%			13.6%				trace	0.3%												
11	1.4%					2.1%		trace	0.8%												
12	0.5%								0.8%												
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Necks 20	50%		100%	92.80%	72.7%	6.1%	50%	68.2%	69%	50%	50%	50%		100%	100%		100%	67%			100%
21	16.6%				11.7%	30.3%		8.7%	10.3%												
22					1.3%	15.2%			3.4%												
23				7.20%				2.1%													
24	16.6%				6.5%	21.2%		16.1%	10.3%	50%			50%					33%			
25					2.6%	3%		2.5%													
26						3%															
27						18.2%		0.4%	6.9%												
28																					
29						3%		1.2%													
30	16.6%																				
31					5.2%		50%	0.40%													
32								0.4%													
33																					
34																					
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
O/base 41	12.5%					39.6%		17.8%	16.7%								100%				100%
42	75%	50%	100%	30.8%	42.9%	24.5%		17.3%	55.6%	50%			50%								50%
43		50%		23.1%	42.9%	15%		41.4%		50%											50%
44						3.8%		3.7%													100%
45						1.9%	100%	0.5%													
46								10.5%				94.7%									

Table 7.6 - Percentage frequencies of each component type within its specific category

SITE	Kalavassos Survey Sites																						
	Kala-A	K.Kokk	K.Pam	K.Tenta	Khirok	Philia	Orga	Sotira	Troulli	Angast	Kafk II	Kafk VI	Kamban	Mari	Markotis	Spilios	Yirtom	Zoulof	Argak	Latom			
47	12.5%			46.2%	14.3%	15.1%		8.9%	27.8%														
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%					100%	100%	100%		100%		
C/base 51	33.3%				15.4%	12.5%		48.4%														100%	
52					46.2%	29.2%		17.9%															
53						8.3%		1.1%															
54			75%	28.6%		12.5%																	
55	66.7%	100%	25%	57.1%	30.8%	16.7%		23.2%	75%			100%											
56								1.1%															
57				14.3%																			
58					7.7%	20.8%		8.4%	25%														
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%									100%	
Spout 61						2.9%		7.7%															
62					6.3%	26.5%	100%	28.6%															
63.1	14.3%	100%			37.5%	29.4%		3.6%														33.3%	
63.2					18.8%																		
64	28.6%					14.7%		4.2%															
65						5.9%		17.6%															
66						2.9%		3%															
67						11.8%		35.1%															
68	57.1%				37.5%	5.9%		100%															
Total	100%	100%			100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

KEY	
Dhali = Dhali Agridhi	Khirok = Khirokitia Vounoi
Kala-A = Kalavassos Site A	Philia = Philia Drakos A
K.Kokk = Kalavassos Kokkinoyia Orga = Orga Palialonia	Orga = Orga Palialonia
K.Tenta = Kalavassos Tenta	Sotira = Sotira Teppes
Troulli = Klepini Troulli	
Angast = Kalavassos Angastromeni	
Kafk II = Kalavassos Kafkalia II	
Kafk VI = Kalavassos Kafkalia VI	
Kamban = Kalavassos Kambanaris	Yirtom = Kalavassos Yirtomylos
Mari = Mari Paliambela	Zoulof = Kalavassos Zoulofidithes
Markotis = Kalavassos Markotis	Argak = Kalavassos Argakia East
Spilios = Kalavassos Spilios	Latom = Tokhni Latomaes

Table 7.6 - Percentage frequencies of each component type within its specific category

Kalavassos Survey Sites																					
SITE	Kala-A	K.Kokk	K. Pam	K.Tenta	Khirok	Philla	Orga	Sotira	Troulli	Angast	Kafk II	Kafk VI	Kamban	Marl	Markotis	Spillos	Ylirtom	Zoulof	Argak	Latom	
Rilms 0	18					5	85	147	76												
1	89	20		17	267	168	5	1890	199	13	2	16	3	15	3	2	3	21		2	
2	31		3	103	17	71	2	97	26	1		14	2					1			
3	3				9	19	2	15	3												
4	22		4	1	3	53	1	41	16					1			1				
5	1					23		21	17												
6					1	21	1	4				2									
7	46	8		12	72	30	3	653	36	1	1	3	1	1			9	1	3	3	
8						3		2													
9						1															
10	4			21				1	1												
11	3					10		1	3												
12	1							3	3												
Total	218	28	7	154	374	484	14	2872	379	15	3	35	6	17	3	2	13	23	5	3	
Necks 20	3		4	13	56	2	1	165	40	1		1		5	1			2		1	
21	1				9	10		21	6			1									
22					1	5			2												
23				1				5													
24	1				5	7		39	6	1			1					1			
25					2	1		6													
26						1	1	1													
27						6		1	4												
28																					
29						1		3					1								
30	1																				
31					4			1													
32																					
33																					
34																					
Total	6		4	14	77	33	2	242	58	2	2	2	2	5	1			3		1	
O/base 41	1					21		34	6								1				
42	6	2	3	4	3	13		33	20	1		1						1			
43		2		3	3	8		79		1								1			
44						2		7												1	
45						1		1													
46								20				18									

Table 7.7 - Number of each component type within its specific category

SITE	Kalavassos Survey Sites																				
	Kala-A	K.Kokk	K. Pam	K.Tenta	Khirok	Philia	Orga	Sotira	Troulli	Angast	Kafk II	Kafk VI	Kamban	Mari	Markotis	Spilios	Yirtom	Zoulof	Argak	Latom	
47	1				6	1	8	17	10												
Total	8	4	3	13	7	53	2	191	36	2	19						1	2		1	
C/base 51	1				2	3		46													1
62					6	7		17													
63						2		1													
64			3	2		3															
65	2	2	1	4	4	4		22	9		1		1								
66								1													
67				1																	
68						1	5	8	3												
Total	3	2	4	7	13	24	24	95	12	1	1										1
Spout 61						1		13													
62					2	9	2	48													
63.1	1	3			12	10		6			5										1
63.2					6																
64	2					5		7													
65						2		30													
66						1															
67						4		5													1
68	4				12	2		59		1	2										1
Total	7	3			32	34	2	168		1	7						1				3

KEY

Dhali = Dhali Agridhi	Khirok = Khirokitta Vounoi	Troulli = Klepini Troulli	Kamban = Kalavassos Kambanaris	Yirtom = Kalavassos Yirtomylos
Kala-A = Kalavassos Site A	Philia = Philia Drakos A	Angast = Kalavassos Angastromeni	Mari = Mari Pallambela	Zoulof = Kalavassos Zoulofidhes
K.Kokk = Kalavassos Kokkinoyia	Orga = Orga Paliatonia	Kafk II = Kalavassos Kafkalia II	Markotis = Kalavassos Markotis	Argak = Kalavassos Argakia East
K.Tenta = Kalavassos Tenta	Sotira = Sotira Teppes	Kafk VI = Kalavassos Kafkalia VI	Spilios = Kalavassos Spilios	Latom = Tokhni Latomaes

Table 7.7 - Number of each component type within its specific category

Motif 1	Shape							
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total
Kala-A	3	3%	4	4%			7	3%
K.Kokk	1	7%	1	8%			2	6%
K.Tenta (Early)			2	10%			2	4%
K.Tenta (Late)	17	6%	34	10%			51	6%
Khirok	16	3%	34	5%			50	2%
Philia	274	22%	282	23%	4	1%	560	19%
Sotira 1	1	trace	1	trace			2	trace
Sotira 2	11	1%	14	1%	31	2%	56	1%
Sotira 3	1	trace	9	3%			10	1%
Troulli (Early)	21	13%	24	15%	1	1%	46	11%
Troulli (Late)	7	44%	8	47%			15	31%
Orga	2	20%					2	5%
Total	354		413		36		803	
% of shape	6.7%		8.3%		0.9%		5.8%	

Motif 2	Shape							
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total
Kala-A			1	1%			1	trace
K.Kokk	1	7%					1	3%
K.Tenta (Early)			1	13%			1	2%
K.Tenta (Late)	4	1%	4	1%			8	1%
Khirok	3	trace	3	trace	4	1%	10	trace
Philia	54	4%	46	4%	37	9%	137	5%
Sotira 1	1	trace	1	trace			2	trace
Sotira 2	4	trace	27	1%	15	1%	46	1%
Sotira 3	2	1%	7	2%	2	1%	11	1%
Troulli (Early)	18	11%	15	9%	3	3%	36	8%
Troulli (Late)			2	12%			2	4%
Orga					5	36%	5	14%
Total	87		107		66		260	
% of shape	1.7%		2.2%		1.8%		1.9%	

Motif 3	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok				1	trace			1	trace
Philia	1	trace		5	trace	24	6%	30	1%
Sotira 1									
Sotira 2	1	trace		4	trace			5	trace
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total	2		10		24			36	
% of shape	trace		0.2%		0.7%			0.3%	

Table 7.12 - Percentage frequency of each motif, relative to all other motifs, at the eight major sites

Motif 4	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A	2	2%	2	2%				4	2%
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)	1	trace	2	1%				3	trace
Khirok	5	1%	3	trace				8	trace
Philia	25	2%	31	3%	1	trace		57	2%
Sotira 1									
Sotira 2	1	trace	6	trace	1	trace		8	trace
Sotira 3									
Troulli (Early)	9	5%	2	1%				11	3%
Troulli (Late)			1	6%				1	2%
Orga									
Total	43		47		2			92	
% of shape	0.8%		0.9%		0.1%			0.7%	

Motif 5	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)	2	1%	1	trace	3	2%		6	1%
Khirok									
Philia	21	2%	25	2%	3	1%		49	2%
Sotira 1									
Sotira 2			1	trace				1	trace
Sotira 3									
Troulli (Early)			3	2%	1	1%		4	1%
Troulli (Late)									
Orga			1	8%				1	3%
Total	23		31		7			61	
% of shape	0.4%		0.6%		0.2%			0.4%	

Motif 6	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)	1	trace	11	3%				12	2%
Khirok									
Philia			1	trace				1	trace
Sotira 1									
Sotira 2									
Sotira 3									
Troulli (Early)			1	1%	1	1%		2	trace
Troulli (Late)									
Orga			1	8%				1	3%
Total	1		14		1			16	
% of shape	trace		0.3%		trace			0.1%	

Table 7.12 - Percentage frequency of each motif, relative to all other motifs, at the eight major sites

Motif 7	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)				10	3%			10	1%
Khirok	1	trace		3	trace			4	trace
Philia	7	1%		2	trace	2	trace	11	trace
Sotira 1									
Sotira 2				1	trace	1	trace	2	trace
Sotira 3									
Troulli (Early)									
Troulli (Late)				1	6%			1	2%
Orga									
Total	8			17		3		28	
% of shape	0.2%			0.3%		trace		0.2%	

Motif 8	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A	1	1%						1	trace
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok	1	trace		2	trace	2	trace	5	trace
Philia	19	2%		12	1%	3	1%	34	1%
Sotira 1	1	trace		1	trace			2	trace
Sotira 2	3	trace		13	1%			16	trace
Sotira 3	1	trace				6	2%	7	1%
Troulli (Early)									
Troulli (Late)	1	6%		1	6%			2	4%
Orga									
Total	27			29		11		67	
% of shape	0.5%			0.6%		0.3%		0.5%	

Motif 9	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok	1	trace						1	trace
Philia	6	trace		8	1%	1	trace	15	1%
Sotira 1									
Sotira 2	1	trace						1	trace
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total	8			8		1		17	
% of shape	0.2%			0.2%		trace		0.1%	

Table 7.12 - Percentage frequency of each motif, relative to all other motifs, at the eight major sites

Motif 10	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok				2	trace			2	trace
Philia	21	2%	8	1%				29	1%
Sotira 1									
Sotira 2				2	trace			2	trace
Sotira 3									
Troulli (Early)									
Troulli (Late)	1	6%						1	2%
Orga	1	10%	1	8%	1	7%	3	3	8%
Total	23		13		1		37		
% of shape	0.4%		0.3%		trace		0.3%		

Motif 11	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A	1	1%	1	1%	1	2%	3	1%	
K.Kokk									
K.Tenta (Early)					1	5%	1	11%	
K.Tenta (Late)	1	trace	1	trace	2	1%	4	1%	
Khirok	4	1%			5	1%	9	trace	
Philia	18	1%	9	1%	1	trace	28	1%	
Sotira 1	1	trace			2	1%	3	trace	
Sotira 2	1	trace	2	trace	5	trace	8	trace	
Sotira 3			2	1%			2	trace	
Troulli (Early)	4	2%	3	2%	3	3%	10	2%	
Troulli (Late)					1	6%	1	2%	
Orga					2	14%	2	5%	
Total	30		18		23		71		
% of shape	0.6%		0.4%		0.6%		0.5%		

Motif 12	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A				1	1%			1	trace
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)						3	2%	3	trace
Khirok	3	trace			2	trace	5	trace	
Philia	5	trace	3	trace	3	1%	11	trace	
Sotira 1			1	trace	1	trace	2	trace	
Sotira 2	3	trace	2	trace	6	trace	11	trace	
Sotira 3	2	1%			1	trace	3	trace	
Troulli (Early)	4	2%	8	5%	3	3%	15	3%	
Troulli (Late)					2	13%	2	4%	
Orga									
Total	17		15		21		53		
% of shape	0.3%		0.3%		0.6%		0.4%		

Table 7.12 - Percentage frequency of each motif, relative to all other motifs, at the eight major sites

Motif 13	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok		1 trace				1 trace		2 trace	
Philia		2 trace		4 trace		2 trace		8 trace	
Sotira 1									
Sotira 2									
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total		3		4		3		10	
% of shape		0.1%		0.1%		0.1%		0.1%	

Motif 14	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)				3	1%	3	2%	6	1%
Khirok									
Philia		2 trace		5 trace		3	1%	10 trace	
Sotira 1									
Sotira 2									
Sotira 3						1 trace		1 trace	
Troulli (Early)									
Troulli (Late)									
Orga									
Total		2		8		7		17	
% of shape		trace		0.2%		0.2%		0.1%	

Motif 15	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)						7	4%	7	1%
Khirok									
Philia		1 trace		5 trace		6	1%	12 trace	
Sotira 1									
Sotira 2						1 trace		1 trace	
Sotira 3						1 trace		1 trace	
Troulli (Early)									
Troulli (Late)									
Orga									
Total		1		5		15		21	
% of shape		trace		0.1%		0.4%		0.2%	

Table 7.12 - Percentage frequency of each motif, relative to all other motifs, at the eight major sites

Motif 16	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A						1	2%	1	trace
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok						1	trace	1	trace
Philia	86	7%	89	7%	16	4%	191	7%	
Sotira 1									
Sotira 2	16	1%	1	trace			17	trace	
Sotira 3			1	trace			1	trace	
Troulli (Early)	1	1%					1	trace	
Troulli (Late)			1	6%	2	13%	3	6%	
Orga	1	10%	1	8%			2	5%	
Total	104		93		20		217		
% of shape	2.0%		1.9%		0.5%		1.6%		

Motif 17	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A	1	1%						1	trace
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok						1	trace	1	trace
Philia	30	2%	33	3%	8	2%	71	2%	
Sotira 1			1	trace			1	trace	
Sotira 2			1	trace	1	trace	2	trace	
Sotira 3									
Troulli (Early)			1	1%			1	trace	
Troulli (Late)									
Orga	1	10%	4	31%	1	7%	6	16%	
Total	32		40		11		83		
% of shape	0.6%		0.8%		0.3%		0.6%		

Motif 18	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk						1	17%	1	3%
K.Tenta (Early)									
K.Tenta (Late)						1	1%	1	trace
Khirok				1	trace			1	trace
Philia	8	1%	9	1%	7	2%	24	1%	
Sotira 1	1	trace					1	trace	
Sotira 2	2	trace					2	trace	
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total	11		10		9		30		
% of shape	0.2%		0.2%		0.2%		0.2%		

Table 7.12 - Percentage frequency of each motif, relative to all other motifs, at the eight major sites

Motif 19	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)				2	10%			2	4%
K.Tenta (Late)									
Khirok									
Philia	62	5%	75	6%	10	2%	147	5%	
Sotira 1									
Sotira 2	19	1%						19	trace
Sotira 3									
Troulli (Early)									
Troulli (Late)	1	6%						1	2%
Orga									
Total	82		77		10		169		
% of shape	1.6%		1.6%		0.3%		1.2%		

Motif 20	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok									
Philia	8	1%	3	trace	4	1%	15	1%	
Sotira 1									
Sotira 2									
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total	8		3		4		15		
% of shape	0.2%		trace		0.1%		0.1%		

Motif 21	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok									
Philia	3							3	trace
Sotira 1									
Sotira 2									
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total	3							3	
% of shape	trace							trace	

Table 7.12 - Percentage frequency of each motif, relative to all other motifs, at the eight major sites

Motif 22	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok									
Philia	12	1%	9	1%	3	1%	24	1%	
Sotira 1									
Sotira 2									
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total	12		9		3		24		
% of shape	0.2%		0.2%		0.1%		0.2%		

Motif 23	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok	2 trace						2 trace		
Philia	28	2%	5 trace		2 trace		35	1%	
Sotira 1									
Sotira 2									
Sotira 3									
Troulli (Early)	1	1%	2	1%			3	1%	
Troulli (Late)									
Orga					1	7%	1	3%	
Total	31		7		3		41		
% of shape	0.6%		0.1%		0.1%		0.3%		

Motif 24	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok									
Philia	1 trace		2 trace		3	1%	6 trace		
Sotira 1									
Sotira 2									
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total	1		2		3		6		
% of shape	trace		trace		0.1%		trace		

Table 7.12 - Percentage frequency of each motif, relative to all other motifs, at the eight major sites

Motif 25	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok									
Philia		1	trace					1	trace
Sotira 1									
Sotira 2									
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total		1						1	
% of shape		trace						trace	

Motif 26	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok									
Philia		1	trace	1	trace	1	trace	3	trace
Sotira 1									
Sotira 2									
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total		1		1		1		3	
% of shape		trace		trace		trace		trace	

Motif 27	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok		1	trace					1	trace
Philia		1	trace	2	trace	5	1%	8	trace
Sotira 1									
Sotira 2									
Sotira 3									
Troulli (Early)						1	1%	1	trace
Troulli (Late)									
Orga									
Total		2		2		6		10	
% of shape		trace		trace		0.2%		0.1%	

Table 7.12 - Percentage frequency of each motif, relative to all other motifs, at the eight major sites

Motif 28	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok									
Philia		1	trace		1	trace		2	trace
Sotira 1						1	trace	1	trace
Sotira 2									
Sotira 3									
Troulli (Early)						1	1%	1	trace
Troulli (Late)									
Orga									
Total		1			1	2		4	
% of shape		trace			trace	trace		trace	

Motif 29	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok									
Philia					2			2	trace
Sotira 1									
Sotira 2									
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total					2			2	
% of shape					trace			trace	

Motif 30	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok									
Philia		14	1%	14	1%	7	2%	35	1%
Sotira 1									
Sotira 2									
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total		14		14		7		35	
% of shape		0.3%		0.3%		0.2%		0.3%	

Table 7.12 - Percentage frequency of each motif, relative to all other motifs, at the eight major sites

Motif 31	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok									
Philia	21	2%	26	2%	1	trace		48	2%
Sotira 1									
Sotira 2									
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total	21		26		1			48	
% of shape	0.4%		0.5%		trace			0.3%	

Motif 32	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)				1	trace			1	trace
Khirok									
Philia				1	trace			1	trace
Sotira 1									
Sotira 2									
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total				2				2	
% of shape				trace				trace	

Motif 33	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)						1	trace	1	trace
Khirok				1	trace			1	trace
Philia	32	3%	21	2%				53	2%
Sotira 1	1	trace		1	trace			2	trace
Sotira 2	1	trace		3	trace	3	trace	7	trace
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga				1	8%			1	3%
Total	34		27		4			65	
% of shape	0.7%		0.5%		0.1%			0.5%	

Table 7.12 - Percentage frequency of each motif, relative to all other motifs, at the eight major sites

Motif 34	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok									
Philia		6	trace		6	trace		12	trace
Sotira 1									
Sotira 2									
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total		6		6				12	
% of shape		0.1%		0.1%				0.1%	

Motif 35	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok									
Philia		13	1%	9	1%	1	trace	23	1%
Sotira 1									
Sotira 2									
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total		13		9		1		23	
% of shape		0.3%		0.2%		trace		0.2%	

Motif 36	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok									
Philia		1	trace	6	trace	3	1%	10	trace
Sotira 1									
Sotira 2				1	trace			1	trace
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total		1		7		3		11	
% of shape		trace		0.1%		0.1%		0.1%	

Table 7.12 - Percentage frequency of each motif, relative to all other motifs, at the eight major sites

Motif 37	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok				1 trace		7	1%	8	trace
Philia	13	1%	7	1%	12	3%	32	1%	
Sotira 1			1 trace					1	trace
Sotira 2	6	trace	5	trace	5	trace	16	trace	
Sotira 3			1 trace					1	trace
Troulli (Early)									
Troulli (Late)									
Orga									
Total	19		15		24		58		
% of shape	0.4%		0.3%		0.6%		0.4%		

Motif 38	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok	12	2%	7	1%	3	trace	22	1%	
Philia	2	trace	14	1%	7	2%	23	1%	
Sotira 1					3	1%	3	trace	
Sotira 2	1	trace	6	trace	6	trace	13	trace	
Sotira 3	1	trace	1	trace	1	trace	3	trace	
Troulli (Early)									
Troulli (Late)									
Orga									
Total	16		28		20		64		
% of shape	0.3%		0.6%		0.5%		0.5%		

Motif 39	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok				1 trace		2	trace	3	trace
Philia	1	trace				1	trace	2	trace
Sotira 1									
Sotira 2				1 trace		1	trace	2	trace
Sotira 3						1	trace	1	trace
Troulli (Early)	1	1%	1	1%	1	1%	3	1%	
Troulli (Late)									
Orga									
Total	2		3		6		11		
% of shape	trace		0.1%		0.2%		0.1%		

Table 7.12 - Percentage frequency of each motif, relative to all other motifs, at the eight major sites

Motif 40	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok									
Philia		4	trace		5	trace		9	trace
Sotira 1						2	1%	2	trace
Sotira 2									
Sotira 3						1	trace	1	trace
Troulli (Early)									
Troulli (Late)									
Orga									
Total		4		5		3		12	
% of shape		0.1%		0.1%		0.1%		0.1%	

Motif 41	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok				1	trace	5	1%	6	trace
Philia		27	2%	10	1%	6	1%	43	1%
Sotira 1		1	trace			2	1%	3	trace
Sotira 2		8	trace	2	trace	2	trace	12	trace
Sotira 3				1	trace	4	1%	5	1%
Troulli (Early)		3	2%					3	1%
Troulli (Late)		1	6%					1	2%
Orga		1	10%					1	3%
Total		41		14		19		74	
% of shape		0.8%		0.3%		0.5%		0.5%	

Motif 42	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok						1	trace	1	trace
Philia		4	trace	18	1%			22	1%
Sotira 1						1	trace	1	trace
Sotira 2									
Sotira 3				1	trace			1	trace
Troulli (Early)		11	7%	13	8%	2	2%	26	6%
Troulli (Late)						2	13%	2	2%
Orga		1	10%			1	7%	2	5%
Total		16		32		7		55	
% of shape		0.3%		0.6%		0.2%		0.4%	

Table 7.12 - Percentage frequency of each motif, relative to all other motifs, at the eight major sites

Motif 43	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok						1	trace	1	trace
Philia		2	trace	18	1%			20	1%
Sotira 1									
Sotira 2									
Sotira 3		1	trace			2	1%	3	trace
Troulli (Early)									
Troulli (Late)									
Orga									
Total		3		18		3		24	
% of shape		0.1%		0.4%		0.1%		0.2%	

Motif 44	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok									
Philia						1	trace	1	trace
Sotira 1									
Sotira 2				1	trace	1	trace	2	trace
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total				1		2		3	
% of shape				trace		trace		trace	

Motif 45	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok						1	trace	1	trace
Philia		9	1%	10	1%	9	2%	28	1%
Sotira 1									
Sotira 2				1	trace	1	trace	2	trace
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total		9		11		11		31	
% of shape		0.2%		0.2%		0.3%		0.2%	

Table 7.12 - Percentage frequency of each motif, relative to all other motifs, at the eight major sites

Motif 46	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok									
Philia			7	1%	5	1%	12	trace	
Sotira 1									
Sotira 2									
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total			7		5		12		
% of shape			0.1%		0.1%		0.1%		

Motif 47	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok									
Philia		1 trace		7	1%	1 trace		9	trace
Sotira 1									
Sotira 2									
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total		1		7		1		9	
% of shape		trace		0.1%		trace		0.1%	

Motif 48	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok									
Philia		3 trace		1 trace				4	trace
Sotira 1									
Sotira 2									
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total		3		1				4	
% of shape		0.1%		trace				trace	

Table 7.12 - Percentage frequency of each motif, relative to all other motifs, at the eight major sites

Motif 49	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A	1		1%			1	2%	2	1%
K.Kokk									
K.Tenta (Early)						1	2%	1	2%
K.Tenta (Late)									
Khirok						2	trace	2	trace
Philia	4	trace		13	1%	2	trace	19	1%
Sotira 1	1	trace						1	trace
Sotira 2									
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total	6			13		6		25	
% of shape	0.1%			0.3%		0.2%		0.2%	

Motif 50	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok									
Philia	1	trace		1	trace			2	trace
Sotira 1									
Sotira 2									
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total	1			1				2	
% of shape	trace			trace				trace	

Motif 51	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok									
Philia	11		1%	12	1%			23	1%
Sotira 1									
Sotira 2									
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total	11			12				23	
% of shape	0.2%			0.2%				0.2%	

Table 7.12 - Percentage frequency of each motif, relative to all other motifs, at the eight major sites

Motif 52	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok									
Philia		1	trace					1	trace
Sotira 1									
Sotira 2									
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total		1						1	
% of shape		trace						trace	

Motif 54	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok									
Philia		1	trace	1	trace			2	trace
Sotira 1									
Sotira 2									
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total		1		1				2	
% of shape		trace		trace				trace	

Motif 55	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A		1	1%					1	trace
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok									
Philia		7	1%	9	1%	7	2%	23	1%
Sotira 1									
Sotira 2				1	trace	1	trace	2	trace
Sotira 3						1	trace	1	trace
Troulli (Early)									
Troulli (Late)									
Orga									
Total		8		10		9		27	
% of shape		0.2%		0.2%		0.2%		0.2%	

Table 7.12 - Percentage frequency of each motif, relative to all other motifs, at the eight major sites

Motif 56	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok		1	trace					1	trace
Philia				3	trace	1	trace	4	trace
Sotira 1									
Sotira 2						1	trace	1	trace
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total		1		3		2		6	
% of shape		trace		0.1%		trace		trace	

Motif 57	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok									
Philia		2	trace	3	trace			5	trace
Sotira 1									
Sotira 2									
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total		2		3				5	
% of shape		trace		0.1%				trace	

Motif 58	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok						1	trace	1	trace
Philia		3	trace	6	trace	4	1%	13	trace
Sotira 1									
Sotira 2									
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total		3		6		5		14	
% of shape		0.1%		0.1%		0.1%		0.1%	

Table 7.12 - Percentage frequency of each motif, relative to all other motifs, at the eight major sites

Motif 59	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok									
Philia				2	trace	1	trace	3	trace
Sotira 1									
Sotira 2									
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total				2		1		3	
% of shape				trace		trace		trace	

Motif 60	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)				1	trace			1	trace
Khirok									
Philia		5	trace	7	1%	17	4%	29	1%
Sotira 1									
Sotira 2						2	trace	2	trace
Sotira 3				1	trace			1	trace
Troulli (Early)									
Troulli (Late)									
Orga									
Total		5		9		19		33	
% of shape		0.1%		0.2%		0.5%		0.2%	

Motif 61	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok									
Philia		2	trace	2	trace	1	trace	5	trace
Sotira 1									
Sotira 2									
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total		2		2		1		5	
% of shape		trace		trace		trace		trace	

Table 7.12 - Percentage frequency of each motif, relative to all other motifs, at the eight major sites

Motif 62	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok									
Philia			10	1%	4	1%	14	trace	
Sotira 1									
Sotira 2									
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total			10		4		14		
% of shape			0.2%		0.1%		0.1%		

Motif 63	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok									
Philia			10	1%			10	trace	
Sotira 1									
Sotira 2									
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total			10				10		
% of shape			0.2%				0.1%		

Motif 64	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok									
Philia		1 trace		1 trace		1 trace		3 trace	
Sotira 1									
Sotira 2									
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total		1		1		1		3	
% of shape		trace		trace		trace		trace	

Table 7.12 - Percentage frequency of each motif, relative to all other motifs, at the eight major sites

Motif 65	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok									
Philia		4	trace		2	trace		6	trace
Sotira 1									
Sotira 2									
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total		4			2			6	
% of shape		0.1%			trace			trace	

Motif 66	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok									
Philia					1	trace		1	trace
Sotira 1									
Sotira 2									
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total					1			1	
% of shape					trace			trace	

Motif 67	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok									
Philia		1	trace		5	trace		6	trace
Sotira 1									
Sotira 2									
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total		1			5			6	
% of shape		trace			0.1%			trace	

Table 7.12 - Percentage frequency of each motif, relative to all other motifs, at the eight major sites

Motif 68	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok									
Philia				1 trace		1 trace		2 trace	
Sotira 1									
Sotira 2									
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total				1		1		2	
% of shape				trace		trace		trace	

Motif 69	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok						1 trace		1 trace	
Philia		1 trace		1 trace		11	3%	13 trace	
Sotira 1									
Sotira 2						4 trace		4 trace	
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total		1		1		16		18	
% of shape		trace		trace		0.4%		0.1%	

Motif 70	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)						3	2%	3 trace	
Khirok						2 trace		2 trace	
Philia		1 trace				1 trace		2 trace	
Sotira 1									
Sotira 2									
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total		1				6		7	
% of shape		trace				0.2%		0.1%	

Table 7.12 - Percentage frequency of each motif, relative to all other motifs, at the eight major sites

Motif 71	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)						4	2%	4	1%
Khirok									
Philia									
Sotira 1									
Sotira 2									
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total						4		4	
% of shape						0.1%		trace	

Motif 72	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)						2	1%	2	trace
Khirok									
Philia						5	1%	5	trace
Sotira 1									
Sotira 2						3	trace	3	trace
Sotira 3						1	trace	1	trace
Troulli (Early)									
Troulli (Late)									
Orga									
Total						11		11	
% of shape						0.3%		0.1%	

Motif 73	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok						1	trace	1	trace
Philia		3	trace		1	trace		4	trace
Sotira 1									
Sotira 2		5	trace		5	trace		10	trace
Sotira 3						1	trace	1	trace
Troulli (Early)		1	1%					1	trace
Troulli (Late)									
Orga									
Total		9		6		2		17	
% of shape		0.2%		0.1%		trace		0.1%	

Table 7.12 - Percentage frequency of each motif, relative to all other motifs, at the eight major sites

Motif 74		Shape						
site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A								
K.Kokk								
K.Tenta (Early)								
K.Tenta (Late)								
Khirok								
Philia			1	trace	3	1%	4	trace
Sotira 1								
Sotira 2					1	trace	1	trace
Sotira 3								
Troulli (Early)			2	1%			2	trace
Troulli (Late)								
Orga								
Total			3		4		7	
% of shape			0.1%		0.1%		0.1%	

Motif 75		Shape						
site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A								
K.Kokk								
K.Tenta (Early)								
K.Tenta (Late)								
Khirok								
Philia	1	trace	3	trace			4	trace
Sotira 1								
Sotira 2	1	trace	1	trace	1	trace	3	trace
Sotira 3								
Troulli (Early)								
Troulli (Late)								
Orga								
Total	2		4		1		7	
% of shape	trace		0.1%		trace		0.1%	

Motif 76		Shape						
site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A								
K.Kokk								
K.Tenta (Early)								
K.Tenta (Late)								
Khirok								
Philia	15	1%	6	trace	5	1%	26	1%
Sotira 1								
Sotira 2								
Sotira 3								
Troulli (Early)								
Troulli (Late)								
Orga								
Total	15		6		5		26	
% of shape	0.3%		0.1%		0.1%		0.2%	

Table 7.12 - Percentage frequency of each motif, relative to all other motifs, at the eight major sites

Motif 77	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok									
Philia		3 trace		1 trace				4 trace	
Sotira 1									
Sotira 2									
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total		3		1				4	
% of shape		0.1%		trace				trace	

Motif 78	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok									
Philia		70	6%	26	2%	9	2%	105	4%
Sotira 1									
Sotira 2									
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total		70		26		9		105	
% of shape		1.4%		0.5%		0.2%		0.8%	

Motif 79	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok									
Philia		5 trace		6 trace		2 trace		13 trace	
Sotira 1		1 trace						1 trace	
Sotira 2									
Sotira 3									
Troulli (Early)						1	1%	1 trace	
Troulli (Late)									
Orga									
Total		6		6		3		15	
% of shape		0.1%		0.1%		0.1%		0.1%	

Table 7.12 - Percentage frequency of each motif, relative to all other motifs, at the eight major sites

Motif 80	Shape							
site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A								
K.Kokk								
K.Tenta (Early)								
K.Tenta (Late)								
Khirok					2	trace	2	trace
Philia					1	trace	1	trace
Sotira 1								
Sotira 2			3	trace	1	trace	4	trace
Sotira 3					1	trace	1	trace
Troulli (Early)								
Troulli (Late)								
Orga								
Total			3		5		8	
% of shape			0.1%		0.1%		0.1%	

Motif 81	Shape							
site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A								
K.Kokk								
K.Tenta (Early)								
K.Tenta (Late)								
Khirok	4	1%	1	trace			5	trace
Philia	10	1%	9	1%			19	1%
Sotira 1								
Sotira 2								
Sotira 3								
Troulli (Early)								
Troulli (Late)								
Orga								
Total	14		10				24	
% of shape	0.3%		0.2%				0.2%	

Motif 82	Shape							
site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A								
K.Kokk								
K.Tenta (Early)								
K.Tenta (Late)								
Khirok								
Philia								
Sotira 1								
Sotira 2	1	trace			1	trace	2	trace
Sotira 3								
Troulli (Early)								
Troulli (Late)								
Orga								
Total	1				1		2	
% of shape	trace				trace		trace	

Table 7.12 - Percentage frequency of each motif, relative to all other motifs, at the eight major sites

Motif 83	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok		1 trace		3 trace				4	trace
Philia									
Sotira 1									
Sotira 2									
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total		1		3				4	
% of shape		trace		0.1%				trace	

Motif 85	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok									
Philia				1 trace		2 trace		3	trace
Sotira 1									
Sotira 2		1 trace						1	trace
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total		1		1		2		4	
% of shape		trace		trace		trace		trace	

Motif 86	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A		1	1%	2	2%	1	2%	4	2%
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok				1 trace				1	trace
Philia				3 trace		6	1%	9	trace
Sotira 1				1 trace				1	trace
Sotira 2				2 trace		6 trace		8	trace
Sotira 3				1 trace				1	trace
Troulli (Early)									
Troulli (Late)									
Orga									
Total		1		10		13		24	
% of shape		trace		0.2%		0.3%		0.1%	

Table 7.12 - Percentage frequency of each motif, relative to all other motifs, at the eight major sites

Motif 87	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok									
Philia				4 trace		2 trace		6 trace	
Sotira 1									
Sotira 2									
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total				4		2		6	
% of shape				0.1%		trace		trace	

Motif 88	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)				1 trace				1 trace	
Khirok									
Philia				2 trace				2 trace	
Sotira 1									
Sotira 2				1 trace				1 trace	
Sotira 3									
Troulli (Early)				1	1%			1 trace	
Troulli (Late)									
Orga									
Total				5				5	
% of shape				0.1%				trace	

Motif 89	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok									
Philia				3 trace		1 trace		4 trace	
Sotira 1									
Sotira 2									
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total				3		1		4	
% of shape				0.1%		trace		trace	

Table 7.12 - Percentage frequency of each motif, relative to all other motifs, at the eight major sites

Motif 90	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok									
Philia				1	trace			1	trace
Sotira 1									
Sotira 2									
Sotira 3		1	trace					1	trace
Troulli (Early)									
Troulli (Late)									
Orga									
Total		1		1				2	
% of shape		trace		trace				trace	

Motif 91	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok									
Philia		2	trace	1	trace	1	trace	4	trace
Sotira 1									
Sotira 2									
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total		2		1		1		4	
% of shape		trace		trace		trace		trace	

Motif 92	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok									
Philia		2	trace	3	trace			5	trace
Sotira 1									
Sotira 2									
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total		2		3				5	
% of shape		trace		0.1%				trace	

Table 7.12 - Percentage frequency of each motif, relative to all other motifs, at the eight major sites

Motif 93	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok									
Philia				3	trace			3	trace
Sotira 1									
Sotira 2									
Sotira 3				1	trace			1	trace
Troulli (Early)									
Troulli (Late)									
Orga									
Total				4				4	
% of shape				0.1%				trace	

Motif 94	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok		1	trace		1	trace		2	trace
Philia									
Sotira 1									
Sotira 2									
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total		1		1				2	
% of shape		trace		trace				trace	

Motif 95	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A		1	1%	2	2%			3	1%
K.Kokk				1	8%			1	3%
K.Tenta (Early)									
K.Tenta (Late)									
Khirok		2	trace	7	1%	6	1%	15	1%
Philia		15	1%	9	1%	6	1%	30	1%
Sotira 1		1	trace	5	2%	8	4%	14	2%
Sotira 2		11	1%	6	trace	27	2%	44	1%
Sotira 3		4	1%	4	1%	15	4%	23	2%
Troulli (Early)		10	6%	9	6%	11	10%	30	7%
Troulli (Late)		1	6%			3	19%	4	8%
Orga		2	20%	1	8%	1	7%	4	11%
Total		47		44		77		168	
% of shape		0.9%		0.9%		2.1%		1.2%	

Table 7.12 - Percentage frequency of each motif, relative to all other motifs, at the eight major sites

Motif 96	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok				1 trace				1 trace	
Philia		2 trace						2 trace	
Sotira 1									
Sotira 2						1 trace		1 trace	
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total		2		1		1		4	
% of shape		trace		trace		trace		trace	

Motif 97	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok									
Philia		3 trace				1 trace		4 trace	
Sotira 1									
Sotira 2		1 trace						1 trace	
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total		4				1		5	
% of shape		0.1%				trace		trace	

Motif 98	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok									
Philia				1 trace				1 trace	
Sotira 1									
Sotira 2									
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total				1				1	
% of shape				trace				trace	

Table 7.12 - Percentage frequency of each motif, relative to all other motifs, at the eight major sites

Motif 99	Shape							
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total
Kala-A	1	1%			1	1%	2	1%
K.Kokk								
K.Tenta (Early)								
K.Tenta (Late)								
Khirok								
Philia								
Sotira 1								
Sotira 2				2 trace			2 trace	
Sotira 3								
Troulli (Early)								
Troulli (Late)								
Orga								
Total	1		2		1		4	
% of shape	trace		trace		trace		trace	

Motif 100	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)				1 trace		2	1%	3 trace	
Khirok	1 trace							1 trace	
Philia	1 trace							1 trace	
Sotira 1									
Sotira 2									
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total	2		1		2			5	
% of shape	trace		trace		trace			trace	

Motif 101	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok	6	1%	4	1%	15	2%	25	1%	
Philia	18	1%	17	1%	1 trace		36	1%	
Sotira 1	1 trace						1 trace		
Sotira 2									
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total	25		21		16		62		
% of shape	0.5%		0.4%		0.4%		0.4%		

Table 7.12 - Percentage frequency of each motif, relative to all other motifs, at the eight major sites

Motif 102	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok									
Philia		2	trace		1	trace		3	trace
Sotira 1									
Sotira 2									
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total		2		1				3	
% of shape		trace		trace				trace	

Motif 103	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok									
Philia		3	trace		5	trace		1	trace
Sotira 1									
Sotira 2									
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total		3		5		1		9	
% of shape		0.1%		0.1%		trace		0.1%	

Motif 104	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok		2	trace					2	trace
Philia		1	trace					1	trace
Sotira 1									
Sotira 2									
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total		3						3	
% of shape		0.1%						trace	

Table 7.12 - Percentage frequency of each motif, relative to all other motifs, at the eight major sites

Motif 105	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok									
Philia						1 trace		1 trace	
Sotira 1									
Sotira 2									
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total						1		1	
% of shape						trace		trace	

Motif 106	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A	5	5%	4	4%				9	4%
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)	68	23%	21	6%	1	1%	90	11%	
Khirok	146	20%	63	10%	37	5%	246	12%	
Philia	50	4%	12	1%	4	1%	66	2%	
Sotira 1	35	14%	8	8%	1 trace		44	6%	
Sotira 2	301	15%	74	4%	20	1%	395	7%	
Sotira 3	46	17%	12	3%			58	6%	
Troulli (Early)	33	20%	15	9%	1	1%	49	11%	
Troulli (Late)									
Orga									
Total	684		209		64		957		
% of shape	13.0%		4.2%		1.7%		6.9%		

Motif 107	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)	2	25%			1	5%	3	6%	
K.Tenta (Late)	56	19%	74	23%			130	16%	
Khirok			2 trace				2 trace		
Philia	2 trace		4 trace				6 trace		
Sotira 1									
Sotira 2									
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total	60		80		1		141		
% of shape	1.1%		1.6%		trace		1.0%		

Table 7.12 - Percentage frequency of each motif, relative to all other motifs, at the eight major sites

Motif 108	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok									
Philia									
Sotira 1						1	trace	1	trace
Sotira 2				6	trace	3	trace	9	trace
Sotira 3						1	trace	1	trace
Troulli (Early)									
Troulli (Late)		1	6%	1	6%			2	4%
Orga						1	7%	1	3%
Total		1		7		6		14	
% of shape		trace		0.1%		0.1%		0.1%	

Motif 109	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok									
Philia									
Sotira 1									
Sotira 2				1	trace	5	trace	6	trace
Sotira 3				1	trace			1	trace
Troulli (Early)									
Troulli (Late)									
Orga									
Total				2		5		7	
% of shape				trace		0.1%		0.1%	

Motif 110	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok									
Philia									
Sotira 1									
Sotira 2		3	trace					3	trace
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total		3						3	
% of shape		0.1%						trace	

Table 7.12 - Percentage frequency of each motif, relative to all other motifs, at the eight major sites

Motif 111	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok		1	trace			1	trace	2	trace
Philia									
Sotira 1									
Sotira 2						2	trace	2	trace
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total		1				3		4	
% of shape		trace				0.1%		trace	

Motif 113	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok									
Philia		2	trace	1	trace	1	trace	4	trace
Sotira 1									
Sotira 2									
Sotira 3									
Troulli (Early)				1	1%			1	trace
Troulli (Late)									
Orga									
Total		2		2		1		5	
% of shape		trace		trace		trace		trace	

Motif 114	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok									
Philia									
Sotira 1									
Sotira 2						1	trace	1	trace
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total						1		1	
% of shape						trace		trace	

Table 7.12 - Percentage frequency of each motif, relative to all other motifs, at the eight major sites

Motif 115		Shape						
site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A								
K.Kokk								
K.Tenta (Early)								
K.Tenta (Late)								
Khirok			1	trace			1	trace
Philia								
Sotira 1								
Sotira 2					1	trace	1	trace
Sotira 3								
Troulli (Early)								
Troulli (Late)								
Orga								
Total			1		1		2	
% of shape			trace		trace		trace	

Motif 116		Shape						
site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A								
K.Kokk								
K.Tenta (Early)								
K.Tenta (Late)								
Khirok								
Philia								
Sotira 1					1	trace	1	trace
Sotira 2								
Sotira 3								
Troulli (Early)								
Troulli (Late)								
Orga								
Total					1		1	
% of shape					trace		trace	

Motif 118		Shape						
site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A								
K.Kokk								
K.Tenta (Early)								
K.Tenta (Late)								
Khirok								
Philia								
Sotira 1								
Sotira 2			2	trace			2	trace
Sotira 3								
Troulli (Early)								
Troulli (Late)								
Orga								
Total			2				2	
% of shape			trace				trace	

Table 7.12 - Percentage frequency of each motif, relative to all other motifs, at the eight major sites

Motif 119		Shape						
site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A								
K.Kokk								
K.Tenta (Early)								
K.Tenta (Late)								
Khirok	2	trace	1	trace	5	1%	8	trace
Philia								
Sotira 1								
Sotira 2	2	trace					2	trace
Sotira 3								
Troulli (Early)								
Troulli (Late)								
Orga								
Total	4		1		5		10	
% of shape	0.1%		trace		0.1%		0.1%	

Motif 120		Shape						
site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A								
K.Kokk								
K.Tenta (Early)								
K.Tenta (Late)								
Khirok								
Philia								
Sotira 1					1	trace	1	trace
Sotira 2					1	trace	1	trace
Sotira 3								
Troulli (Early)								
Troulli (Late)								
Orga								
Total					2		2	
% of shape					trace		trace	

Motif 121		Shape						
site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A								
K.Kokk								
K.Tenta (Early)								
K.Tenta (Late)								
Khirok	1	trace	1	trace	3	trace	5	trace
Philia								
Sotira 1								
Sotira 2								
Sotira 3								
Troulli (Early)								
Troulli (Late)								
Orga								
Total	1		1		3		5	
% of shape	trace		trace		0.1%		trace	

Table 7.12 - Percentage frequency of each motif, relative to all other motifs, at the eight major sites

Motif 122	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok		2	trace		1	trace		3	trace
Philia									
Sotira 1									
Sotira 2									
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total		2			1			3	
% of shape		trace			trace			trace	

Motif 123	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok						2	trace	2	trace
Philia									
Sotira 1									
Sotira 2									
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total						2		2	
% of shape						trace		trace	

Motif 400	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A		4	4%	8	9%	4	6%	16	6%
K.Kokk				1	8%			1	3%
K.Tenta (Early)				3	15%	7	37%	10	21%
K.Tenta (Late)		37	12%	21	6%	69	42%	127	16%
Khirok		22	3%	20	3%	61	8%	103	5%
Philia		59	5%	15	1%	52	12%	126	4%
Sotira 1		2	1%	8	3%	9	4%	19	3%
Sotira 2		16	1%	47	2%	72	5%	135	2%
Sotira 3		2	1%	7	2%	9	3%	18	2%
Troulli (Early)		31	19%	45	28%	60	57%	136	31%
Troulli (Late)		4	25%	1	6%	6	38%	11	22%
Orga				1	8%	1	7%	2	6%
Total		177		177		350		704	
% of shape		3.4%		3.6%		9.5%		5.0%	

Table 7.12 - Percentage frequency of each motif, relative to all other motifs, at the eight major sites

Motif 401		Shape						
site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A								
K.Kokk								
K.Tenta (Early)								
K.Tenta (Late)	94	31%	121	37%	32	20%	247	31%
Khirok								
Philia	15	1%	44	4%	10	2%	69	2%
Sotira 1					1	trace	1	trace
Sotira 2								
Sotira 3								
Troulli (Early)	4	2%	1	1%	2	2%	7	2%
Troulli (Late)								
Orga								
Total	113		166		45		324	
% of shape	2.2%		3.3%		1.2%		2.3%	

Motif 402		Shape						
site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A								
K.Kokk								
K.Tenta (Early)			4	20%	2	11%	6	13%
K.Tenta (Late)	7	2%	9	3%	4	2%	20	3%
Khirok	3	trace	2	trace	9	1%	14	1%
Philia	16	1%	11	1%	12	3%	39	1%
Sotira 1	3	1%	3	1%	2	1%	8	1%
Sotira 2	15	1%	21	1%	16	1%	52	1%
Sotira 3	1	trace	8	2%	5	1%	14	1%
Troulli (Early)	13	29%	12	8%	11	10%	36	8%
Troulli (Late)	1	6%					1	2%
Orga			1	8%			1	3%
Total	59		71		61		191	
% of shape	1.1%		1.4%		1.7%		1.4%	

Motif 501		Shape						
site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A	5	5%			3	5%	8	3%
K.Kokk			1	8%			1	3%
K.Tenta (Early)			2	10%			2	4%
K.Tenta (Late)	4	1%	5	2%	3	2%	12	2%
Khirok	46	6%	61	10%	31	4%	138	7%
Philia	37	3%	43	4%	19	4%	99	3%
Sotira 1			1	trace	2	1%	3	trace
Sotira 2	31	2%	53	3%	70	4%	154	3%
Sotira 3	3	1%	6	2%	6	2%	15	2%
Troulli (Early)					1	1%	1	trace
Troulli (Late)								
Orga								
Total	126		172		135		433	
% of shape	2.4%		3.5%		3.7%		3.1%	

Table 7.12 - Percentage frequency of each motif, relative to all other motifs, at the eight major sites

Motif 502	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok						1 trace		1 trace	
Philia		2 trace		3 trace				5 trace	
Sotira 1						1 trace		1 trace	
Sotira 2		1 trace		1 trace		4 trace		6 trace	
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total		3		4		6		13	
% of shape		0.1%		0.1%		0.1%		0.1%	

Motif 503	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A				1	1%			1 trace	
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok		1 trace		1 trace				2 trace	
Philia		1 trace		5 trace		5	1%	11 trace	
Sotira 1									
Sotira 2				1 trace		1 trace		2 trace	
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total		2		8		6		16	
% of shape		trace		0.2%		0.2%		0.1%	

Motif 504	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)		1 trace						1 trace	
Khirok		3 trace		1 trace		1 trace		5 trace	
Philia				1 trace				1 trace	
Sotira 1									
Sotira 2				8 trace		1 trace		9 trace	
Sotira 3				1 trace				1 trace	
Troulli (Early)									
Troulli (Late)									
Orga									
Total		4		11		2		17	
% of shape		0.1%		0.2%		trace		0.1%	

Table 7.12 - Percentage frequency of each motif, relative to all other motifs, at the eight major sites

Motif 505	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok									
Philia									
Sotira 1									
Sotira 2				1	trace			1	trace
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total				1				1	
% of shape				trace				trace	

Motif 507	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok									
Philia				1	trace			1	trace
Sotira 1									
Sotira 2									
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total				1				1	
% of shape				trace				trace	

Motif 508	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok				1	trace	2	trace	3	trace
Philia									
Sotira 1									
Sotira 2									
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total				1		2		3	
% of shape				trace		trace		trace	

Table 7.12 - Percentage frequency of each motif, relative to all other motifs, at the eight major sites

Motif 509	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok				1	trace	1	trace	2	trace
Philia						4	1%	4	trace
Sotira 1									
Sotira 2									
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total				1		5		6	
% of shape				trace		0.1%		trace	

Motif 510	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok									
Philia				1	trace			1	trace
Sotira 1									
Sotira 2									
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total				1				1	
% of shape				trace				trace	

Motif 511	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A				1	1%			1	trace
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok		13	2%	18	3%			31	1%
Philia		3	trace	10	1%	1	trace	14	trace
Sotira 1				1	trace			1	trace
Sotira 2		1	trace	6	trace			7	trace
Sotira 3				1	trace			1	trace
Troulli (Early)									
Troulli (Late)									
Orga									
Total		17		37		1		55	
% of shape		0.3%		0.7%		trace		0.4%	

Table 7.12 - Percentage frequency of each motif, relative to all other motifs, at the eight major sites

Motif 512	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok						1	trace	1	trace
Philia				3	trace	1	trace	4	trace
Sotira 1									
Sotira 2				1	trace	2	trace	3	trace
Sotira 3		1	trace					1	trace
Troulli (Early)									
Troulli (Late)									
Orga									
Total		1		4		4		9	
% of shape		trace		0.1%		0.1%		0.1%	

Motif 513	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok						1	trace	1	trace
Philia		1	trace	1	trace	2	trace	4	trace
Sotira 1						1	trace	1	trace
Sotira 2									
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total		1		1		4		6	
% of shape		trace		trace		0.1%		trace	

Motif 514	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok									
Philia		1	trace					1	trace
Sotira 1									
Sotira 2									
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total		1						1	
% of shape		trace						trace	

Table 7.12 - Percentage frequency of each motif, relative to all other motifs, at the eight major sites

Motif 515	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok									
Philia									
Sotira 1									
Sotira 2				7	trace	8	1%	15	trace
Sotira 3				1	trace	1	trace	2	trace
Troulli (Early)									
Troulli (Late)									
Orga									
Total				8		9		17	
% of shape				0.2%		0.2%		0.1%	

Motif 516	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok						1	trace	1	trace
Philia									
Sotira 1				1	trace			1	trace
Sotira 2				9	trace	2	trace	11	trace
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total				10		3		13	
% of shape				0.2%		0.1%		0.1%	

Motif 517	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok				3	trace	1	trace	4	trace
Philia									
Sotira 1									
Sotira 2				1	trace			1	trace
Sotira 3				1	trace			1	trace
Troulli (Early)									
Troulli (Late)									
Orga									
Total				5		1		6	
% of shape				0.1%		trace		trace	

Table 7.12 - Percentage frequency of each motif, relative to all other motifs, at the eight major sites

Motif 520	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok		3	trace		3	trace		6	trace
Philia		2	trace					2	trace
Sotira 1									
Sotira 2									
Sotira 3					1	trace		1	trace
Troulli (Early)									
Troulli (Late)									
Orga									
Total		5			4			9	
% of shape		0.1%			0.1%			0.1%	

Motif 521	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok									
Philia									
Sotira 1									
Sotira 2						1	trace	1	trace
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total						1		1	
% of shape						trace		trace	

Motif 522	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok									
Philia									
Sotira 1									
Sotira 2					1	trace		1	trace
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total					1			1	
% of shape					trace			trace	

Table 7.12 - Percentage frequency of each motif, relative to all other motifs, at the eight major sites

Motif 523	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok						2	trace	2	trace
Philia									
Sotira 1						1	trace	1	trace
Sotira 2				1	trace			1	trace
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total				1		3		4	
% of shape				trace		0.1%		trace	

Motif 524	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok									
Philia									
Sotira 1									
Sotira 2		1	trace					1	trace
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total		1						1	
% of shape		trace						trace	

Motif 525	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok									
Philia									
Sotira 1									
Sotira 2				1	trace			1	trace
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total				1				1	
% of shape				trace				trace	

Table 7.12 - Percentage frequency of each motif, relative to all other motifs, at the eight major sites

Motif 526	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok				1 trace				1 trace	
Philia									
Sotira 1									
Sotira 2									
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total				1				1	
% of shape				trace				trace	

Motif 527	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok						2 trace		2 trace	
Philia									
Sotira 1									
Sotira 2									
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total						2		2	
% of shape						trace		trace	

Motif 528	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok		1 trace		1 trace				2 trace	
Philia									
Sotira 1									
Sotira 2									
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total		1		1				2	
% of shape		trace		trace				trace	

Table 7.12 - Percentage frequency of each motif, relative to all other motifs, at the eight major sites

Motif 529	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok		1	trace		3	trace		2	trace
Philia									
Sotira 1									
Sotira 2									
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total		1			3			2	6
% of shape		trace			0.1%			trace	

Motif 530	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok		1	trace		2	trace		1	trace
Philia									
Sotira 1									
Sotira 2									
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total		1			2			1	4
% of shape		trace			trace			trace	

Motif 531	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok					2	trace			2
Philia									
Sotira 1									
Sotira 2									
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total					2				2
% of shape					trace				trace

Table 7.12 - Percentage frequency of each motif, relative to all other motifs, at the eight major sites

Motif 532	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok						1 trace		1 trace	
Philia									
Sotira 1									
Sotira 2									
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total						1		1	
% of shape						trace		trace	

Motif 533	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok				1 trace				1 trace	
Philia									
Sotira 1									
Sotira 2									
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total				1				1	
% of shape				trace				trace	

Motif 540	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok				1 trace				1 trace	
Philia									
Sotira 1									
Sotira 2									
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total				1				1	
% of shape				trace				trace	

Table 7.12 - Percentage frequency of each motif, relative to all other motifs, at the eight major sites

Motif 601	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A	3	3%	4	4%				7	3%
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok	18	2%	25	4%				43	2%
Philia	2	trace	2	trace	3	trace		7	trace
Sotira 1	7	3%	7	3%				14	2%
Sotira 2	41	2%	48	3%	3	trace		92	2%
Sotira 3	10	4%	11	3%				21	2%
Troulli (Early)	1	1%	1	1%				2	trace
Troulli (Late)			1	6%				1	2%
Orga									
Total	82		99		6			187	
% of shape	1.6%		2.0%		0.1%			1.3%	

Motif 602	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A			1	1%				1	trace
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok	17	2%	14	2%	6	1%		37	2%
Philia					1	trace		1	trace
Sotira 1	9	4%	7	3%	3	1%		19	3%
Sotira 2	124	6%	125	7%	6	trace		255	5%
Sotira 3	22	8%	14	4%				36	4%
Troulli (Early)									
Troulli (Late)									
Orga									
Total	172		161		16			349	
% of shape	3.3%		3.2%		0.4%			2.5%	

Motif 603	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A	4	4%	1	1%				5	2%
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok	42	6%	32	5%				74	4%
Philia	2	trace	1	trace				3	trace
Sotira 1	15	6%	20	8%				35	5%
Sotira 2	105	5%	111	6%				216	4%
Sotira 3	19	7%	21	6%	1	trace		41	4%
Troulli (Early)									
Troulli (Late)									
Orga									
Total	187		186		1			374	
% of shape	3.6%		3.7%		trace			2.7%	

Table 7.12 - Percentage frequency of each motif, relative to all other motifs, at the eight major sites

Motif 604		Shape						
site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A	1	1%	1	1%			2	1%
K.Kokk								
K.Tenta (Early)								
K.Tenta (Late)								
Khirok								
Philia								
Sotira 1	1	trace					1	trace
Sotira 2	3	trace	3	trace			6	trace
Sotira 3	1	trace	2	1%			3	trace
Troulli (Early)								
Troulli (Late)								
Orga								
Total	6		6				12	
% of shape	0.1%		0.1%				0.1%	

Motif 605		Shape						
site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A	2	2%					2	1%
K.Kokk								
K.Tenta (Early)								
K.Tenta (Late)								
Khirok								
Philia								
Sotira 1	1	trace	6	3%	1	trace	8	1%
Sotira 2	3	trace	14	1%			17	trace
Sotira 3	7	3%	6	2%			13	1%
Troulli (Early)								
Troulli (Late)								
Orga								
Total	13		26		1		40	
% of shape	0.2%		0.5%		trace		0.3%	

Motif 606		Shape						
site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A					3	5%	3	1%
K.Kokk								
K.Tenta (Early)								
K.Tenta (Late)								
Khirok	1	trace					1	trace
Philia								
Sotira 1			2	1%			2	trace
Sotira 2	3	trace	10	1%			13	trace
Sotira 3			4	1%			4	trace
Troulli (Early)								
Troulli (Late)								
Orga								
Total	4		16		3		23	
% of shape	0.1%		0.3%		0.1%		0.2%	

Table 7.12 - Percentage frequency of each motif, relative to all other motifs, at the eight major sites

Motif 607	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok		1 trace		3 trace				4	trace
Philia									
Sotira 1				1 trace				1	trace
Sotira 2		3 trace		7 trace				10	trace
Sotira 3		2	1%	2	1%			4	trace
Troulli (Early)									
Troulli (Late)									
Orga									
Total		6		13				19	
% of shape		0.1%		0.2%				0.1%	

Motif 608	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A		2	2%					2	1%
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok		8	1%	6	1%	4	1%	18	1%
Philia									
Sotira 1		1 trace		4	2%			5	1%
Sotira 2		17	1%	16	1%	6 trace		39	1%
Sotira 3		5	2%	2	1%	2	1%	9	1%
Troulli (Early)									
Troulli (Late)									
Orga									
Total		33		28		12		73	
% of shape		0.6%		0.6%		0.3%		0.5%	

Motif 609	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A		1	1%					1	trace
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)		1 trace						1	trace
Khirok		8	1%	19	3%			27	1%
Philia									
Sotira 1		8	3%	2	1%			10	1%
Sotira 2		17	1%	17	1%			34	1%
Sotira 3		2	1%	4	1%			6	1%
Troulli (Early)									
Troulli (Late)									
Orga									
Total		37		42				79	
% of shape		0.7%		0.8%				0.6%	

Table 7.12 - Percentage frequency of each motif, relative to all other motifs, at the eight major sites

Motif 610	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok		1	trace					1	trace
Philia									
Sotira 1									
Sotira 2		1	trace		1	trace		2	trace
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total		2			1			3	
% of shape		trace			trace			trace	

Motif 611	Shape									
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site	
Kala-A										
K.Kokk										
K.Tenta (Early)										
K.Tenta (Late)										
Khirok		1	trace					1	trace	
Philia										
Sotira 1		1	trace		1	trace	2	1%	4	1%
Sotira 2		11	1%		7	trace	1	trace	19	trace
Sotira 3		3	1%		10	3%			13	1%
Troulli (Early)										
Troulli (Late)										
Orga										
Total		16			18		3		37	
% of shape		0.3%			0.4%		0.1%		0.3%	

Motif 612	Shape									
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site	
Kala-A										
K.Kokk										
K.Tenta (Early)										
K.Tenta (Late)										
Khirok		2	trace		5	1%		7	trace	
Philia										
Sotira 1					2	1%		2	trace	
Sotira 2		5	trace		7	trace		12	trace	
Sotira 3							1	trace	1	trace
Troulli (Early)										
Troulli (Late)										
Orga										
Total		7			14		1		22	
% of shape		0.1%			0.3%		trace		0.2%	

Table 7.12 - Percentage frequency of each motif, relative to all other motifs, at the eight major sites

Motif 613	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok									
Philia									
Sotira 1				1	trace			1	trace
Sotira 2		2	trace	8	trace	5	trace	15	trace
Sotira 3		1	trace					1	trace
Troulli (Early)									
Troulli (Late)									
Orga									
Total		3		9		5		17	
% of shape		0.1%		0.2%		0.1%		0.1%	

Motif 614	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok						1	trace	1	trace
Philia									
Sotira 1				2	1%			2	trace
Sotira 2		1	trace			7	trace	8	trace
Sotira 3		1	trace					1	trace
Troulli (Early)									
Troulli (Late)									
Orga									
Total		2		2		8		12	
% of shape		trace		trace		0.2%		0.1%	

Motif 615	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok									
Philia									
Sotira 1									
Sotira 2				2	trace			2	trace
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total				2				2	
% of shape				trace				trace	

Table 7.12 - Percentage frequency of each motif, relative to all other motifs, at the eight major sites

Motif 616	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A	1		1%					1	trace
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok	2	trace		1	trace			3	trace
Philia									
Sotira 1				1	trace			1	trace
Sotira 2	1	trace						1	trace
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total	4			2				6	
% of shape	0.1%			trace				trace	

Motif 617	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok									
Philia									
Sotira 1				1	trace			1	trace
Sotira 2				2	trace			2	trace
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total				3				3	
% of shape				0.1%				trace	

Motif 618	Shape							
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total
Kala-A	44	47%	40	44%	34	52%	118	47%
K.Kokk	3	20%	1	8%	3	50%	7	21%
K.Tenta (Early)	6	75%	4	20%	7	37%	17	36%
K.Tenta (Late)	5	2%	4	1%	17	10%	26	3%
Khirok	236	32%	194	31%	262	35%	692	33%
Philia	3	trace	3	trace	4	1%	10	trace
Sotira 1	114	44%	95	40%	115	55%	324	46%
Sotira 2	954	47%	831	44%	899	57%	2684	48%
Sotira 3	153	57%	121	35%	207	62%	481	51%
Troulli (Early)								
Troulli (Late)								
Orga	1	10%	1	8%			2	6%
Total	1519		1294		1548		4361	
% of shape	28.9%		26.1%		42.0%		31.4%	

Table 7.12 - Percentage frequency of each motif, relative to all other motifs, at the eight major sites

Motif 619		Shape						
site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A	2	2%	3	3%	10	15%	15	6%
K.Kokk	7	47%	7	54%	2	33%	16	47%
K.Tenta (Early)			1	5%			1	2%
K.Tenta (Late)	1	trace	1	trace	3	2%	5	1%
Khirok	2	trace	3	trace	9	1%	14	1%
Philia								
Sotira 1	13	5%	15	6%	23	11%	51	7%
Sotira 2	71	3%	88	5%	93	6%	252	5%
Sotira 3	21	8%	24	7%	31	9%	76	8%
Troulli (Early)								
Troulli (Late)								
Orga								
Total	117		142		171		430	
% of shape	2.2%		2.9%		4.6%		3.1%	

Motif 620		Shape						
site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A	5	5%	4	4%	5	8%	14	6%
K.Kokk								
K.Tenta (Early)			1	5%			1	2%
K.Tenta (Late)	2	1%	2	1%	3	2%	7	1%
Khirok	47	6%	41	6%	169	23%	257	12%
Philia	1	trace					1	trace
Sotira 1	29	11%	18	8%	23	11%	70	8%
Sotira 2	177	9%	134	7%	169	11%	480	9%
Sotira 3	30	11%	29	8%	31	9%	90	9%
Troulli (Early)								
Troulli (Late)								
Orga								
Total	291		229		400		920	
% of shape	5.5%		4.6%		10.9%		6.6%	

Motif 621		Shape						
site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A	2	2%	6	7%	1	2%	9	4%
K.Kokk	3	20%	1	8%			4	12%
K.Tenta (Early)								
K.Tenta (Late)								
Khirok	22	3%	14	2%	60	8%	96	5%
Philia	1	trace			1	trace	2	trace
Sotira 1	7	3%	16	7%	3	1%	26	4%
Sotira 2	33	2%	108	6%	45	3%	186	3%
Sotira 3			28	8%	10	3%	38	4%
Troulli (Early)								
Troulli (Late)								
Orga								
Total	68		173		120		361	
% of shape	1.3%		3.5%		3.3%		2.6%	

Table 7.12 - Percentage frequency of each motif, relative to all other motifs, at the eight major sites

Motif 622		Shape						
site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A								
K.Kokk								
K.Tenta (Early)								
K.Tenta (Late)								
Khirok								
Philia								
Sotira 1								
Sotira 2	1	trace					1	trace
Sotira 3	24	9%					24	3%
Troulli (Early)								
Troulli (Late)								
Orga								
Total	25						25	
% of shape	0.5%						0.2%	

Motif 623		Shape						
site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A								
K.Kokk								
K.Tenta (Early)								
K.Tenta (Late)								
Khirok			1	trace			1	trace
Philia								
Sotira 1								
Sotira 2								
Sotira 3								
Troulli (Early)								
Troulli (Late)								
Orga								
Total			1				1	
% of shape			trace				trace	

Motif 624		Shape						
site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A								
K.Kokk								
K.Tenta (Early)								
K.Tenta (Late)								
Khirok			1	trace			1	trace
Philia								
Sotira 1								
Sotira 2								
Sotira 3								
Troulli (Early)								
Troulli (Late)								
Orga								
Total			1				1	
% of shape			trace				trace	

Table 7.12 - Percentage frequency of each motif, relative to all other motifs, at the eight major sites

Motif 625	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok		1	trace		2	trace		3	trace
Philia									
Sotira 1									
Sotira 2									
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total		1			2			3	
% of shape		trace			trace			trace	

Motif 626	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok		1	trace					1	trace
Philia									
Sotira 1									
Sotira 2									
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total		1						1	
% of shape		trace						trace	

Motif 627	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok		4	1%		2	trace		2	trace
Philia									
Sotira 1									
Sotira 2									
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total		4			2		2	8	
% of shape		0.1%			trace		trace	0.1%	

Table 7.12 - Percentage frequency of each motif, relative to all other motifs, at the eight major sites

Motif 629	Shape								
	site	Open outer surface	% of Open outer surface	Open inner surface	% of Open inner surface	Closed	% of Closed	Total	% of Site
Kala-A									
K.Kokk									
K.Tenta (Early)									
K.Tenta (Late)									
Khirok									
Philia									
Sotira 1									
Sotira 2				1	trace			1	trace
Sotira 3									
Troulli (Early)									
Troulli (Late)									
Orga									
Total				1				1	
% of shape				trace				trace	

Table 7.12 - Percentage frequency of each motif, relative to all other motifs, at the eight major sites

Motif Group 1	Shape						
	site	Open outer surface	% of total outer surface	Open inner surface	% of total inner surface	Closed	% of total closed
Kala-A		3	1%	4	2%		
K.Kokk		1	3%	1	3%		
K.Tenta (Early)				2	3%		
K.Tenta (Late)		17	3%	34	6%		
Khirok		16	1%	34	2%		
Philia		274	10%	282	10%	4	
Sotira 1		1		1			
Sotira 2		11		14		31	1%
Sotira 3		1		9	1%		
Troulli (Early)		21	6%	24	6%	1	
Troulli (Late)		7	14%	8	16%		
Orga		2	6%				
Total		354		413		36	

Motif Group 2	Shape						
	site	Open outer surface	% of total outer surface	Open inner surface	% of total inner surface	Closed	% of total closed
Kala-A		7	3%	13	6%	5	2%
K.Kokk		1	3%	1	3%		
K.Tenta (Early)		1	2%	6	9%	8	12%
K.Tenta (Late)		42	7%	26	5%	74	13%
Khirok		37	2%	27	2%	72	4%
Philia		162	6%	113	4%	118	4%
Sotira 1		4	1%	10	2%	12	2%
Sotira 2		26	1%	88	2%	99	2%
Sotira 3		6	1%	16	2%	12	1%
Troulli (Early)		66	17%	73	19%	69	18%
Troulli (Late)		4	8%	4	8%	9	18%
Orga				1	3%	7	20%
Total		356		378		485	

Motif Group 3	Shape						
	site	Open outer surface	% of total outer surface	Open inner surface	% of total inner surface	Closed	% of total closed
Kala-A							
K.Kokk							
K.Tenta (Early)							
K.Tenta (Late)		97	17%	146	26%	38	7%
Khirok		2		3		1	
Philia		47	2%	81	3%	20	1%
Sotira 1						2	
Sotira 2				2		1	
Sotira 3						1	
Troulli (Early)		4	1%	5	1%	4	1%
Troulli (Late)				1	2%		
Orga				2	6%		
Total		150		240		67	

Table 7.15 - Frequency occurrence of motif groups on different surfaces of vessel

Motif Group 4	Shape						
	site	Open outer surface	% of total outer surface	Open inner surface	% of total inner surface	Closed	% of total closed
Kala-A		1					
K.Kokk							
K.Tenta (Early)				4	6%	2	3%
K.Tenta (Late)		7	1%	10	2%	11	2%
Khirok		5		6		11	1%
Philia		63	2%	47	2%	24	1%
Sotira 1		4	1%	4	1%	2	
Sotira 2		20		37	1%	17	
Sotira 3		2		8	1%	12	1%
Troulli (Early)		13	3%	12	3%	11	3%
Troulli (Late)		3	6%	1	2%		
Orga		1	3%	2	6%		
Total		119		131		90	

Motif Group 5	Shape						
	site	Open outer surface	% of total outer surface	Open inner surface	% of total inner surface	Closed	% of total closed
Kala-A		1				1	
K.Kokk							
K.Tenta (Early)							
K.Tenta (Late)							
Khirok						2	
Philia		118	4%	123	4%	25	1%
Sotira 1				1			
Sotira 2		16		2		1	
Sotira 3				1			
Troulli (Early)		1		2	1%		
Troulli (Late)				1	2%	2	4%
Orga		2	6%	5	14%	1	3%
Total		138		135		32	

Motif Group 6	Shape						
	site	Open outer surface	% of total outer surface	Open inner surface	% of total inner surface	Closed	% of total closed
Kala-A							
K.Kokk						1	3%
K.Tenta (Early)				2	3%		
K.Tenta (Late)				1		1	
Khirok				1			
Philia		199	7%	164	6%	41	1%
Sotira 1		1					
Sotira 2		21					
Sotira 3							
Troulli (Early)							
Troulli (Late)		1	2%				
Orga							
Total		222		168		43	

Table 7.15 - Frequency occurrence of motif groups on different surfaces of vessel

Motif Group 7	Shape						
	site	Open outer surface	% of total outer surface	Open inner surface	% of total inner surface	Closed	% of total closed
Kala-A							
K.Kokk							
K.Tenta (Early)							
K.Tenta (Late)							
Khirok	3						
Philia	33	1%	13		11		
Sotira 1							
Sotira 2							
Sotira 3							
Troulli (Early)	1		2		2		
Troulli (Late)							
Orga					1		
Total	37		15		14		

Motif Group 8	Shape						
	site	Open outer surface	% of total outer surface	Open inner surface	% of total inner surface	Closed	% of total closed
Kala-A							
K.Kokk							
K.Tenta (Early)							
K.Tenta (Late)					1		
Khirok				1	1		
Philia	65	2%	61	2%	17	1%	
Sotira 1	1		1				
Sotira 2	1		4		4		
Sotira 3							
Troulli (Early)							
Troulli (Late)							
Orga				1			
Total	67		68		23		

Motif Group 10	Shape						
	site	Open outer surface	% of total outer surface	Open inner surface	% of total inner surface	Closed	% of total closed
Kala-A							
K.Kokk							
K.Tenta (Early)							
K.Tenta (Late)							
Khirok	14	1%	10	1%	20	1%	
Philia	63	2%	88	3%	33	1%	
Sotira 1	1		1		7	1%	
Sotira 2	22		28		22		
Sotira 3	2		4		11		
Troulli (Early)	16	4%	16	4%	3	1%	
Troulli (Late)	2	4%	1	2%	2	4%	
Orga	2	6%			2	6%	
Total	122		148		100		

Table 7.15 - Frequency occurrence of motif groups on different surfaces of vessel

Motif Group 15		Shape				
site	Open outer surface	% of total outer surface	Open inner surface	% of total inner surface	Closed	% of total closed
Kala-A						
K.Kokk						
K.Tenta (Early)						
K.Tenta (Late)			1			
Khirok						
Philia	12		33	1%	23	1%
Sotira 1						
Sotira 2					2	
Sotira 3			1			
Troulli (Early)						
Troulli (Late)						
Orga						
Total	12		35		25	

Motif Group 17		Shape				
site	Open outer surface	% of total outer surface	Open inner surface	% of total inner surface	Closed	% of total closed
Kala-A						
K.Kokk						
K.Tenta (Early)						
K.Tenta (Late)					9	2%
Khirok					3	
Philia	2		1		17	1%
Sotira 1						
Sotira 2					7	
Sotira 3					1	
Troulli (Early)						
Troulli (Late)						
Orga						
Total	2		1		37	

Motif Group 20		Shape				
site	Open outer surface	% of total outer surface	Open inner surface	% of total inner surface	Closed	% of total closed
Kala-A	1		2	1%		
K.Kokk			1	3%		
K.Tenta (Early)						
K.Tenta (Late)						
Khirok	2		8		6	
Philia	20	1%	10		7	
Sotira 1	1		5	1%	8	1%
Sotira 2	12		6		28	1%
Sotira 3	4		4		15	2%
Troulli (Early)	10	3%	9	3%	11	3%
Troulli (Late)	1	2%			3	6%
Orga	2	6%	1	3%	1	3%
Total	53		46		79	

Table 7.15 - Frequency occurrence of motif groups on different surfaces of vessel

Motif Group 23		Shape				
site	Open outer surface	% of total outer surface	Open inner surface	% of total inner surface	Closed	% of total closed
Kala-A	5	2%	2	1%	3	1%
K.Kokk			1	3%		
K.Tenta (Early)			2	3%		
K.Tenta (Late)	4	1%	5	1%	3	1%
Khirok	60	3%	84	5%	36	2%
Philia	44	2%	64	2%	26	1%
Sotira 1			3		3	
Sotira 2	33	1%	72	2%	79	2%
Sotira 3	4		8	1%	6	1%
Troulli (Early)					1	
Troulli (Late)						
Orga						
Total	150		241		157	

Motif Group 35		Shape				
site	Open outer surface	% of total outer surface	Open inner surface	% of total inner surface	Closed	% of total closed
Kala-A	51	22%	46	20%	34	14%
K.Kokk	3	9%	1	3%	3	9%
K.Tenta (Early)	6	9%	4	6%	7	11%
K.Tenta (Late)	5	1%	4	1%	17	3%
Khirok	313	17%	265	15%	268	15%
Philia	7		6		8	
Sotira 1	145	22%	129	20%	115	18%
Sotira 2	1225	24%	1113	22%	908	18%
Sotira 3	204	21%	167	17%	207	21%
Troulli (Early)	1		1			
Troulli (Late)			1	2%		
Orga	1	3%	1	3%		
Total	1961		1738		1567	

Motif Group 36		Shape				
site	Open outer surface	% of total outer surface	Open inner surface	% of total inner surface	Closed	% of total closed
Kala-A	5	2%	4	2%	13	6%
K.Kokk	7	21%	7	21%	2	6%
K.Tenta (Early)			1	1%		
K.Tenta (Late)	1		1		3	
Khirok	3		3		9	1%
Philia						
Sotira 1	15	2%	23	4%	24	4%
Sotira 2	80	2%	115	2%	93	2%
Sotira 3	29	3%	36	4%	31	4%
Troulli (Early)						
Troulli (Late)						
Orga						
Total	140		190		175	

Table 7.15 - Frequency occurrence of motif groups on different surfaces of vessel

Motif Group 37		Shape				
site	Open outer surface	% of total outer surface	Open inner surface	% of total inner surface	Closed	% of total closed
	Kala-A	8	3%	4	2%	5
K.Kokk						
K.Tenta (Early)			1	1%		
K.Tenta (Late)	3	1%	2		3	1%
Khirok	64	4%	69	4%	174	10%
Philia	1					
Sotira 1	38	6%	27	4%	23	4%
Sotira 2	215	4%	174	3%	182	4%
Sotira 3	40	4%	37	4%	33	3%
Troulli (Early)						
Troulli (Late)						
Orga						
Total	369		314		420	

Motif Group 38		Shape				
site	Open outer surface	% of total outer surface	Open inner surface	% of total inner surface	Closed	% of total closed
	Kala-A	2	1%	6	3%	1
K.Kokk	3	9%	1	3%		
K.Tenta (Early)						
K.Tenta (Late)						
Khirok	26	1%	19	1%	60	3%
Philia	1				1	
Sotira 1	9	1%	20	3%	5	1%
Sotira 2	49	1%	122	2%	46	1%
Sotira 3	3		38	4%	11	1%
Troulli (Early)						
Troulli (Late)						
Orga						
Total	93		206		124	

Table 7.15 - Frequency occurrence of motif groups on different surfaces of vessel






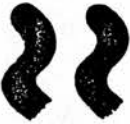

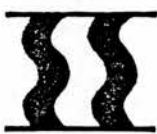



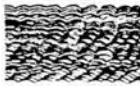














1		Rim band	14		Intersecting lines
2		Vertical broad band 4cm >	15		Converging lines and bands
3		Horizontal broad band 4cm >	16		Wavy bands
4		Diagonal broad band 4cm >	17		Bounded wavy bands
5		Vertical thin lines < 3mm	18		Ripple lines
6		Horizontal thin lines < 3mm	19		Ripple pattern
7		Diagonal thin lines < 3mm	20		Ripple variant #1
8		Vertical thick line 3 - 40mm	21		Ripple variant #2
9		Horizontal thick line 3 - 40mm	22		Broad ripple bands
10		Diagonal thick line 3 - 40mm	23		Ladder pattern
11		Converging bands	24		Ladder pattern variant #1
12		Intersecting bands	25		Ladder pattern variant #2
13		Converging lines	26		Ladder pattern variant #3

Table 7.16/1 - Decoration Red on White

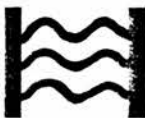







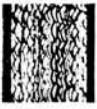





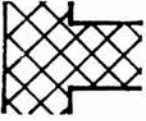
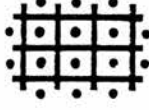


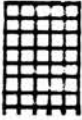








27		Ladder pattern variant #4	40		Concentric squares and circles
28		Ladder pattern variant #5	41		Targets
29		Ladder pattern variant #6	42		Reserved targets
30		Bounded ripple bands #1	43		Reserved circles
31		Bounded ripple bands #2	44		Strings of targets
32		Curvilinear ripple bands	45		Cross-hatched circles
33		Cross-hatching	46		Cross-hatched circle variant
34		Cross-hatched intersecting bands	47		Cross-hatching with dots
35		Cross-hatched bands	48		Curvilinear bands with cross-hatching & dots
36.1		Lattice	36.2		Lattice bands
37		Concentric circles	49		Multiple V's
38		Single circles	50		Opposed solid triangles
39		Reserved dots	51		Solid pendant triangles
			52		Hatched triangles

Table 7.16/2 - Decoration Red on White (continued)
















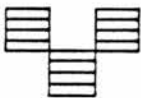





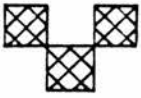



53		Cross-hatched triangles	66		Chequerboard variant #2
54		Ripple filled triangles	67		“Philia” pattern
55		Multiple zig-zag	68		Unidentified areas within boundaries
56		Dot borders	68.1		Ripple
57		Stroke border	68.2		Target
58		Dot bands	68.3		Dots
59		Strokes	68.4		Solid
60		Solid chequerboard	68.5		Triangle
61		Chequerboard with hatched filler	68.6		Lattice
62		Chequerboard with ripple filler	68.7		Cross-hatched
63		Chequerboard with wash filler	68.8		Hatched
64		Chequerboard with cross-hatched filler	68.9		Wavy lines
65		Chequerboard variant #1	68.10		Chevron

Table 7.16/3 - Decoration Red on White (continued)













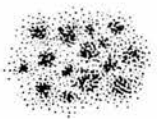
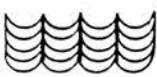
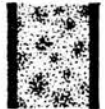
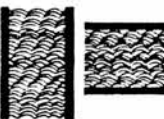






69		Shoulder band	82		Band defining tube spout
70		Shoulder & neck band	83		Solid paint inside spout
71		Solid neck & shoulder band	84		Solid paint on outside of spout
72		Multiple shoulder bands	85		Opposing spatulas
73		Concentric circles defining base	86		Dots
74		Targets defining base	87		Reserved circles with chevron filler
75		Circles defining base	88		Converging lines and band variant
76		Mottle	89		Festoons
77		Mottle bands	90		Festoon variant
78		Ripple filled broad bands	91		Solid circles with wavy lines
79		Solid disk defining base	92		Targets with wavy lines
80		Solid zig-zag	93		Concentric diamonds or squares
81		Band defining trough spout	94		Solid pendant semi-circles

Table 7.16/4 - Decoration Red on White (continued)


















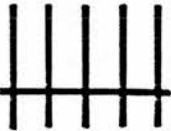




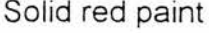



95		Curvilinear band	108		Strings of circles
96		Curvilinear line	109		Diamonds and intersecting lines
97		Curvilinear band variant	110		Curving solid bands from rim
98		Multiple curvilinear line variant	111		Joined circles
99		Strings of diamonds	112		Joined targets
100		Reserved slits	113		Wavy horizontal line below rim band
101		Curvilinear zones	114		Joined target variant
102		Crescents	115		Tendrils
103		Curvilinear hatched area	116		Lines barred
104		Cross-hatched bands meeting target	117		Solid paint on neck
105		Dot border variant	118		"Sotira" thin wavy bands
106		Solid red paint	119		Rectilinear bands
107		Solid white paint	120		Curvilinear shapes

Table 7.16/5 - Decoration Red on White (continued)







121		Rows of dots
122		Dot band on rim
123		Rectilinear shapes
124		Multiple brush curvilinear lines
125		Broad band with circle border
126		Reserved strings of dots

Table 7.16/6 - Decoration Red on White (continued)

501		Broad vertical combed bands	514		Wavy broad bands and solid band
502		Broad vertical combed bands with lines	515		Wavy combed ladders
503		Broad intersecting combed bands	516		Combed zones
504		Thin straight combed bands	517		Combed curvilinear zones
505		Broad straight combed bands	518		Straight combed zones
506		Broad wavy combed bands	519		Combed bands intersected by solid bands
507		Combed hairpins	520		Combed rim bands
508		Converging thin straight combed lines	521		Combed wavy bands
509		Combed bridges between targets	522		Straight combed ladders
510		Thin combed 'reserved' lines	523		Circles with combed boxes
511		Combed curved bands covering bowl	524		Combed 'figure of 8'
512		Converging wavy combed broad bands with solid zones	525		Combed diagonals
513		Wavy combed concentric circles	526		Combed squares

Table 7.16/7 - Decoration Painted and Combed

527		Combed squares and solid squares
528		Diagonal bands combed in diagonal straights
529		Converging wavy bands
530		'Khirokitia' tight waves
531		Combed straight returns
532		Combed bands with thin intersectors
533		Horizontal broad wavy bands

Table 7 16/8 - Decoration Painted and Combed (continued)




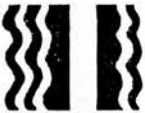


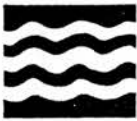
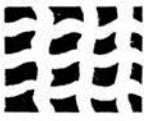










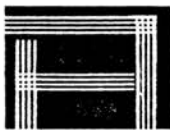

601		Thin wavy lines horizontal to rim	614		Converging combed straight lines
602		Thin wavy lines vertical to rim	615		Combination thin wavy & thick straight lines
603		Thin wavy lines diagonal to rim	616		Combed zig-zags
604		Thick wavy lines horizontal to rim	617		Combed wavy cross-hatching
605		Thick wavy lines vertical to rim	618		601/602/603 with no orientation
606		Thick wavy lines diagonal to rim	619		604/605/606 with no orientation
607		Thin straight lines horizontal to rim	620		607/608/609 with no orientation
608		Thin straight lines vertical to rim	621		610/611/612 with no orientation
609		Thin straight lines diagonal to rim	622		Combed hairpins
610		Thick straight lines horizontal to rim	623		Horizontal combed trough spout
611		Thick straight lines vertical to rim	624		Horizontal combed tube spout
612		Thick straight lines diagonal to rim	625		Combed sharp waves
613		Chequerboard combing	628		Rectilinear combed lines

Table 7.16/9 - Decoration Combed

Decoration - MBW Embossed

701



703



702



Table 7.16/10 - Decoration Monochrome Burnished Ware

List of Figures 7.17-7.21

- Figure 7.17/1 - Sotira. Hut 39a. btw Floors I-II. Buff Coarse Ware dish
Figure 7.17/2 - Sotira. Hut 29. btw Floors II-III. Red on White. open bowl Type 01
Figure 7.17/3 - Sotira. Hut 12. btw Floor II and rock. Cb. closed vessel
Figure 7.17/4 - Sotira. surface. Cb. open body sherd
Figure 7.17/5 - Sotira. Hut 13. Floor I. Red on White. open bowl. Type 02
Figure 7.17/6 - Sotira. surface. Cb. open bowl. Type 01
- Figure 7.18/1 - Khirokitia. 9990, RMP, holemouth
Figure 7.18/2 - Khirokitia. 9528, RMP, holemouth
Figure 7.18/3 - Khirokitia. 9407. Red on White. deep bowl. Type 04
Figure 7.18/4 - Khirokitia. 9593, PCb. open bowl. Type 01
Figure 7.18/5 - Khirokitia. 9400, closed vessel
Figure 7.18/6 - Khirokitia. 9427. Cb. open bowl. Type 01
Figure 7.18/7 - Khirokitia. 9400, Cb (Khirokitia tight combing). open bowl. Type 01
Figure 7.18/8 - Khirokitia. 9467, PCb. open body sherd (outer surface)
- Figure 7.19/1 - Kalavassos A. Hut II. 0-40cm. Cb. open bowl. Type 01
Figure 7.19/2 - Kalavassos A. Hut III. 0-40cm. Cb. open bowl. Type 01
Figure 7.19/3 - Kalavassos A. Hut V. btw Floors III-IV. Red on White. open bowl. Type 02
Figure 7.19/4 - Kalavassos A. Hut XI. 0-30cm. Red on White. closed vessel
Figure 7.19/5 - Kalavassos A. Hut XI. Floor III. Red on White. closed vessel
Figure 7.19/6 - Kalavassos B. Pit VIII. Floor VI. PCb. open bowl. Type 06
Figure 7.19/7 - Kalavassos B. Pit VIII. Floor VI. Red on White. open bowl. Type 06
Figure 7.19/7 - Kalavassos B. Pit VIII. surface. Red on White. open body sherd
- Figure 7.20/1 - Kalavassos *Yirtomylos*. surface survey. Red on White. closed vessel
Figure 7.20/2 - Kalavassos *Yirtomylos*. surface survey. Red on White. closed vessel
Figure 7.20/3 - Mari *Paliambela*. surface survey. Cb. open bowl
Figure 7.20/4 - Mari *Paliambela*. surface survey. Cb. open bowl
Figure 7.20/5 - Kalavassos *Zoulofidithes*. surface survey. PCb. open bowl
Figure 7.20/6 - Kalavassos *Zoulofidithes*. surface survey. PCb. open bowl. Type 01
- Figure 7.21/1 - Troulli. Pit A. 240-260cm. Red on White. open bowl. Type 01
Figure 7.21/2 - Troulli. Pit B. 60-80cm. RMP. embossed open bowl. Type 05
Figure 7.21/3 - Troulli. Pit A. 320-340cm. MBW. small bowl
Figure 7.21/4 - Troulli. III-6/1. Red on White. open bowl. Type 05
Figure 7.21/5 - Troulli. III-6/1. Red on White. open bowl. Type 05
Figure 7.21/6 - Orga. surface survey. Red on White. open body sherd. outer surface
Figure 7.21/7 - Orga. surface survey. Red on White. closed vessel
Figure 7.21/8 - Orga. surface survey. Red on White. open bowl. Type 01. decoration worn
Figure 7.21/9 - Orga. surface survey. Red on White. open body sherd. outer surface
Figure 7.21/10 - Orga. surface survey. Red on White. closed vessel

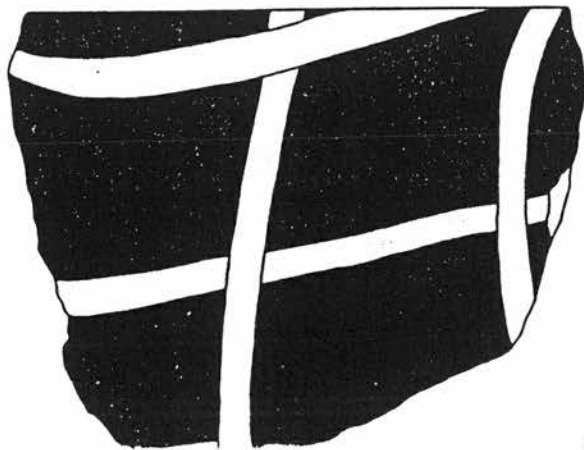
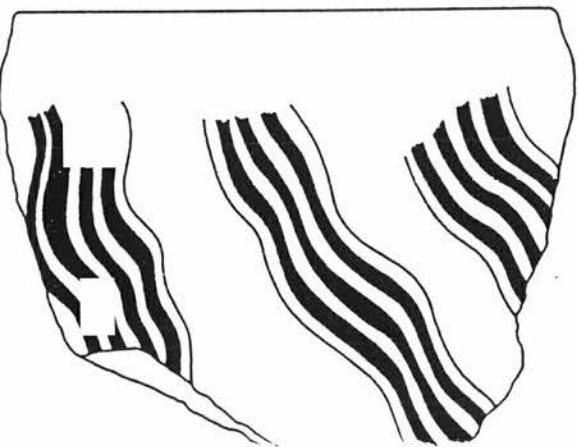
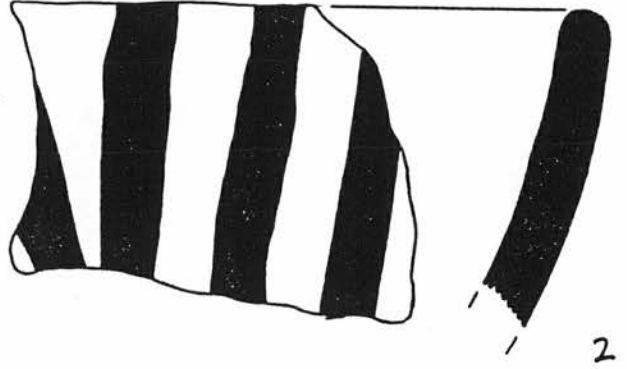
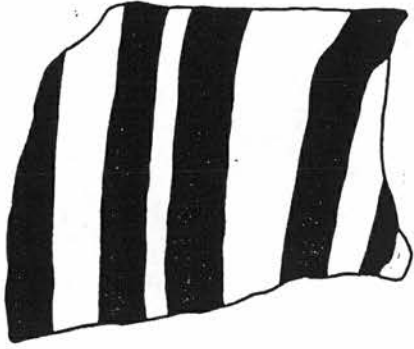
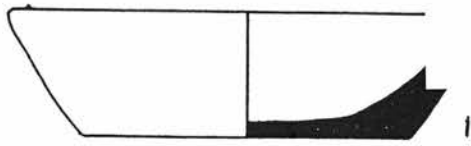


Figure 7.17

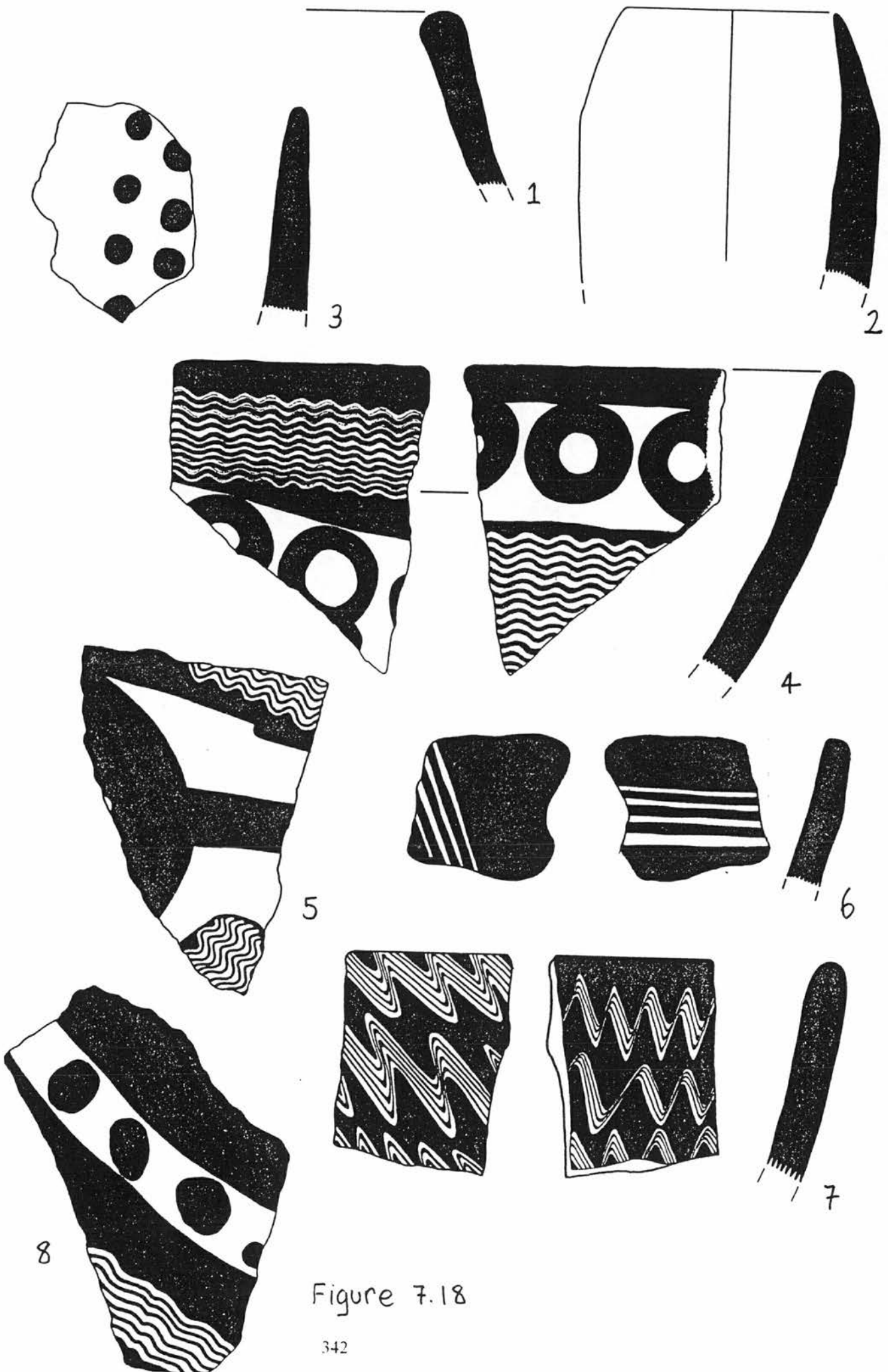


Figure 7.18

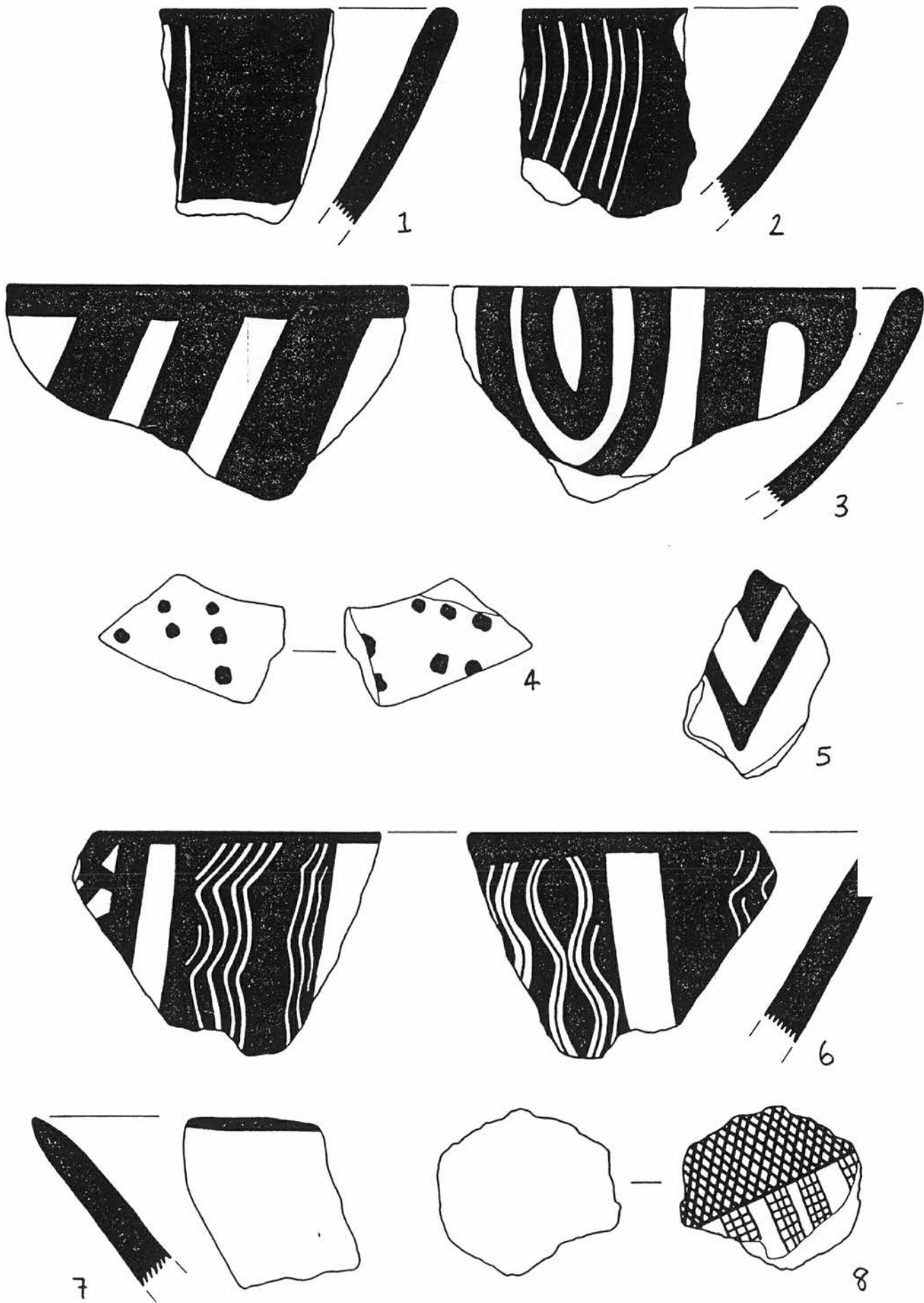


Figure 7.19

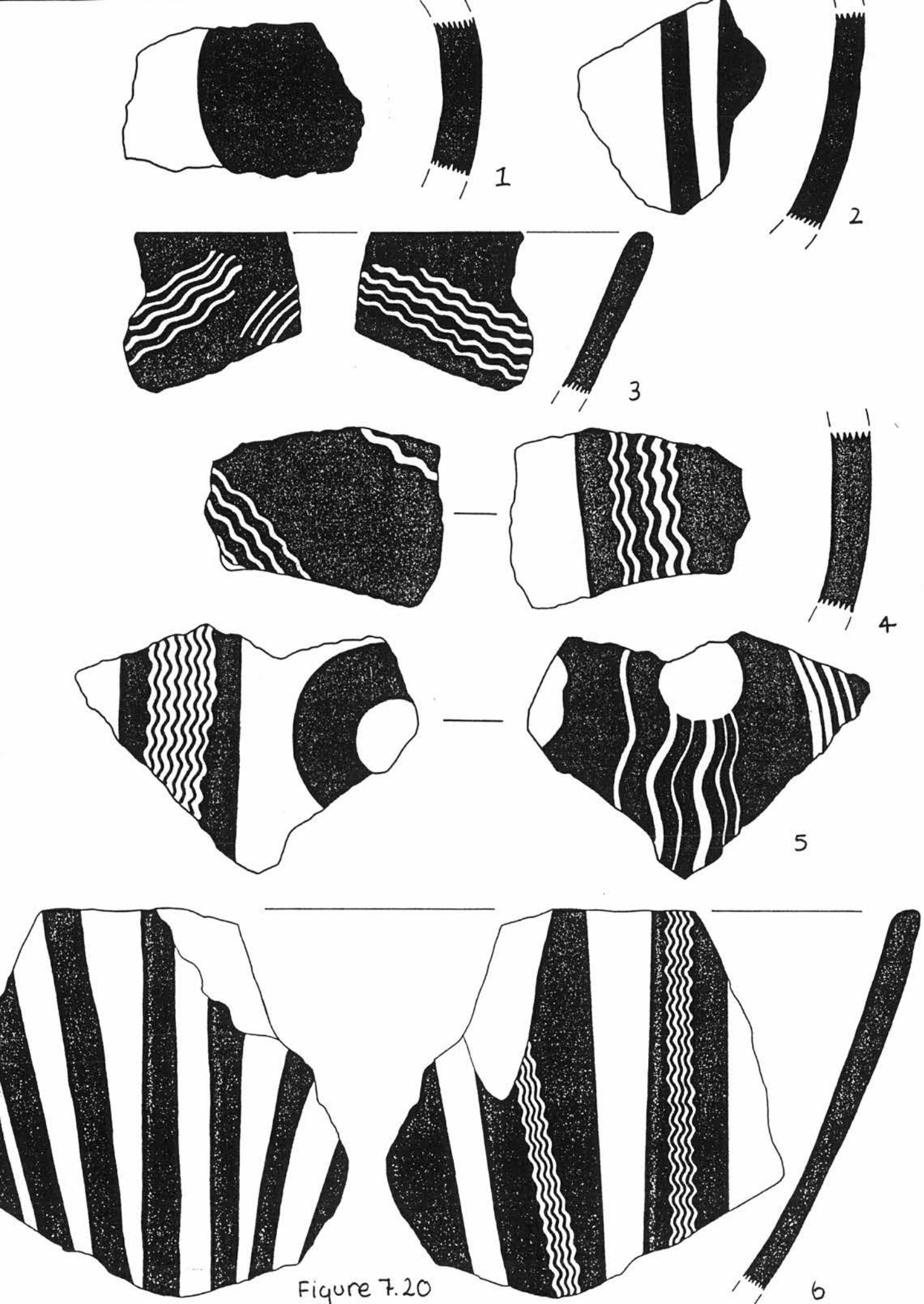


Figure 7.20

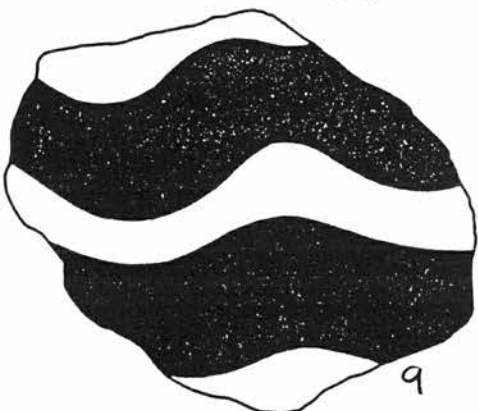
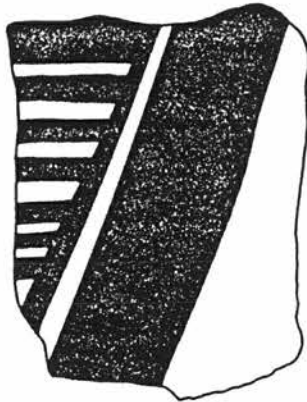
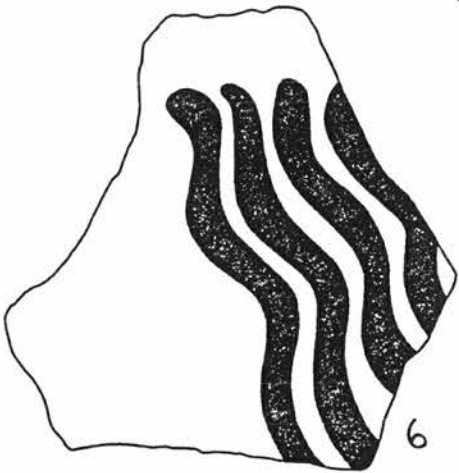
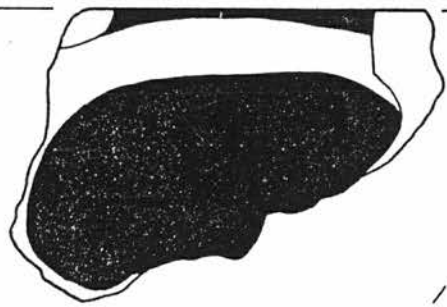
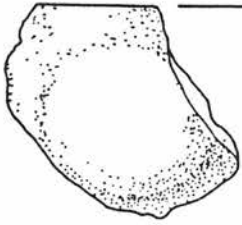


Figure 7.21

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CHAPTER 8

PHILIA, TROULLI AND VRYSI: AN ANALYSIS OF DESIGN VARIATION

8.1 - Introduction

Philia was the first SCU site to be excavated after a hiatus of some twenty years following Dikaios's work at Sotira (Dikaios 1961). In the 1960's there was still very little known about the SCU Phase. Leaving aside, Dikaios' report on Sotira, the only other published reports were the Swedish Cyprus Expedition's volume on the Early Prehistoric Period (Dikaios 1962), the report on the mainly KCU site of Khirokitia (Dikaios 1953), and a few papers on various other Early Prehistoric sites (including, Dikaios 1934, 1935, 1936a, 1936b). Consequently, although considerably more was known about the SCU Phase than many other periods in Cypriot history, there were still substantial gaps in the data, which generated more questions than answers.

Although Dikaios had been replaced as Director of the Department of Antiquities by the time excavations had begun at Philia, there was still considerable academic interest in the Early Prehistoric Period, due mostly to the work of Dikaios himself, and to that of James Stewart, whose own work had concentrated mainly in the Bronze Age (Stewart 1962). Consequently, when Watkins came to work at Philia, interest in the earlier periods in Cyprus was at a relatively high point. That Philia was an important SCU site was already known. Earlier trial excavation work in the 1940's by the Department of Antiquities at both Site A, and the later occupations of Philia Drakos B and C (Dikaios n.d.) had uncovered architectural remains of various Early Prehistoric horizons, confirming the existence of another clustered group of sites, similar to the Kalavassos cluster.

From the perspective of the pottery, Philia is the most diverse SCU site. Not only does it generate ware types not seen before in Cyprus (particularly MBW and its variants), it also has the most varied RW repertoire. The problems of quantifying and recording an unusual ceramic assemblage, which consisted of ware types with no comparative forerunners in the SCU material culture, must have created substantial problems for the excavators. Even so, Watkins' work on the motif analysis was advanced for its time. At Sotira, Dikaios had carefully recorded and quantified the frequency of ware types by context (or floor level), but he had not attempted to broach the

difficult problem of multi-variate classification. Watkins, by comparison, was the first to consider the SCU Phase as a temporally contiguous culture, albeit, with distinct regional and spatial patterning. Therefore, his interests were centred on both the chronological seriation of changes in shape and wares, and also on the spatial relationship between particular SCU ceramic groups.

Watkins developed a multi-variate system of ceramic recording which focused broadly on the relationship between decorative modes, ware type, fabric and shape. The very same ceramic recording method was subsequently used by Peltenburg at the site of Vrysi (Peltenburg 1982b). Having worked at Philia with Watkins, Peltenburg had a good knowledge of the pottery. He was able to transpose this knowledge onto the Vrysi ceramics, distinguishing the same forms, motifs, and ware types, and also identifying new pottery classes. This produced a high degree of continuity from one site to the other, and it is this combination of identical ceramic recording methods, and Peltenburg's knowledge of the Philia pottery, that enable comparison of the original data.

The analysis of the excavated collections from Vrysi and Philia is supplemented in this chapter by the inclusion of the museum sample from Troulli. It was possible to modify the Troulli data base to fit the recording methods used by Watkins and Peltenburg by re-grouping motifs, and slightly re-structuring attribute fields. The Pit A material, which had been re-analysed and phased by Peltenburg (Peltenburg 1979), formed the basis of the finer analysis. The sample from Troulli is significantly smaller than that of Philia and Vrysi and it was not known whether this would significantly bias the results. The test for sample richness undertaken below (Figure 8.2, page 356) indicates that sample size, in this instance, may have some skewing effect on the data, but there are approximately 1000 motifs from Troulli, in comparison with 5000 at Philia and 8000 at Vrysi, therefore it was considered that the sample was large enough to undertake comparative analysis.

Vrysi and Troulli are located within 4km of each other on the coastal plain north of the Kyrenia Range. Philia, on the other hand, is located in the Morphou Bay region, some 40km south-west of Vrysi and Troulli, south of the Kyrenia Range (Map 2.2). The economic and social connections between the three sites is not well understood, and of particular interest is the relationship between Vrysi and Troulli, which are located within the same subsistence catchment area, and Philia, which is some distance from the former two sites. A comparative study of the pottery collections

is consequently vital for understanding patterns of stylistic diversity between two very proximate sites, possibly springing from the same parent community, and one relatively distant site, but still of the same RW decorative tradition.

In Chapter 5 it was argued that “some of the diversity, evident in ceramic design, probably arose directly from subsistence related patterning, through the budding off of “daughter” communities”. If this hypothesis is correct, then the sites of Vrysi and Troulli should exhibit observable, non-random patterning between their ceramic assemblages that is different from, or at odds with, the patterns of diversity observed between regions. The close proximity, and presumably close kin relationships, between Vrysi and Troulli should generate stylistic patterning distinct from that of Philia and Troulli, or Philia and Vrysi. Alternately, if all three sites fitted a simple “distance to similarity ratio”, as proposed by Deetz (Deetz 1965) and Longacre (Longacre 1970), then Troulli and Vrysi should exhibit the greatest degree of similarity, with Philia being equally dissimilar to both sites. Finally, it may be that neither of these two patterns of stylistic variation can be identified, and that other models must be considered. Ultimately, the purpose of this Chapter is to compare the patterns of diversity between the three sites, to identify the stylistic patterning that exists, and to relate this to the models established in Chapter’s 5 and 6.

8.2 - The classification system

The Vrysi and Philia classification system (hereafter VPC) records fewer attribute variables than the classification system created for this thesis. Therefore, certain attributes analysed for co-variation in Chapter 7, cannot be analysed here because the information was never recorded. The VPC concentrates on the proportional representation of ware types, and the quantifiable variation in RW design motifs. It is specifically these attributes which will form the basis of the analysis in this chapter. The VPC provides the following information on the ceramics:

1. The total ceramic count for each context.
2. Total counts for each ware type.
3. A breakdown of RW motifs, *sometimes* by open and closed surfaces.
4. Total pattern counts.

Morphology is largely ignored. Analysis at the component level has not been undertaken. For example, rims, bases, and spouts, if recorded, cannot be matched up with corresponding open or closed forms, even though rough estimates of component types are given in the Vrysi publication (Peltenburg 1982b, 65-66). Variations in shape are not recorded, therefore it is not known whether a closed diagnostic sherd belongs to a holemouth vessel or to a narrow necked bottle. It is not possible to differentiate between the various open bowl shapes, even though again, development of the form is referred to in the Vrysi publication (Peltenburg 1982b, 65-66). Finally, it is also not possible to associate design motifs with morphology or vessel surface (ie, inner or outer surfaces), because the recording of this information is not consistent.

Although there are limitations to the VPC, there are also many aspects in its favour. In the first instance, the samples are large and represent the complete ceramic repertoire, thereby substantially reducing sample bias. Secondly, the recording system is uncomplicated and broadly defined, reducing the chance of confusing analyses caused by complicated recording systems. Thirdly, the samples from Philia and Vrysi are approximately the same size, increasing the degree of comparability between these two assemblages. The anomaly is the sample from Troulli, which is considerably smaller. However, broad analyses can still be undertaken on all three assemblages.

8.3 - The structure of the analysis

8.3.1 - Vrysi

The sample from Vrysi consists of 63,457 sherds (Table 8.1, Table 8.2)¹. This includes a number of surface deposits and un-phased contexts. A few contaminated contexts have been excluded, but by and large, this number represents almost the total sum of recorded Vrysi pottery. The sample was obtained from the original pottery recording sheets², and there are some irregularities in the quality and degree of recorded information which should be highlighted. Approximately three or four individual ceramic readers can be recognised by their handwriting. Some employed a high degree of recording precision, while others do not record the pottery in as much detail. Furthermore, some contexts produced unambiguous material, which could be easily assigned to ware, shape and motif categories, while other contexts produced sherds which did not fit easily into categories. Another inconsistency is that CW was not always counted. However, the

¹ Table's 8.1 and 8.2 are located at the end of this chapter.

² Access to the original recording sheets is with the kind permission of Professor E.J. Peltenburg.

publication notes that CW was weighed (Peltenburg 1982b, 61) but weights are not included on the pottery recording forms, although counts often are. I have used CW counts where they were recorded, but in instances where the presence of CW is referred to as “some sherds” or “many sherds”. I have not tried to “guess” what this means, and have left CW out altogether. The outcome is that the percentage of CW represents less than the absolute total, but this difference is considered not so dramatic that it affects the overall result.

Another inconsistency between the published ceramic analysis and the analysis undertaken in this chapter is that the publication refers to fabric types, whereas the recording sheets refer to wares. Therefore, there exists some ambiguity in the correlation of the original data with the publication. At Vrysi, clear fabric types are usually discernible, enabling easier cross-referencing than at other sites, such as Philia, where fabrics are not so clearly defined. In most instances it has been possible to cross-reference wares and fabrics. Fabric’s A, B, and C, for example, occur in the Decorated Fine Wares, Fabric D is unique to Buff Coarse Ware, and Fabric E is unique to Coarse Ware. However, Fabric F created some problems. It is described as a distinct fabric type, with a dark red/red brown monochrome surface, but whether it constituted a different ware type is not known. Peltenburg says of Fabric F that:

There are only a few occurrences of this ware at Vrysi, always less than 1% of any context. It is treated with a highly burnished reddish brown paint applied directly or over a thin wash on the core in monochrome fashion, mainly for bowls. Its rarity and lack of conformity with the fairly standardised technology employed in Vrysi decorated wares point to a non-local or very specialised source. Surfaces conform to Dikaios’ description of Red Lustrous (Dikaios 1962, 86) particularly common in the south of the island, but closer correlation would need analyses.

(Peltenburg 1982b, 64)

Therefore, Fabric F is distinct for its surface finish as well as fabric. The pottery sheets for Vrysi record the presence of a Monochrome *Buff* Ware in House 16 and House 12, and it maybe that this actually corresponds to Fabric F, as there is no mention of any other ware type with which it could correspond. In my own observations of the small collection of pottery from Vrysi, currently stored in the Department of Archaeology, The University of Edinburgh, there was a fabric type

with a surface finish that closely resembled MBW at Philia. Unfortunately however, there is no way of checking this observation as most of the pottery is still inaccessible in Kyrenia Castle.

Finally, Peltenburg included only those sherds which originated from well stratified deposits, a total of some 42,937 sherds (Peltenburg 1982b, 61). I have used the total sherd assemblage for the broad analysis, disregarding phasing, but have followed Peltenburg for the finer analysis and have disregarded all contaminated and un-phased deposits. However, my totals do not match Peltenburg's totals. On removing un-phased and contaminated deposits the total sample used in the finer analysis is 50,360 sherds, some 8,000 sherds more than Peltenburg's total. Unfortunately it is not possible to correlate Peltenburg's and my sample more closely as there is no mention in the publication of the contexts which were excluded. In the end, the results of the analysis below show a strong similarity with Peltenburg's own results, and I suspect this discrepancy does not significantly effect the reliability.

8.3.2 - Philia

The sample from Philia consists of 49,798 sherds (Table 8.3, Table 8.4)³, including surface and un-phased contexts. Again the analysis is based upon the original pottery recording sheets provided by the excavator.⁴ As with Vrysi, all contexts were used in the broad analysis, but only phased deposits were used in the finer analysis.

There are a number of inconsistencies in the Philia archival material which have reduced the reliability of the data analysis. In the first instance, not all contexts are included in the following analysis because not all the data sheets were available. Watkins undertook his own analysis of the pottery for publication (Watkins n.d.), and this appears to include all the excavated contexts. Consideration was given to using Watkins' own analysis in this thesis, but as he lumped together most of the original 22 motif groups to create 7 broad motif categories, it was felt that the original motif groups would supply more information, and could be more easily correlated with the Vrysi motif groups. Although the sample is not complete, it does include most of the better preserved contexts and therefore, should be representative.

³ Table's 8.3 and 8.4 are located at the end of this chapter.

⁴ Access to the Philia pottery recording sheets is with the kind permission of Dr T.F. Watkins.

In the second instance, not all ware types are recorded on the pottery sheets. Monochrome Burnished Ware with RW decoration (MBW/RW) is not included, nor is there a distinction made between standard MBW and the bright pink MBW variant. These omissions have created various problems with assigning phases to contexts. Watkins phased Philia partly on the basis of the pottery, and partly on the basis of the better stratigraphic sequences. However, there are no existing concordance tables. Consequently, I had to use a combination of various sources of information to assign contexts to phases. Essentially, I used Watkins' original stratigraphic matrices, and his ceramic data analyses, to tie in the phasing to the original ceramic recording sheets. In most instances this worked quite well, but in other instances there was just not enough information. Therefore, many contexts have not been phased. The greatest problem was defining which contexts belonged to Phase 2, and which belonged to Phase 3. One of the defining criteria for Phase 2 is that MBW/RW appears for the first time, and it is found in much greater proportions than in Phase 3. In order to identify Phase 2 deposits, I looked at Watkins cumulative percentage frequencies, to find the ratio of MBW/RW to other wares in each context. There were a number of contexts which clearly had more of this ware type than others and these I designated as Phase 2 deposits. In contrast, Phase 1 deposits were clearly recognisable because they consisted wholly of MBW, and Phase 3 and 4 deposits were separated by a sterile layer of marl. Therefore, the only ambiguity that exists is between Phase's 2 and 3. Fortunately, the analysis shows that there is a significant decrease in MBW between Phase 2 and Phase 3, in line with Watkin's own findings, suggesting that the division of contexts into Phase's 2 and 3 is reliable. Even so, the results must be considered with some circumspection because of the many inconsistencies and ambiguities which exist.

8.3.3 - Troulli

The sample from Troulli is the same as that used in Chapter 7, but it has been modified slightly to match the recording structure for the Philia and Vrysi samples (Table 8.5, Table 8.6)⁵. In contrast with Philia and Vrysi, the Troulli sample consists of only 1759 sherds, approximately 3% of the total of the other two sites. However, the motif count is between 12.5% and 20% of the latter two sites.

⁵ Table 8.5 and 8.6 are located at the end of this chapter.

In order to include Troulli in the analysis some initial modifications were made to the motif classification. The museum sample was recorded using the detailed classification system established for this thesis, and outlined in Chapter 4. Where the VPC records 28 motifs in all, later modified by the excavators to a total of 22, this thesis records 126 RW motifs, used in the analysis in Chapter 7. In order to ensure that the Troulli motifs matched with the Philia and Vrysi excavation samples, many motifs had to be lumped together, or excluded if they did not fit into the VPC classification. Inconsistencies still remained. For example, even before the Troulli material was added to the data set, there were inconsistencies between the Philia and Vrysi motifs. Some motifs recorded at Vrysi that did not match with those recorded at Philia, mostly because the collections were subtly different and therefore motifs were not identical. In such cases, similar motifs had to be lumped into the same motif category. The resulting concordance table of motifs is illustrated in Table 8.7, at the end of this chapter.

8.4 - Summary statistics

In Chapter 7, four principal questions underpinned the analytical process. Three similar questions form the basis of the analysis in this chapter.

1. Do assemblages show a tendency to become more heterogeneous or homogeneous with time?
2. Does the degree of similarity between sites converge or diverge over time?
3. Is there more similarity in ceramic assemblages within site clusters (ie, Troulli and Vrysi), than between regions (ie, Philia, with Vrysi and Troulli)?

The analysis will focus on the spatial and temporal patterning of stylistic diversity within design motifs because this is the only attribute class for which we have good data. As with Chapter 7, the sites will be analysed on a broad level, and then at a finer level, by phase. Again, high resolution, multi-variate statistics have been avoided because of the likelihood of misleading results. The second part of the Chapter will briefly review the proportional representation of different ware types at each site. It will be interesting to note whether there is consistency between the analysis of the Philia and Troulli samples in Chapter 7, and the patterns of variation noted here. An initial step in any analysis is to give a broad overview of the collections in terms of the frequency and

types of motifs that occur. This has already been undertaken for Troulli in Chapter 7, but will be repeated here in order to illustrate the relationship between Troulli, Vrysi and Philia.

8.4.1 - Morphology

Very little comparative data on morphology is available for Vrysi and Philia. However, the proportion of open to closed vessels was recorded at both sites and it is interesting to note the difference in proportions from those recorded in the previous Chapter. It was observed in Chapter 7 that a dichotomy exists between the substantial “above ground” sites, which have a greater proportion of open vessels to closed vessels, and the eroded sites and survey sites, which have a greater proportion of closed to open vessels. Figure 8.1, below, illustrates the percentage frequency distribution of open and closed vessels at Philia, Troulli and Vrysi. The graph shows that Philia and Troulli have almost identical proportions of open and closed vessels, with a slightly higher proportion of open shapes, whereas at Vrysi the proportions are reversed. Based on the observations in Chapter 7, we would expect Vrysi, as a site with substantial architecture, to have a higher proportion of open to closed sherds. Instead Vrysi groups with sites such as Khirokitia and Tenta, which are weighted towards closed vessels.

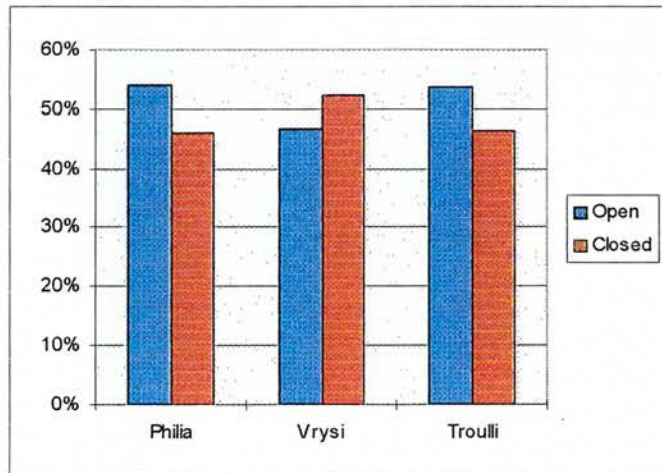


Figure 8.1 - Percentage frequency of open and closed vessels at Philia, Vrysi and Troulli

The question arises whether these slight differences in morphological preference are related to factors of settlement location, or variation in subsistence activities, or some other unknown factor. In Chapter 7, it was suggested that variations in subsistence strategies might account for the

morphological differences between assemblages, and certainly, there is now enough evidence to suggest differential site usage in the SCU. Another theory might be that closed vessels were used for storing liquid and that sites which are located further from fresh water sources might have had a greater need for liquid storage containers, as trips to the nearest water source were made less frequently. Alternatively, a preference for closed vessels at some sites might be explained more simply in terms of the subsistence activities that were carried out. Some sites may have had a greater need for liquid storage in general, including olive oil, milk products and other substances. At Vrysi, for instance, olives were found in most botanical samples (Kyllo 1982, 92), whereas, they are rare at other sites. Unfortunately, there is very little evidence for either hypothesis and certainly no consistent patterns emerge. Without good supporting evidence, the extent to which sites varied in their economic activities are uncertain on the basis of a comparison of vessel shapes. Moreover, there is no way to substantiate hypotheses about the types of substances which were contained in pottery vessels, as we do not have the full repertoire of storage and transport containers and no residue analysis has been conducted on SCU pottery (but see Peltenburg for the ECU, Peltenburg et al. 1998).

8.4.2 - Frequency seriation of motifs disregarding phasing

An initial observation that aids subsequent interpretation of stylistic diversity is the relationship between sample size and sample richness. It was illustrated in Chapter 7 that a very small sample will not have the same degree of sample richness as larger samples, simply because there are too few sherds. Therefore, normative variation will exist between samples. For example, of the three samples analysed in this chapter, Vrysi, with the largest sample has a total of 22 out of 22 motif groups represented⁶. Philia, with the second largest sample, has a total of 12 out of 22 motif groups represented, and Troulli, with the smallest sample, has 8 out of 22 motif groups represented. When the total number of motifs is plotted against sample size, the results are surprisingly uniform (Figure 8.2, below). There is a strong correlation between the total number of motifs overall and the total number of sherds. Although Philia exhibits a slightly lower degree of sample richness than would be expected for the size of the sample, this is probably due to a smaller percentage of RW in the collection.

⁶ Two of the motif groups are represented in such low proportions that they do not appear in the bar graph (Figure 8.3)

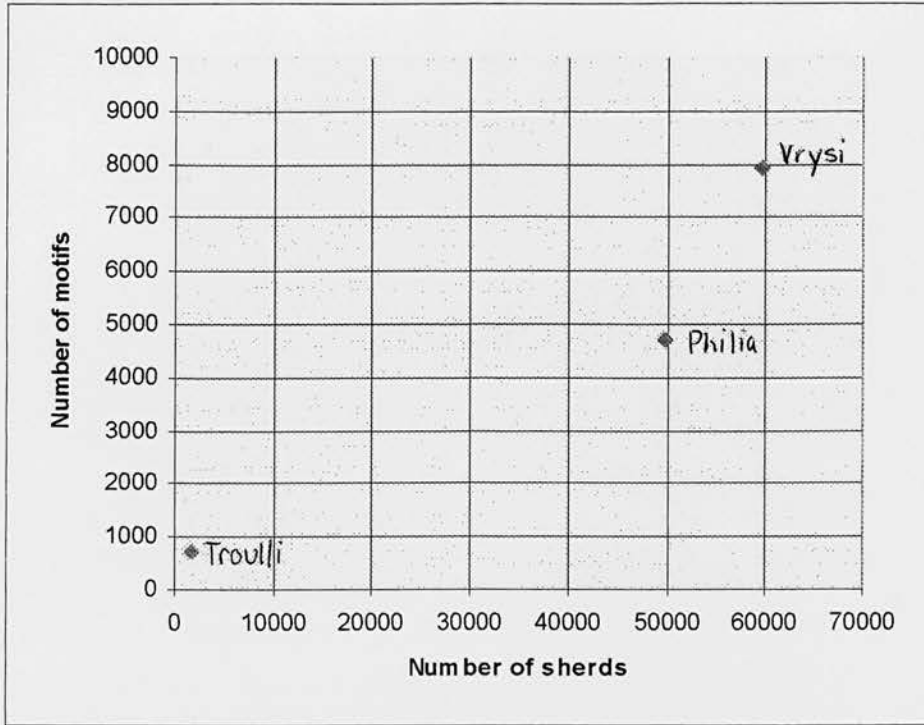


Figure 8.2 - Scatter plot showing the relationship between motif sample size and sample richness at Troulli, Philia and Vrysi

Having noted the effect of sample size upon sample richness, the frequency occurrence of each motif group (presented in Figure 8.3 below) is surprising. The distribution of motifs at Troulli is heavily weighted towards one motif group (Motif Group 14 - parallel bands and lines), whereas Vrysi and Philia have a more even distribution of the motif groups. Comparing this with the results presented in Figure 8.2, it seems clear that although there is a strong correlation between sample size and sample richness, the popularity of certain motifs is determined by other factors. Therefore, although Troulli has a total of 8 motif groups, only one occurs with any degree of frequency. Interpreting this in terms of design heterogeneity, Vrysi and Philia have a much greater range of well represented motif groups and therefore could be said to be more heterogeneous, whereas Troulli is dominated by one motif group, and therefore could be said to be more homogeneous.

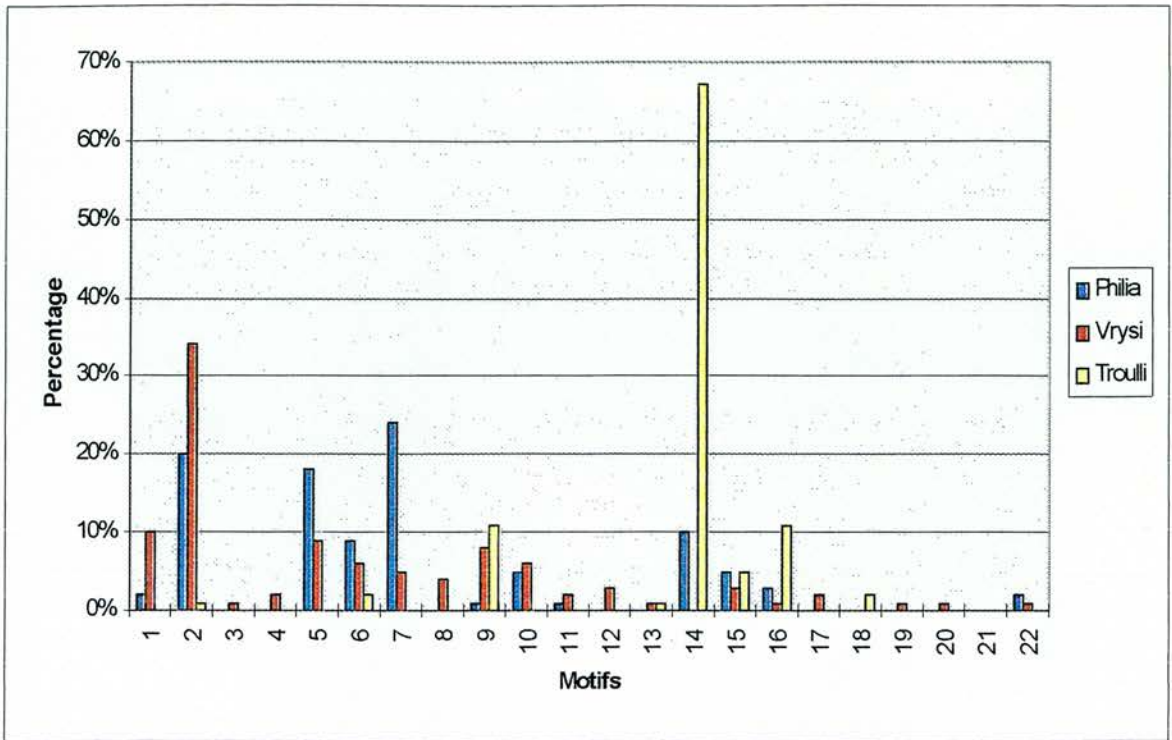


Figure 8.3 - Frequency distribution of motifs, disregarding phasing

In order to illustrate more clearly the dichotomy between Troulli on the one hand, and Philia and Vrysi on the other, the six motif groups which are common to all three sites, were extracted from the percentage frequency graph above, and compared. The results are displayed in the form of a ribbon graph, Figure 8.4 below.

The graph clearly shows the difference between Troulli and the other two sites. Where Philia and Vrysi are characterised by a small, but even distribution of all six motifs, Troulli is dominated by Motif 14. Moreover, the representation of other motif groups is in reverse. For example, Motif 2, which is well represented at both Philia and Vrysi, is not well represented at Troulli. Likewise, Motif 16 is not well represented at Philia and Vrysi, but is better represented at Troulli. These differences suggest that factors, other than sample size, contribute to the variation between the sites.

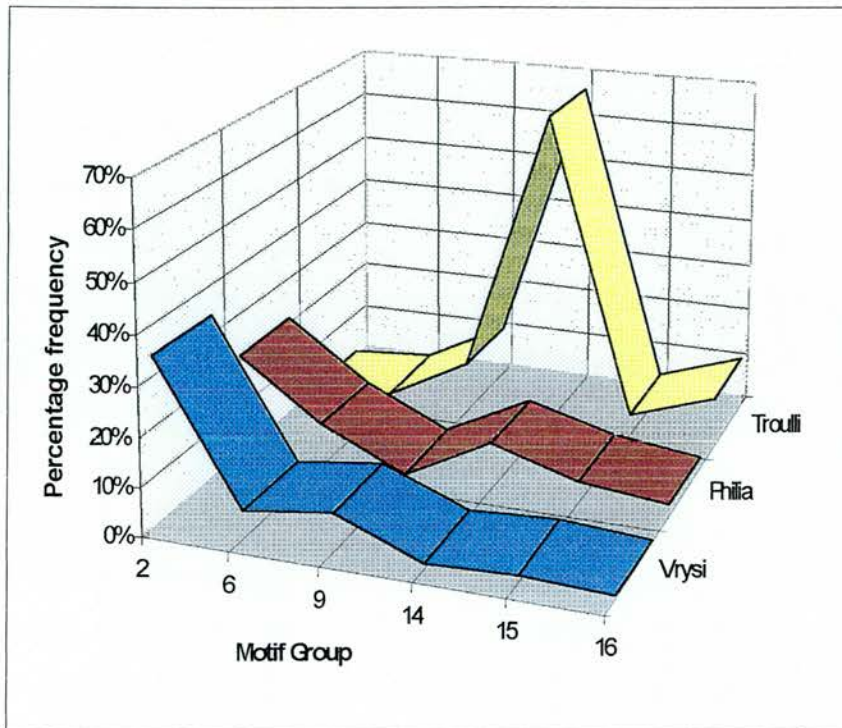


Figure 8.4 - Ribbon graph illustrating the degree of similarity between Vrysi, Philia and Troulli

8.5 - Analysis of variation by phase

This section considers changes in patterns of diversity through time. The results should reflect various aspects of inter-cluster and inter-regional social dynamics which affect diversity. For example, if Troulli is indeed a daughter community of Vrysi (or another as yet unknown site), then we would expect that Troulli's ceramic assemblage would exhibit greater similarity to the parent community early in the sequence, becoming more diverse with time as it becomes more autonomous and develops its own stylistic patterning. In contrast, patterns of variation between regions should be different to those between clustered sites, because they are not influenced by strong kin ties. Therefore, the ceramic assemblages of Vrysi and Troulli should become more diverse through time, whereas the ceramic assemblages of Vrysi and Philia, or Troulli and Philia may show no change, or may become more similar or dissimilar, depending upon the social dynamics between regions.

8.5.1 - The Early Phases

The frequency distribution of designs was compared for the Early Phase at Vrysi, the Early Phase at Troulli and Phase 2 at Philia, and the results are presented in Figure 8.5, below.

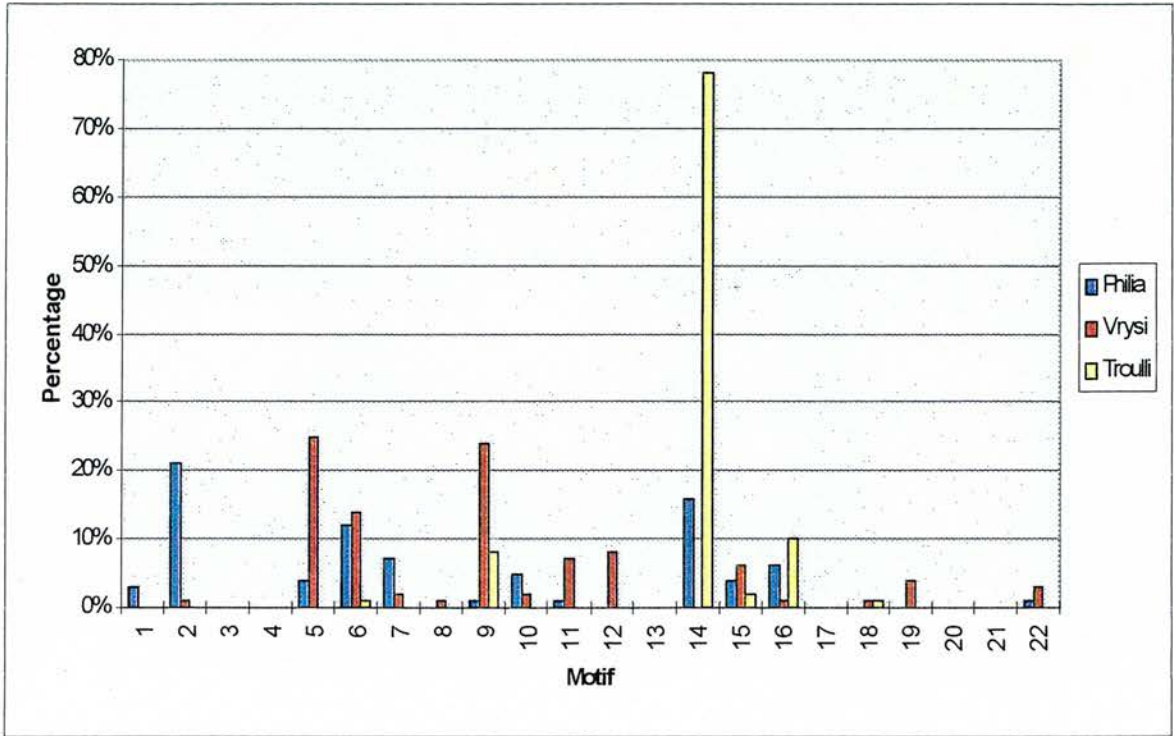


Figure 8.5 - Frequency distribution of motif groups in the Early Phases of Vrysi and Troulli, and Phase 2 of Philia

The results of the frequency graph reflect the results obtained from the broader analysis. Again, Troulli exhibits a noticeable dissimilarity to either Philia or Vrysi. Troulli is dominated by Motif 14 (parallel bands and lines), while Motif 9 (reserved circles), Motif 15 (concentric circles) and Motif 16 (ladder pattern) are also represented, but in small quantities. In contrast, Philia and Vrysi have a more even distribution of design motifs, wavy lines and bands are common at both sites (Motif's 5 and 6). Reserved circles (Motif 9) are more common at Vrysi than at Philia and ripple pattern (Motif 2) is more common at Philia than at Vrysi.

8.5.2 - The Middle Phases

By the Middle Phase at Vrysi, the Late Phase at Troulli and Phase 3 at Philia (Figure 8.6, below) a different pattern begins to emerge. At Vrysi especially, there is a significant shift in the types of motifs that are popular. The proportion of ripple pattern (Motif 2) has significantly increased, while wavy lines (Motif 5) and reserved circles (Motif 9) have decreased. At Philia, the proportion of ripple pattern remains constant but lattice (Motif 7) has increased. Wavy lines (Motif 5) and parallel lines and bands (Motif 14) have continued at the same level. At Troulli there is almost no change in the proportional representation of motifs between the Early and Late Phases. Parallel lines and bands still dominate, but the percentage frequency has decreased from just under 80% to just under 60%. Ripple pattern (Motif 2) is represented for the first time in the Late Phase.

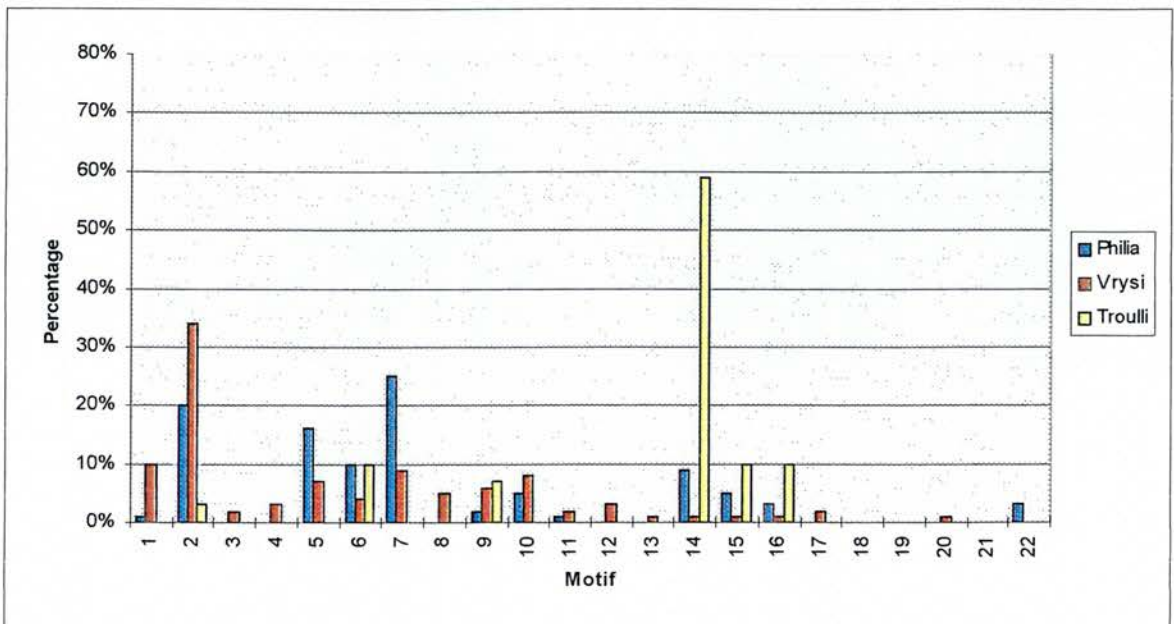


Figure 8.6 - Frequency distribution of motif groups in the Middle Phase of Vrysi, the Late Phase of Troulli, and Phase 3 of Philia

8.5.3 - The Late Phases

Finally, by the Late Phase at Vrysi and Phase 4 at Philia (Figure 8.7, below), Troulli has disappeared from the archaeological record. At Vrysi, ripple pattern (Motif 2) continues to gain in popularity, while the frequency of all other motifs decrease. Wavy lines (Motif 5) and reserved

circles (Motif 9), both common in the Early Phase, now comprise less than 10% of all motif occurrences. At Philia, there is no corresponding increase in ripple design. The only observable change is in the popularity of lattice motif (Motif 7) and chevrons (Motif 1), which increase in Phase 4. All other motif occurrences remain constant. There is no perceptible change in the popularity of wavy bands, mottle (Motif 10), parallel lines and bands (Motif 14), concentric circles (Motif 15) or ladder pattern (Motif 16).

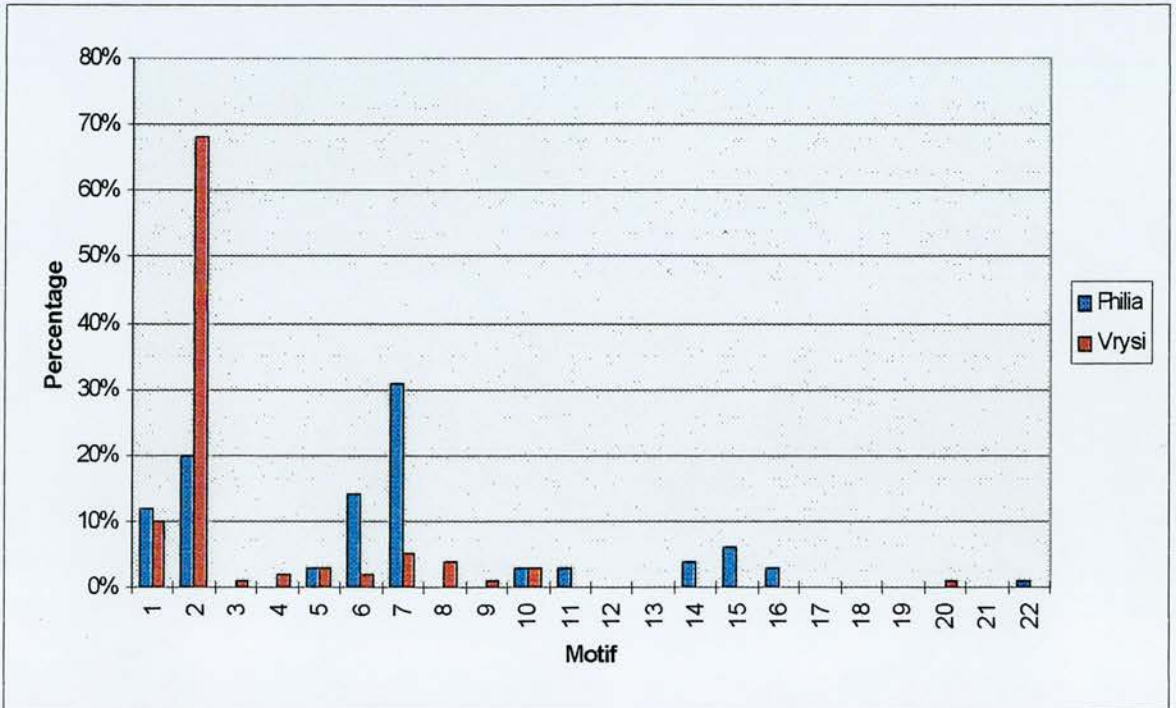


Figure 8.7 - Frequency distribution of motif groups in the Late Phase of Vrysi and Phase 4 of Philia

In terms of stylistic patterning over time, the observations above can be interpreted in a number of ways. First, it is possible to see a shift towards greater diversity between Vrysi and Troulli in the later phases. In the Early Phase Troulli has a strong propensity for one motif type while Vrysi has an even distribution of many motifs. By the Middle Phase at Vrysi this pattern shifts. At Troulli, Motif 14 (parallel lines and bands) still dominates the assemblage, but now at Vrysi, Motif 2 (ripple pattern) also begins to dominate, creating a greater dichotomy between the two assemblages. In the Late Phase at Vrysi, Troulli has disappeared from the archaeological record, but Vrysi now resembles Troulli in its dominance of one motif type over all others.

A different pattern emerges between Philia and Vrysi. In contrast to Vrysi, Philia's general motif distribution remains relatively constant, therefore, although there is a shift towards a greater divergence between the two sites, it is because of changes in the Vrysi assemblage. Although the level of representation at both sites is different, the trends are the same. For example, crescents (Motif 3) are absent at both sites in the earliest phase but are found in small proportions in the second phase. Wavy lines (Motif 5), wavy bands (Motif 6), reserved circles (Motif 9), continue to be represented at both sites but decline in popularity. In contrast, lattice (Motif 7) and Mottle (Motif 10) have increased in popularity at both sites. The reverse situation is in evidence at Troulli. Here, wavy bands (Motif 6) increase in popularity while the frequency occurrence of reserved circles (Motif 9) does not change. Therefore, there is a different pattern of motif development at Troulli compared with Vrysi and Philia.

Finally, the design repertoires of all three sites follow distinct evolutionary patterns, apparently becoming less similar to each other with time. Troulli, is characterised by an internally cohesive design repertoire, which is extremely conservative in the Early Phase, and continues almost unchanged into the Late Phase. There is no obvious shift in the frequency or variety of motifs that are represented, and the only new motif in the Late Phase is ripple pattern, which is found in very small quantities. The dominance of Motif 14 is still unmistakable. Although there appears to be a small increase in the percentage of other motif types, this is more likely due to sample bias caused by the smaller sample size.

At Philia, the degree of design variation is much greater right throughout the sequence. However, like Troulli, there is little change in the frequency or variety of motifs through time. There are small changes, for example rim bands and lattice become more popular, but on the whole the motifs which occur in the Early Phase are also common in the Late Phase. This is in stark contrast with Vrysi. Like Philia, Vrysi is characterised by a high level of design variation in the earliest phase, but with time the assemblage becomes increasingly more homogeneous with the dominance of ripple pattern over all other motifs. The pattern of design variation in the Late Phase now resembles Troulli more than Philia, with the dominance of one motif form over all others.

8.5.4 - Tests for similarity between Philia, Vrysi and Troulli

The percentage frequency counts undertaken above, indicate quite specific development through time in the design repertoires of Philia, Vrysi and Troulli. Although the Philia and Vrysi assemblages are similar in the Early Phase, there is divergence by the Late Phase as Vrysi becomes dominated by ripple design. However, the greatest degree of variation is in the Troulli sample, which is dissimilar to either Philia or Vrysi throughout all phases. The pattern of variation presented above was considered to be quite significant and therefore it was thought appropriate to undertake some higher level analysis.

A variety of statistical techniques were applied to the data, all with fairly meaningless results. It was discovered, after considerable trial and error, that tests of association, such as the Chi Squared test, required considerable modification of the data, which also altered the meaning of the results. In the end, it was decided that simple similarity coefficients were able to show trends in the data without the need to delve too deeply into complicated statistics, and would be complimentary with the percentage frequency counts by highlighting another aspect of similarity not clearly picked up in frequency graphs.

Coefficients of similarity indicate the degree of similarity between two sets of data by comparing the number of shared variables, against the number of unshared variables in the two data sets. Tests for coefficients of similarity can be used for both small and biased samples. It is necessary however, that the correct test be applied to the data, and that careful thought is given to the type of data used, or the results can be misleading. There are a number of methods of calculation of similarity coefficients, some of which have high levels of precision, while others can only indicate trends. Again, a number of different techniques were tried, and after some trial and error it was

decided to use the Jaccard Similarity Coefficient for the analysis of the design motifs, which looks solely for presence or absence of design motifs (see Shennan 1988, 198-208).

The two principal advantages of this method is that it works well with ordinal data, and negative matches are disregarded. In some archaeological instances, negative matches highlight important trends in the data, for example, when comparing a series of graves on the basis of whether they contained male or female burials. In this instance, negative matches give information about the sex of the burial. However, when comparing similar design motifs, negative matches only highlight the fact that certain motifs occur only infrequently. Although the Jaccard Coefficient of similarity has been used here, this method can also be misleading. If a sample is very small the number of mismatches will significantly outweigh the number of positive matches, thereby ensuring a low result. If samples of differing sizes are compared the results will be skewed due to one site having many more motifs than the other. Furthermore, the number of possible matches for each pair of sites varies, therefore, although comparisons between pairs of sites can be made, the results are not absolute. Finally, as the Jaccard Coefficient looks only at whether a motif is present or absent between two sites being compared, it does not allow for the frequency of motif occurrences. For example, it ignores the fact that Motif 618 dominates the motif counts from the southern sites, and does not illustrate the very strong bi-polarity between sites in the North and sites in the South.

All this being said, rather than undertaking potentially misleading high resolution techniques, the Jaccard Coefficient of similarity was considered appropriate because it offers another perspective on the data which cannot be displayed very clearly using percentage frequencies. Percentage frequency graphs and tables are able to illustrate the relationship between proportions of motifs, but they do not indicate clearly the level of similarity between sites on the basis of whether they actually have motifs in common. The Jaccard Coefficient compares the level of similarity between sites by assessing whether or not they share similar motifs.

There was some concern that the size of the Vrysi and Philia samples might skew the results considerably toward a higher similarity reading for these two sites, simply because they have more motifs than Troulli, and by default, more motifs in common. Therefore, the similarity matrices below were primarily constructed to indicate the degree of convergence or divergence between sites over time, rather than between each site in general. The similarity matrices (Table 8.8, Table

8.9 and Table 8.10, below), illustrate the relationship between the presence/absence of the 22 motif groups in the earliest to latest phases at Vrysi, Philia, and Troulli⁷.

	Philia	Vrysi	Troulli
Philia	1	0.63	0.38
Vrysi	0.63	1	0.33
Troulli	0.38	0.33	1

Table 8.8 - Similarity matrix for Philia (Phase 2), Vrysi (Early Phase) and Troulli (Early Phase)

	Philia	Vrysi	Troulli
Philia	1	0.58	0.50
Vrysi	0.58	1	0.33
Troulli	0.50	0.33	1

Table 8.9 - Similarity matrix for Philia (Phase 3), Vrysi (Middle Phase) and Troulli (Late Phase)

	Philia	Vrysi
Philia	1	0.38
Vrysi	0.38	1

Table 8.10 - Similarity matrix for Philia (Phase 4), Vrysi (Late Phase)

The most significant pattern, evident in the three similarity matrices above, is the divergence within the pottery assemblages of Vrysi and Philia. In the earliest phase both sites share a good proportion of motifs in common, producing a high similarity coefficient. There is shift toward a slightly lower similarity coefficient in the middle phase indicating a small divergence in the number of motifs in common. However, it is in the latest phase when there is a significant divergence between Philia and Vrysi, indicated by the very low similarity coefficient (0.38) compared with the earliest phase (0.63).

⁷ Chapter 3 clearly illustrates the temporal parity between the phasing used for the similarity matrices.

Troulli, in comparison with Vrysi and Philia, is only archaeologically visible in the early and middle phases. In the early phase, it exhibits little similarity with either Vrysi or Philia and this pattern continues with Vrysi, where there is no change in the similarity coefficient. However, there is a significant shift towards a greater degree of similarity with Philia, in the middle phase, indicated by the considerably higher similarity coefficient for the two sites (0.50 as compared with 0.33).

The question is whether the pattern of design similarity evident in the coefficients of similarity above, compares with the pattern obtained from the percentage frequency counts? In the first instance the divergence between Vrysi and Philia ties in well with the trend toward greater design homogeneity evident at Vrysi. As Ripple pattern increases at Vrysi (as indicated in the frequency bar graphs), design similarity in general also diverges (indicated by the similarity coefficients). The stasis between Vrysi and Troulli does not contradict the evidence from the frequency counts, but instead lends support by indicating that although the same motifs remain in use, one motif is favoured over all others, and this is only picked up through percentage counts. The enigma is the convergence between Philia and Troulli. There is nothing in the percentage counts to indicate growing similarity between the two sites. The tendency to share more motifs in common is subtle, and is only indicated by very low frequencies of certain motifs in the bar graphs.

The data would therefore suggest that there is a dynamic and constantly changing relationship in the stylistic patterning of all three sites through time. Design motifs at Vrysi, in particular, diverge from both the closely proximate site of Troulli, and apparently the more distant site of Philia. This might indicate an evolving internal unity at Vrysi. The convergence of Troulli and Philia might not necessarily indicate that these two sites were in greater contact with each other, but rather, that internal site development created a more pronounced similarity independent of stylistic patterning. On the other hand, it may also suggest that with time, long distance contact and exchange brought new potters and therefore new motifs into the village sphere, and this might be indicated by the relatively low frequency of other motifs aside from parallel lines and bands at Troulli.

8.6 - Analysis of wares

8.6.1 - Broad analysis, disregarding phasing

All three sites are dominated by RW and therefore should exhibit approximately similar frequency occurrences of ware types. Looking at the broad comparison, disregarding phase (Figure 8.8, below), the dominance of RW at all three sites is apparent. However, clearly RW is more common at Vrysi than at Philia or Troulli. Philia has surprisingly less RW than the other two sites and this is off-set by a larger proportion of MBW, presumably mainly from the early phases, and CW, which is well represented throughout the life of the site. Red on White is well represented at Troulli, but there is also a significant proportion of “other” wares due to the number of abraded body sherds which could not be categorised. Vrysi is dominated by RW.

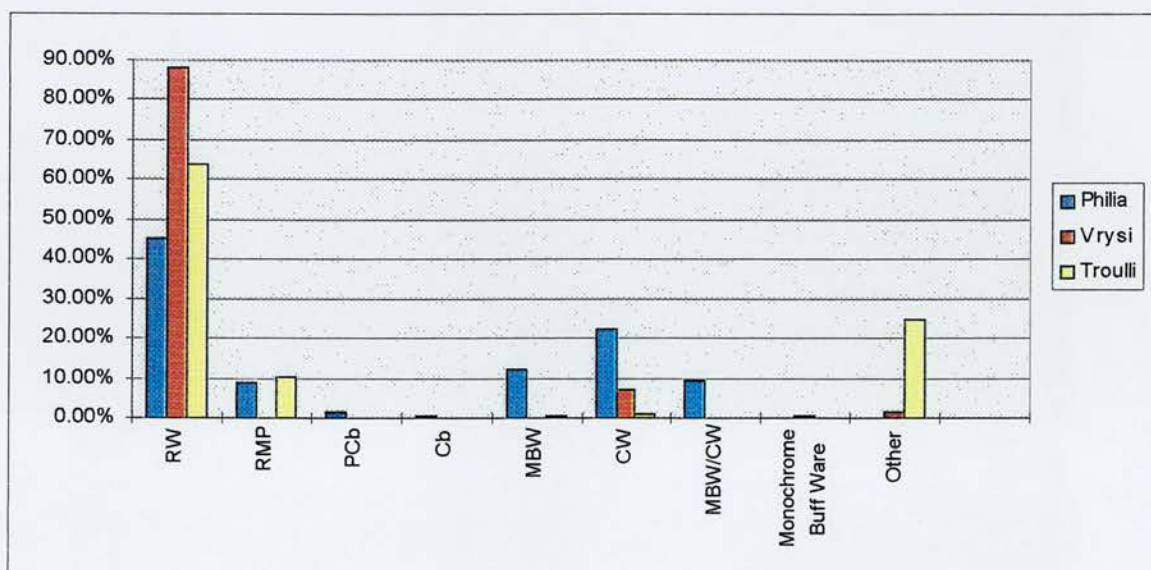


Figure 8.8 - Percentage frequency of the major ware types at Philia, Vrysi and Troulli

Again, there is also a propensity at Philia to have a greater variety of ware types, which corresponds with the site's tendency towards a more even range of motif types.

8.6.2 - Analysis by phase

The following breakdown of ware types over time differs slightly to the breakdown of wares over time in Chapter 7, in that all unphased deposits have now been excluded from the Troulli sample. The corresponding frequency distributions are more accurate because much of the unknown

sheritage, present in Chapter 7, has been removed. Furthermore, for the first time, Philia can now be compared with other primarily RW Ware sites, which was not possible in Chapter 7, because of the enormous sampling bias of the museum sample.

Comparing the proportional representation of ware types over time (Figures 8.9, 8.10 and 8.11), the most notable trend is the relative increase of RW at all sites. Philia, in comparison with Vrysi and Troulli, has a proportionately low representation of RW throughout all phases. In Phase 2, this is off-set by a high proportion of MBW and CW, but as MBW decreases, RW increases. The percentage frequency of CW also decreases quite significantly over time at Philia, a phenomenon which is unique to this site and might be partly due to the greater range of CW types at Philia.

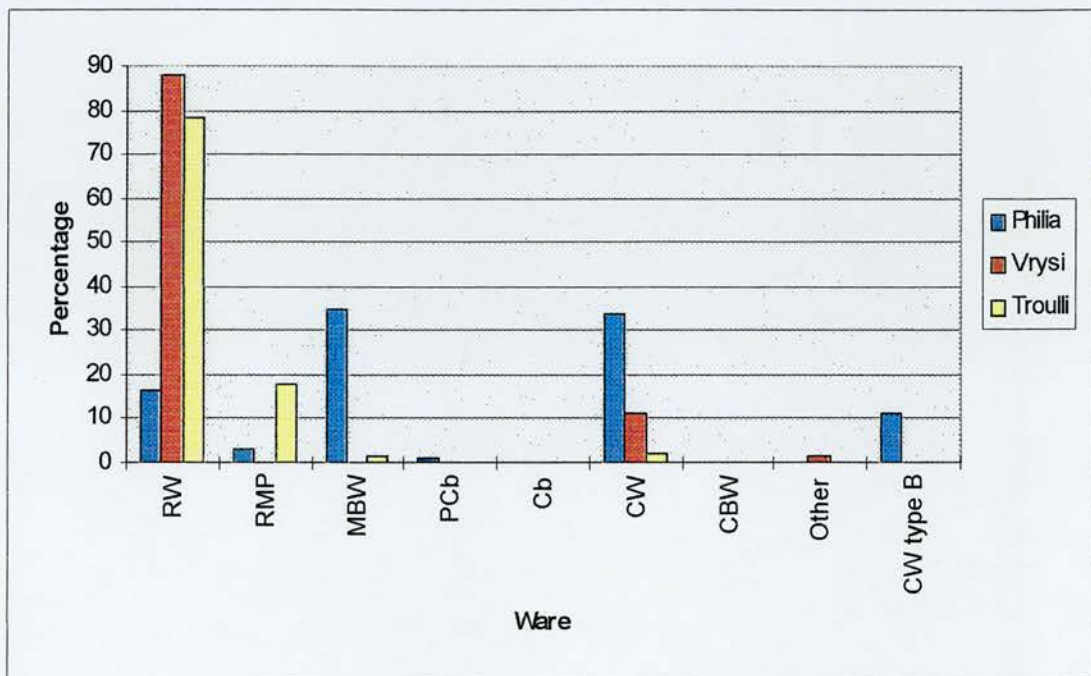


Figure 8.9 - Percentage frequency of the major ware types in Phase 2 at Philia, the Early Phase at Vrysi, and the Early Phase at Troulli

Vrysi and Troulli are similar in the proportion and variety of ware types that are represented. At both sites RW accounts for close to, or over, 90% in all phases. Other wares are correspondingly poorly represented. At Troulli, RW increases, while RMP decreases and CW remains constant. At

Vrysi, RMP is found in such small proportions that it does not appear in the bar chart, but CW decreases proportionally to the increase in RW through all phases.

In the early phases at all three sites, Cb Ware is almost non-existent, accounting for only 10 sherds at Philia, one sherd at Troulli and none at Vrysi. By the middle phases, Cb Ware is better represented, although it never accounts for more than 3-4% of the total sherd count, and at Troulli it is not represented at all, but this might be due to the size of the sample. Peltenburg noted the absence of Cb Ware at Vrysi in the Early Phase and its subsequent appearance in the Middle Phase (Peltenburg 1982b, 65-67), but was never able to offer any firm explanations for this phenomenon. It would appear that even though Cb is scarce at northern sites throughout the SCU, it is certainly more common later in the sequence and I would argue that this is either due to a temporal difference between the appearance of RW sites in the North, earlier than Cb Ware sites in the South, or that there was little contact across the island early in the sequence. The second hypothesis seems unlikely, given the similarity in all other aspects of the material culture.

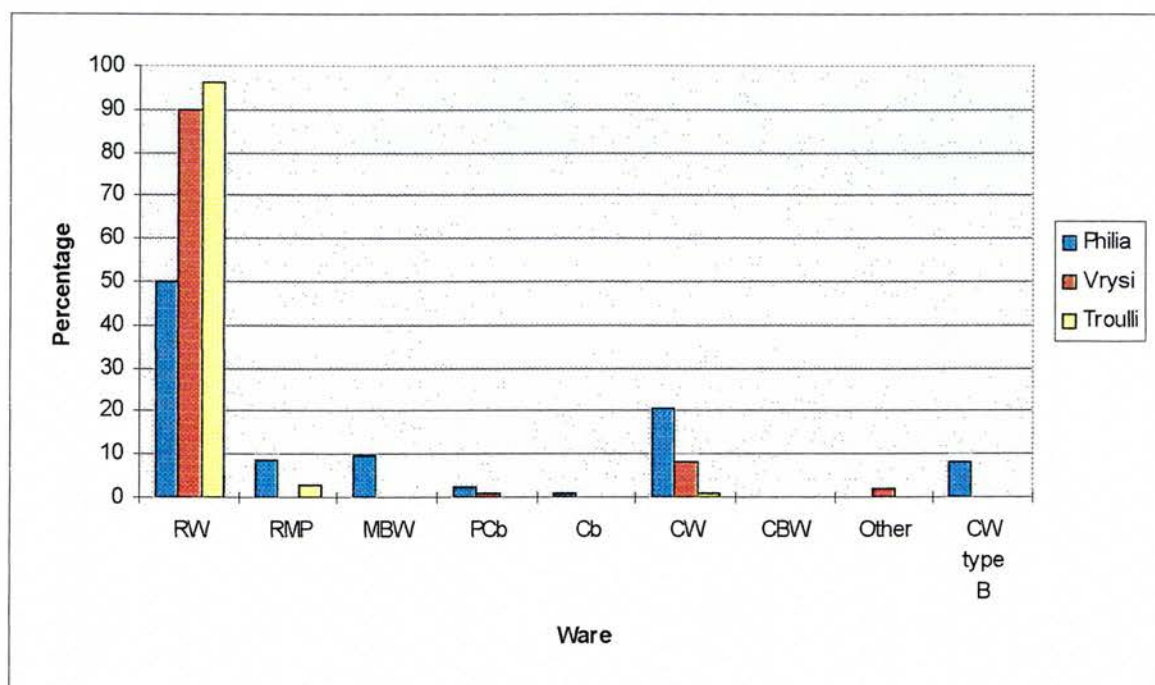


Figure 8.10 - Percentage frequency of the major ware types in Phase 3 at Philia, the Middle Phase at Vrysi, and the Late Phase at Troulli

Finally, in the latest phases, Figure 8.11 below, Troulli is no longer represented, Philia now has a proportional representation of RW similar to other primarily RW Ware sites, and Vrysi remains fairly constant, with RW dominating the assemblage. Combed and PCb are still found in small proportions at Philia, but have decreased to trace amounts at Vrysi.

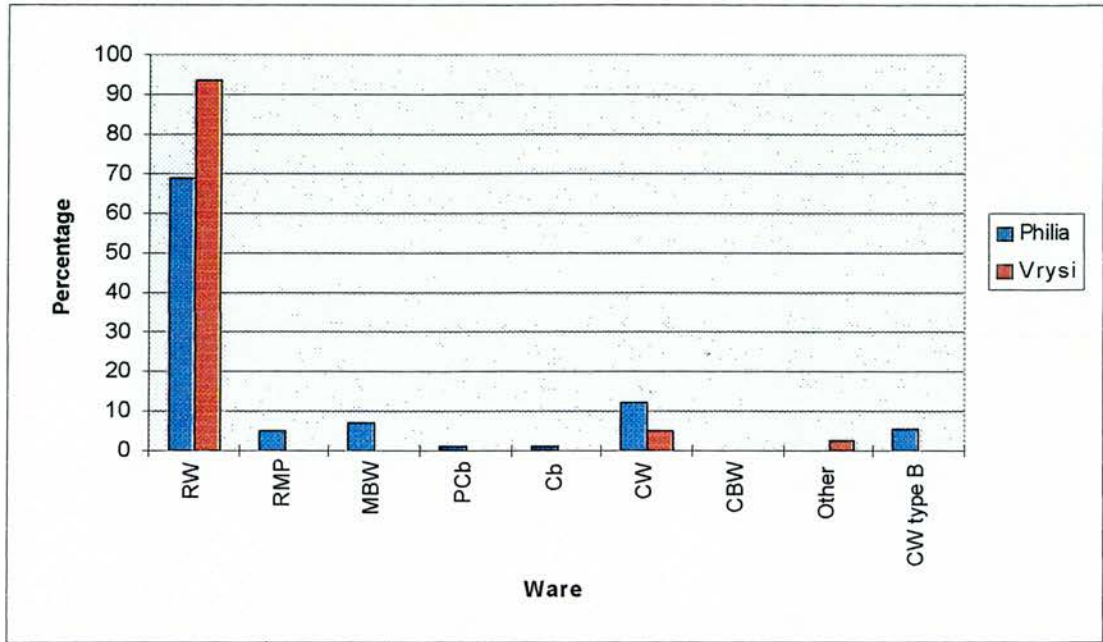


Figure 8.11 - Percentage frequency of the major ware types in Phase 4 at Philia, and the Late Phase at Vrysi

The most interesting feature of the breakdown of ware types presented above, is the relatively low proportion of RW at Philia, and the correspondingly large representation of MBW, particularly in the early phases. This trend is a unique phenomenon in SCU Cyprus. The analysis undertaken in Chapter 7, and here in Chapter 8, illustrates clearly how sites are divided into regional groups on the basis of the proportional representation of either RW Ware, in the North, and Cb and RMP, in the south-central region. However, Philia does not group with either region on the basis of its representation of ware types. Moreover, from the analysis of motifs, above, it appears that Philia follows slightly different trends from other northern RW sites, in the types of motifs that are popular. In chapter 3, it was shown that Philia can be easily slotted into the SCU temporal sequence. The shape and motif repertoire at Philia are certainly SCU, as is manufacturing

technology and the execution of designs. However, the site is at odds with the patterns of spatial and temporal development of other SCU sites.

The most likely explanation for this phenomenon is that we do not yet have all the evidence. The preliminary results coming from Kandou, near Sotira, and Nissia in the East, suggest that there is a wider phenomenon of regional diversity. With the subsequent analysis of the pottery from these sites, and future sites, the picture will widen and presumably become more complex. For the time being, the Philia anomaly will remain an enigma that cannot be properly explained without further work being carried out at other sites in the Morphou Bay region and surrounding regions. The number of SCU sites that have turned up in the last few years (the two mentioned above, and Shillouroukambos) point to major geographical gaps in our data which has little to do with the overall demographic distribution of SCU sites.

8.7 - Summary

During the course of the various analyses undertaken in this chapter, and in Chapter 7, a number of trends have been identified in the data. Morphology and design are the two primary variables which were thought to contribute to regional variation. In the following summary, the results of the data analyses will be broadly reviewed. The various trends will be compared with the definitions of stylistic behaviour outlined in Chapter 6, in order to examine whether style actually does reside in SCU ceramics. Finally, some general conclusions will be advanced which highlight the possible socio-economic factors that may have existed in SCU Cyprus.

8.7.1 - Morphology

Within the mainphase SCU, morphological variation across the island is largely determined by sample size and temporal factors. At the chronological boundaries morphological variation is associated with wider cultural and economic change, and this is best illustrated by sites which span the SCU/ECU transition. Within the mainphase SCU, morphological variation is generally proportional to sample size and “richness”. However, there are some instances where variation appears to be associated with differences in subsistence strategies and seasonal function, and this is most clearly visible between sites that exhibit different types of settlement plan. For example the larger above ground sites, with substantial architecture, tend to be better represented by open shapes, whereas smaller sites with insubstantial architecture have a better representation of closed

shapes. Vrysi is the exception to the rule, where there are more closed vessels than open vessels. This pattern of morphological variation tends to be associated with site clusters. The best evidence for this scenario comes from the Kalavassos region, and the Vrysi/Troulli “cluster” where there are different ratios of open to closed vessels at different sites. It may be that these fluctuations in shape ratio, combined with differential settlement patterns, indicate that subsistence activities were carried out in various ways, and in various settings at different times of the year.

There appears to be no correlation between overall shape and accompanying rim, neck or base types indicating that the variation that exists is concordant with a non-standardised handmade ceramic tradition. It is only towards the end of the SCU that shapes and components are combined with some cognitive perception of the overall outcome, and therefore, one can say that there is a move at the end of the SCU toward greater standardisation within the handmade tradition.

Spouts are the only attribute which exhibit possible regional variation. Of the sites where spouts are well represented, no two sites have the same, or even very similar proportional representations of spout types. It is suspected that this might be due to stylistic differentiation between villages, but without further data this theory remains inconclusive.

8.7.2 - Design

Design motifs exhibit the greatest variation. Temporally, there is a shift away from Cb and PCb motifs at the end of the SCU toward a greater predominance of RW and RMP, and this is illustrated by the motif repertoire at Tenta and Pamboules. There is also a link between design variation and morphology. Open vessels are painted with a greater range of designs than closed vessels, and more frequently with non-structural motifs. Conversely, closed vessels exhibit less variety in general, but a greater tendency toward motifs that emphasise the shape of the vessel, such as lines and bands around the neck and shoulder and other linear motifs.

There is very little difference in the number and variety of motifs painted on the inner and outer surfaces of open vessels. One or other surface appears not to have held more symbolic or visual significance than the other.

At the beginning of this Chapter, and in Chapter 7, a number of questions were put forward which set the parameters upon which the models outlined in Chapter’s 5 and 6 could be compared. These questions were:

1. Do pottery assemblages become more homogeneous or more heterogeneous over time?
2. Is there divergence or convergence in the degree of similarity between sites over time?
3. Is there more similarity in the ceramic assemblages between site clusters than between regions?
4. How significant is the North (RW)/South (Cb) divide?
5. Is the Cb ceramic tradition more internally homogeneous than the RW ceramic tradition?

The following synthesis combines the results of the analysis in Chapter 7 and Chapter 8.

“Do pottery assemblages become more homogeneous or more heterogeneous over time?”.

There are only two museum samples, analysed in Chapter 7, that can be reliably phased, these are Sotira and Troulli. Morphologically, Troulli exhibits a shift from equal proportions of open and closed vessels in the Early Phase to a propensity for open vessels in the Late Phase, and this might indicate a shift in economic or subsistence activities at this site. Sotira, on the other hand, exhibits no internal shift in morphological preference through time, which I suspect is due to the relative brevity of the site. Neither Sotira, nor Troulli exhibit any significant shift in the range or frequency of designs over time. The same motifs occur in approximately the same proportions throughout the duration of both sites. Moreover, both sites have rather conservative motif repertoires and are dominated by one principal motif group in both phases. At Troulli, this is parallel lines and bands, while at Sotira it is thin wavy combed lines.

The total collections, examined in this chapter, exhibit the clearest patterns of design variation. At Philia, there is very little change in the sorts of motifs that occur, but there are also more motifs represented at Philia, than at Troulli and Vrysi, and all are found in relatively similar proportions in each phase. This pattern contrasts with Vrysi, where there is a significant shift in the types and frequencies of motifs. In the Early Phase, Vrysi exhibits the same degree of variety in design motifs as Philia, but by the Late Phase, the motif repertoire is completely dominated by ripple design. Therefore, by the Late Phase, Vrysi has come to resemble Troulli, with one dominant motif form represented.

It could be argued that a similar pattern of increasing homogeneity is observable at other site clusters. It is known that Sotira forms part of a site cluster with Kandou, and although we have no

comparative information from Kandou to compare with either Vrysi or Troulli, the very limited and conservative motif repertoire at Sotira is similar to that noted at Troulli. It might be hypothesised that there exist similar patterns of design co-variation between sites within the same cluster. For example, were we to compare the material from Kandou (which is located approximately 3km from Sotira) with that of Sotira, we might find that Kandou undergoes a shift in motif frequency over time, similar to that of Vrysi. The combination of a shift towards strong internal homogeneity at Vrysi, and a continuing conservatism at Troulli, indicates increasing internal boundedness and village identity at these sites, suggesting that sites within the same economic catchment areas appear to differentiate themselves from one another increasingly with time.

There is some good supporting evidence for this hypothesis. When design “richness” was plotted against sample size in Chapter 7 - Figure 7.8, there was no relationship between the two variables, and many larger samples had very low motif counts. This was in sharp contrast to morphology, where sample richness was directly proportional to sample size. In other words, site size, or more correctly sample size, does not necessarily guarantee that the site also has large design repertoire.

The shift in the proportional representation of designs at Vrysi is presumably a result of internal evolutionary processes, and possibly Vrysi’s relationship with surrounding sites, such as Troulli. The strong conservatism at Troulli and the shift toward greater conservatism at Vrysi, points to very specific stylistic patterning at both sites which, presumably, were influenced by a number of social and evolutionary factors.

“Is there divergence or convergence in the degree of similarity between sites over time”?

Most of the evidence for temporal divergence in design variation comes from the analysis of the total collections from Vrysi, Troulli and Philia, although, there is also some supporting evidence from the southern sites. There seems to be enough evidence to conclude that, on the whole, sites become less similar over time! The exception to this rule appears to be the relationship between Philia and Troulli, but this trend may be explained by many other factors. The tendency toward divergence does not mean that all sites actively seek to differentiate themselves from all other sites, but that at some sites at least, there is a trend toward greater internal homogeneity, and therefore, greater diversity from other sites. Vrysi exhibits the strongest evidence for this trend,

becoming more internally homogeneous with time, and therefore, clearly differentiating itself from Troulli, its nearest known neighbour, but also from Philia with which it shares less motifs in common over time.

“Is there more similarity or diversity between site clusters than between regions?”

Morphologically, there is a greater degree of differentiation between site clusters, than between regions. Within site clusters, some sites have more open vessels than closed vessels, while others have more closed vessels. This pattern usually follows architectural differences, which may indicate differences in site function. However, there is no apparent trend in the number, or range of sites within a cluster, and this seems to be determined by environmental and economic factors. Between regions, there is very little differentiation in morphology. Most sites with substantial architecture have a greater representation of open vessels. The anomaly is Vrysi, which has a slightly higher proportion of closed vessels. Most SCU sites exhibit a high degree of morphological conservatism. There is not a great deal of experimentation with shape, fabric or surface finish. Philia, with its startling array of unique shapes and fabrics is the exception to this overall trend.

In terms of design motifs, there is a distinct dichotomy between sites that have predominantly Cb Ware assemblages and sites that have predominantly RW Ware assemblages. There is also a strong dichotomy between sites within the same cluster (as evidenced by Troulli and Vrysi). However, when comparing similarity coefficients for Vrysi and Philia, there is also a sharp trend towards greater diversification. On the whole it appears to be a constantly changing relationship through time, with some sites becoming more similar, and others becoming less similar, whether within the same cluster or in different regions.

“How significant is the North (RW) South (Cb) divide?”

This question is misleading as Cb Ware sites are mostly confined to the Southern Chalk Plateaus, between the Paphos Coastal Gateway and eastwards. However most scholars continue to refer to the North/South division in the SCU in terms of the predominance of ware types. There is no variation in morphology between the North and South of the island, but there is a distinct dichotomy in the frequency of design motifs, brought about by the predominance of different ware types. The most interesting feature is that RW motifs are significantly more popular at Cb Ware sites than Cb motifs are at RW Ware sites. The fact that PCb is relatively evenly distributed across the island is noteworthy, particularly given that PCb is a combination of the two design

techniques. Overall, there is a strong dichotomy in the class of motifs that are found across the island, and SCU sites have been traditionally pigeon-holed as either RW or Cb Ware sites (Dikaios 1962, Peltenburg 1978, 1979, 1982a, Stanley Price 1979b). However, as more evidence comes to light it is increasingly likely that other patterns of diversity will be identifiable across the island. It is suspected that the results from Nissia (Flourentzos 1997) will bring about a re-appraisal of the Cb/RW dichotomy as new ware ratios emerge. The best evidence in support of this supposition comes from the West-Central site of Philia, where ware types are more evenly distributed than at other excavated sites. For example, RW represents approximately 45% of all ware types at Philia, whereas at Troulli, RW represents 65%, and at Vrysi, RW represents close to 90%. However, as Cb and PCb are never well represented, Philia has been designated a RW site, perhaps incorrectly. The inhabitants of all SCU sites were obviously aware of the different design traditions across the island, because all sites have varying quantities of all of the Decorated Fine Wares, and therefore were in wider contact with each other.

“Is the Cb ceramic tradition more internally homogeneous than the RW ceramic tradition”.

There is no difference in the proportion or range of shapes that occur at either RW Ware sites or Cb sites. In both regions, there is good evidence (discussed above) that different types of sites carried out different subsistence roles, and this is reflected in the varying occurrences of open and closed shapes between sites. There is temporal variation within both RW and Cb Ware sites. Design variation however, does appear to be more homogeneous within the Cb Ware tradition. There are fewer motifs, and a greater propensity for a limited range of four particular motifs, but this might be due to the more limited scope for variety within the technique in general. Having said this, there is a range of rarer Cb motifs and each site tends to have its own preference. Even so, there are substantially fewer Cb motifs overall.

8.8 - Stylistic variation in the SCU ceramics

Three broad categories of non-verbal communication, or *stylistic behaviour*, were defined in Chapter 6, emblematic style, symbolic style, and isochrestic style. Wiessner (Wiessner 1983, 1990) and Sackett (Sackett 1985, 1990) agree that almost all non-verbal stylistic behaviour falls into one or more of these three categories. I have argued in previous chapters that ceramic variation in the SCU is attributable to stylistic behaviour brought about by a range of socio-economic and cultural

interactive processes. Therefore, variation evident in morphology and design should, by extrapolation, fall into one or more of these three categories. In the following section, design variation will be discussed in terms of the various types of stylistic behaviour outlined in Chapter 6.

8.8.1 - Style and morphology

There is island-wide random variation in morphological attributes. Only spouts appear to exhibit non-random variation between sites. All sites have the same range of shapes in approximately similar proportions. There are small variations in the percentage of open and closed shapes, and in the frequency distribution of some less common shapes, such as holemouths, but these variations have been shown to be associated with slight differences in economic strategies, or in site function. There is no evidence of site clusters or regions differentiating themselves from other regions through the medium of vessel shape and when there is substantial change in shape, it is related to temporal factors.

Therefore, morphological attributes do not contain either emblematic or symbolic style. Small variations in morphology can be attributed to isochrestic style, or random variation brought about by the “spectrum of equivalent alternatives, of equally viable options, for attaining any given end in manufacturing and/or using material items” (Sackett 1990, 33). The only exception to this rule might be spouts, but the evidence is too meagre to suggest that other forms of stylistic patterning could be present.

8.8.2 - Stylistic variation in design

According to the definitions of Wiessner and Sackett, active style takes two forms, symbolic style and emblematic style. Design variation in SCU ceramics contains elements of both.

Symbolic style has no distinct referent and therefore has the potential to diffuse with acculturation and enculturation, and may be employed either consciously or unconsciously. Symbolic style presents information about similarities and differences that can help reproduce, alter, disrupt, or create social relationships (Wiessner 1983, 258).

Plog (Plog 1995, 373), says that symbolic style would be less likely to exhibit consistent patterns of attribute association. Variation would be more random with evolving and changing referents over time and space.

Design motifs contain symbolic style. Variation within the RW tradition and within the Cb tradition is characteristic of symbolic style. It is likely that most variation between site clusters is a result of unconscious symbolic style. The pattern of variation between Vrysi and Troulli is particularly characteristic of the way in which symbolic style can be represented. There are no consistent patterns of attribute association, and variation is random and evolving. Between regions there is also evidence of symbolic style. Vrysi and Philia exhibit random patterns of variation in the design motifs on RW sherds, and although many of the same motifs are represented at both sites in the Early Phase, there is a shift in the proportional representation of motifs at Vrysi, and the number of motifs in common, creating greater variation between the two sites with time. The differences are subtle, and were probably used to “alter or create social relationships” (Wiessner 1983, 258). The Cb Ware tradition also exhibits symbolic variation. Predominantly Cb Ware sites display random and evolving patterns of design variation and although there is greater homogeneity in the range of standard motifs that are employed, each site enlists a variety of non-standard motifs which set it apart from other sites.

The regional predominance of one particular ware type over another is characteristic of emblematic style. Emblematic style is interpreted as stylistic statements that conform to certain spoken ones, containing clear, purposeful, conscious messages aimed at specific target populations (Wiessner 1985, 161). Plog (Plog 1995, 373) suggests that we should be able to define clear-cut artefact types only when stylistic variation is a component of isochrestic or emblematic behaviour. We know that the differences between Cb and RW Ware cannot be attributed to isochrestic style, but by definition, Cb Ware and RW Ware are clear-cut artefact types and therefore contain emblematic style. Although archaeologists have categorised differences in vessel surface treatment into different ware types, it is unlikely that these categorisations existed in antiquity. The fact that all other aspects of the SCU material culture exhibits very little differentiation, emphasises that pottery would have been used to fulfil the same tasks in all regions, and presumably represented similar ‘ways of doing things’ to both individuals and groups. As RW and Cb Ware are subtly different ways of achieving a similar decorative effect, it can be assumed that the contextual meaning of pottery would have been similar for the entire SCU population. Therefore, variation in

surface treatment could have been used to transfer certain unspoken messages, which would have been clearly understood by target populations. Emblematic style is the most forceful form of stylistic behaviour and is often used to differentiate group affiliation. The SCU phase is characterised by egalitarian agro-pastoralist societies, which in all likelihood, were directed by highly developed kin based descent rules, and exogamic social structures. In societies of this nature there is a need for individuals to have group or clan affiliation which presumably enhanced, or even ensured survival. The SCU tendency for villages to be built on easily defensible promontories and spurs suggests that the unknown was feared or avoided. Therefore, individuals who could not identify themselves with specific clans or groups risked isolation and rejection, which in turn jeopardised survival. Regional variations in the proportions of different decorative techniques probably represented some form of emblematic style which may have been employed to differentiate closer kin ties from more distant clans or groups.

8.9 - Stylistic variation and socio-economic patterning in the SCU

8.9.1 - Normative variation

How then can these very specific patterns of stylistic representation be interpreted in terms of the various models discussed in earlier chapters. The three forms of style, outlined above, represent different forms of social behaviour. Isochrestic style can be explained in terms of normative aspects of variation in the archaeological record. A variety of different normative factors have been identified as influencing stylistic variation, these include subsistence/settlement systems, vessel shape and use, exchange systems, and temporal variability (Plog 1980).

Of these four categories, subsistence/settlement patterns, exchange systems and temporal variability contribute to isochrestic variation in the SCU ceramics. It has been illustrated that subsistence strategies, and possible differentiation in site function, probably determined the types of activities that were carried out at various sites and this, in turn, may be reflected in the proportional representation of different shapes within site clusters. However, apart from a small degree of variation between the types of motifs that are found on open vessels, and the types of motifs found on closed vessels, there is very little design variation that can be attributed to morphological differences.

There is limited evidence for long distance exchange, although work carried out by Peltenburg on the movement of picrolite in the ECU (Peltenburg 1991b) indicates that regular long distance contact through the dispersal of picrolite occurred over large areas. Peltenburg suggests that the low population densities within most site clusters would have created a need for exogamic community structures, and this in turn would have contributed to movement of people around the island. The relatively sparse quantity of picrolite in SCU contexts does not justify the exchange argument to the same extent as for the ECU, but certainly there must have been the similar necessity for exogamy in the SCU. However, Peltenburg also quotes Stanley Price (Stanley Price 1979a, 70-71) who suggests that resource heterogeneity would have been a strong stimulant in the formation of exchange systems. As most sites have almost identical economic resource bases, the heterogeneity, referred to by Stanley Price, presumably refers to exotic items. I would suspect that differential rainfall and long periods of drought in Cyprus (Christodoulou 1959) would have contributed to the formation of exchange systems more than the desire for luxury items.

8.9.2 - Social Interaction Theory

Assuming that women made pots, the Deetz/Longacre model argues that sites which show internal homogeneity are characteristic of a matrilineal residence rule and sites that show internal heterogeneity are characteristic of a patrilineal residence rule. Moreover, those sites which are geographically proximate and are in regular contact with one another, should exhibit inter-site similarity, while those sites which are at some distance from one another, should exhibit greater diversity. Under the Deetz/Longacre model, the homogeneous character of the Troulli assemblage could be argued as evidence of a matrilineal residence rule, whereas the early heterogeneity of the Vrysi and Philia assemblages could be argued as evidence of a patrilineal residence rule. Moreover, the shift toward greater homogeneity at Vrysi suggests a shift in gender based residence patterning, or a shift away from regular interaction with other sites. Given that Troulli and Vrysi are not more than 4km apart, these sites should be more regularly in contact than Vrysi and Philia, and therefore should exhibit greater similarity.

The stylistic evidence from Vrysi, Troulli and Philia does not fit with the patterns of diversity hypothesised by Deetz and Longacre if all contributing factors are observed. However, the limitations of the Deetz/Longacre model reside not so much with the theory that social interaction

is determined by regular inter-marriage between villages, or even that villages practised gender based residence rules, but more with the argument that women were the sole producers of pottery. In fact, the economic evidence presented in Chapter 5 (Section 5, page 165) suggests that women could not have been the sole producers of pottery in the SCU Phase.

Other related hypotheses, such as Arnold's model for subsistence scheduling (Arnold 1985), also fail to adequately explain the evidence for Neolithic subsistence activities. Arnold's theory states that subsistence patterns and pottery manufacture were closely tied to gender, and that division of labour, particularly pottery production within agro-pastoralist societies, was governed by what he calls scheduling conflicts, dictated by seasonally related patterning of subsistence tasks. Certainly there would have been scheduling conflicts but these were not so much governed by gender but by environment (Levy 1983, 19-20; London 1990, 52; Sherratt 1980, 319). Intensive land-use systems, argued by Sherratt and others as characteristic of the Neolithic economic strategies (Sherratt 1980, Levy 1983), presumably exacted demanding seasonal schedules from early agriculturists. This type of intensive seasonally based agriculture would have required that all able bodied persons be involved in all aspects of the day to day economy. Within this seasonal routine there may have been a propensity for one or other sex to perform specific duties but it could not have been adhered to rigidly. Therefore, if we assume that women participated in many of the same tasks as men, it is more likely that SCU populations practised some form of exogamic community structure, based on virilocal rather than unilocal residence rules.

Community structure is only one systemic factor which contributes to patterns of diversity in SCU Cyprus. The strong stylistic patterning in design variation within site clusters indicates that other influences contributed to stylistic variation.

8.9.3 - Social Boundary Theory and Information Exchange

There is also evidence to suggest that Social Boundary Theory is applicable to SCU Cyprus. Hodder (Hodder 1978, 35) argues that the degree of competition between groups plays a role in the level of similarity between villages. The significant design variation between Vrysi and Troulli suggests that boundary divisions may have existed within site clusters. Hodder (Hodder 1978) and Graves (Graves 1981, 1991) identify a range of social, ideological, economic and

geographic factors which they say contribute to the establishment of boundaries between regions and some of these apply to SCU Cyprus.

It is likely that the patterns of stylistic variation between sites such as Troulli and Vrysi, are the result of the “budding-off” of smaller communities from a larger parent community, and that in the process of dislocation from the parent site, many formal attributes of the larger community were lost in transmission. Consequently personal and group relations in the SCU might well have been influenced by the spatial, and familial proximity of one village to another, and this may also have depended upon the temporal distance between the parent and daughter communities. Interaction within and between villages is likely to have been structured around seasonal subsistence activities, and therefore, competition for resources, particularly within site clusters, could well have been determined by social and well as environmental and demographic factors.

The widening dichotomy between Vrysi and Troulli, can be further explained within the parameters of Social Boundary Theory. With time, the maintenance of inter-cluster boundaries, caused by competition for resources, would have re-enforced identification with the home site, leading to a greater dichotomy in stylistic representation between sites. Presumably pottery was more visible within site clusters than between regions, and this would also influence the degree of stylistic variation within the RW tradition.

Social Boundary Theory may also partly explain the apparent widening dichotomy between Vrysi and Philia. Assuming that agro-pastoralist societies practised exogamous social relationships, which were necessary for the survival of the SCU population as a whole (Flannery and Coe 1968, 274-275; Wobst 1976; Peltenburg 1991b, 108), then inter-marriage presumably took place between villages. The degree of similarity between Philia and Vrysi in the Early Phase indicates regular contact, either via inter-site social relations (such as inter-marriage), or via extended foraging strategies, as argued in Chapter 5. Both forms of interaction would have enabled the cross-fertilisation of ideas and stylistic trends. However, the eventual divergence of Vrysi from Philia indicates that at Vrysi, at least, there was a shift towards greater internal unity in the Middle and Late Phase, which may have been caused by greater degrees of interaction, or by greater competition for resources with sites like Troulli.

8.9.4 - Evolutionary Theory and cultural variation

Recently, there has been extensive work undertaken on the role of evolutionary theory in stylistic variation (Neiman 1995, Shennan 1996). Shennan proposed a number of individual evolutionary factors which can influence regional diversity, and can be easily identified in the ceramic record. The first is random errors or unintentional mistakes in the learning or copying process. Certainly, these would have existed in the SCU design motif repertoire, however, identifying random errors is particularly difficult in a handmade and decorated pottery tradition. Moreover, there is not enough evidence from spatial analysis of individual sites to identify intra-site diversity through different potters hands.

Shennan's second evolutionary factor is guided variation, where individuals acquire a pattern of behaviour from their (cultural) parents and then modify it in the light of their own experience. This phenomenon can only be mapped through time, but again there is no direct evidence from Vrysi, Philia or Troulli for the altering of individual design motifs. However, something similar to this might explain the later popularity at Vrysi and Philia of ripple design, where ripple design is interpreted as the indirect copying of Cb decoration.

Shennan's third factor is direct bias, or cultural selection, where an individual will have a number of different models from which to choose and decides on the basis of the properties of the models themselves. This factor is particularly pertinent to Vrysi and Troulli. Assuming that Troulli is a daughter community of Vrysi, or some other similar site, then it could be argued that in the process of "budding off" from the parent community, only certain aspects of the design repertoire were either involuntarily included in the new repertoire, or voluntarily chosen to be included. I would argue that the former is the most appropriate scenario. This theory is similar to the Founder Affect, argued by Held (Held 1993) for cultural involution at the end of the KCU. Held's argument states that a founding population would bring with it only part of the parent gene pool because the new population represents only a fraction of the original population. In the same way, only a fraction of the Vrysi motif repertoire is found at Troulli, because the number of artisans that shift to Troulli represent only a small proportion of the original number.

8.9.5 - Behaviourist theories and cultural variation

Finally there are various behaviourist models for cultural variation, into which I would also include Motor Habit Theory. Schiffer (Schiffer 1997) argues that technical choices such as clay type, hardness and finish, will affect formal properties such as vessel size, porosity and form. It might be argued that variation in vessel form between sites may be a result of differences in the formal properties of the various clays that were used. The greater range of clays and forms at Philia, could certainly be explained through this model. For example, the wide range of accessible fabrics and tempers presumably contributed to greater experimentation. Therefore, as Schiffer (Schiffer 1997) would argue, the complex effects of technical choices on performance characteristics, mediated by formal properties, impose technological constraints. Thus, any artefact design is based on trade-offs or compromises in performance, or ultimately, experimentation.

In the preceding summary, aspects of design variation between SCU sites were reviewed. It was argued that three types of stylistic variation are present in the ceramics; isochrestic style, symbolic style and emblematic style. In some instances, only one form of stylistic variation could be recognised as residing in the formal attributes, while in other instances, for example ceramic design, all three forms reside together. Stylistic variation is a symptom of socio-economic and cultural behaviour, therefore, it was argued that style in SCU ceramics represents interactive processes. Each of the three forms of style that reside in SCU ceramics were considered in relation to the wider material cultural evidence and on this basis, a number of interacting hypotheses were put forward to explain the patterns of variation evident in the SCU ceramics in terms of socio-economic behaviour. In Chapter 9, the summary conclusions reached in this chapter will be ensconced within the wider question of regional diversity, stylistic behaviour and socio-cultural patterning in the SCU.

SITE	YEAR	SQUARE	LEVEL	CONTEXT	PHASE	No. SHERDS	RW	RMP	MBW	Pcb	CB	C	BUFC	OTHER	OPEN	CLOSED	O/C	SPOUTS	NECKS
AEV	1971	I	backfill			153	151	1				1			58	77		11	
AEV	1969	I	2	Floor 1	MP	69	45	16				2							
AEV	1969	I	3	Floor 1	MP	99	90	8						1					
AEV	1969	I	4	Floor 2	MP	251	181					52		4					
AEV	1969	I	5	Floor 2	MP	54	52					2							
AEV	1969	I	6	Floor 2	MP	67	60					2		5					
AEV	1969	I	6	Floor 3	MP	101	83					15		2					
AEV	1971	I(H1)	2	Floor 1	MP	21	20					1			13	7			
AEV	1971	I(H1)	2	Floor 1	MP	49	46					3			26	20			
AEV	1971	I(H1)	3	Floor 2	MP	3	3								2	1			
AEV	1971	I(H1)	3	Floor 2	MP	30	29					1			16	13			
AEV	1971	I(H1)	4	Floor 2	MP	55	48					6			26	21		1	
AEV	1971	H1	4/5	Floor 2	MP	11	4					7			2	2			
AEV	1971	H1	5	Floor 2	MP	229	219					10			83	136			
AEV	1971	H1	5/6	Floor 3	MP	37	36					1			13	23			
AEV	1971	H1	6	Floor 3	MP	152	83					69			27	56			
AEV	1971	H1	7	Floor 3	MP	166	160					6			63	92		2	2
AEV	1971	H1	wall		MP	17	16							1	10	6			
AEV	1971	H1	8	Floor 4	MP	59	59								25	34			
AEV	1972	H1	8	Floor 4	MP	316	277					39			142	135		4	4
AEV	1972	H1	10	Floor 4	MP	207	182					25			66	116			
AEV	1972	H1	8/10	Floor 4	MP	88	88								21	67			
AEV	1972	H1	11	Floor 5	MP	402	402								200	202		1	5
AEV	1972	H1	12	Floor 5	MP	1	1									1			
AEV	1973	H1	12?	Floor 5	MP	4	3	1							3				
AEV	1972	H1	12	Floor 5	MP	293	293								142	151			5
AEV	1973	H1	13		EP	28	28								13	15			1
AEV	1973	H1	14		EP	147	131					16			47	55		3	1
AEV	1973	H1	15		EP	207	192					15			76	93		1	2
AEV	1973	H1	16		EP	223	215	5				15			98	87		2	8
AEV	1973	H1	16/17		EP	8	6					2			2	4			
AEV	1973	H1	17		EP	146	134	2				10			64	56		1	
AEV	1971	H2A	1	contaminated		16	15					1			8	7			1
AEV	1971	H2A	2	Floor 1	MP/LP	69	69								35	34		2	1
AEV	1971	H2A	3	Floor 2	MP	62	62								27	35		2	1

Table 8.1 - Original pottery counts from Ayios Epiktitos *Vrysi*

SITE	YEAR	SQUARE	LEVEL	CONTEXT	PHASE	No. SHERDS	RW	RMP	MBW	PCb	CB	C	BUFFC	OTHER	OPEN	CLOSED	O/C	SPOUTS	NECKS
AEV 1971	H2A	4	Floor 3	MP		144	57					23		64	61	70		2	2
AEV 1972	H2A	4	Floor 3	MP		192	154					38			77	77		4	5
AEV 1972	H2A	5		MP		234	208					26			119	102		6	3
AEV 1972	H2A	6	Floor 4a	MP		144	125					19			33	92			
AEV 1972	H2A	6	Floor 4b	MP		7	7								4	3			
AEV 1972	H2A	7	Floor 4b makeup	MP		2	2								2				
AEV 1971	H2B	1	Floor 1	MP		709	654				2	53			342	312		10	9
AEV 1971	H2B	2	Floor 2	MP		69	61			5		3			38	28		1	
AEV 1971	H2B	3	Floor 3	MP		397	368			1		38			203	154		3	2
AEV 1971	H2B	4	Floor 3	MP		165	149					16			83	66		4	3
AEV 1971	H2B	5	Floor 4a	MP		209	201					8			84	117		1	4
AEV 1972	H2B	5	Floor 4a	MP		24	23					1			12	11			
AEV 1972	H2B	6	Floor 4b	MP		143	111				1	31			37	74		1	7
AEV 1972	H2B	7	Floor 5	MP		100	100			1					40	59			2
AEV 1972	H2B	8	Floor 5	MP		145	145								61	84		1	3
AEV 1972	H2B	9	Floor 5 makeup	MP		12	12								3	9		1	
AEV 1972	H2B	9	Floor 5 makeup	MP		32	29				3				8	21			3
AEV 1969	II (H3)	2	Floor 1	MP		81	45	19				13							
AEV 1969	II (H3)	3		MP		12	8	4											
AEV 1969	II (H3)	4		MP		99	72	5				3		19					
AEV 1969	II (H3)	5	Floor 2/3	MP		58	46					8		4					
AEV 1969	II (H3)	6		MP		125	101					16		8					
AEV 1969	II (H3)	7		MP		83	57					9		17					
AEV 1969	II (H3)	8		MP		121	118					3							
AEV 1969	II (H3)	9	Floor 4/5	MP		28	24					4							
AEV 1969	II (H3)	10		MP		30	26					4							
AEV 1969	II (H3)	11	Floor 5 makeup	MP		35	22					8		5					
AEV 1971	H3	2	Floor 1	MP		173	151			1		21			40	111		2	3
AEV 1971	H3	3	Floor 1	MP		10	8					2			1	1			2
AEV 1971	H3	4	Floor 1	MP		45	44					1			18	26			
AEV 1971	H3	5	Floor 2	MP		296	261			2		35			104	107		3	3
AEV 1971	H3	6	Floor 3	MP		65	32					33			11	21			
AEV 1971	H3	7	Floor 4	MP		55	48					9			23	35			1
AEV 1971	H3	8	Floor 5	MP		68	56					12			15	41		1	1
AEV 1971	H4A	surface				169	169								97	62		4	2

Table 8.1 - Original pottery counts from Ayios Epiktitos *Vrysi*

SITE	YEAR	SQUARE	LEVEL	CONTEXT	PHASE	No. SHERDS	RW	RMP	MBW	PCb	CB	C	BUFFC	OTHER	OPEN	CLOSED	O/C	SPOUTS	NECKS
AEV	1972	H4A	surface			234	226					8			109	117		2	4
AEV	1971	H4A	1	Floor 1	LP	183	155					28			64	91		1	1
AEV	1972	H4A	2	contaminated	LP	91	90					1			20	70		1	2
AEV	1972	H4A	3	Floor 2	MP	65	65								40	25		1	9
AEV	1972	H4A	3	Floor 2	MP	178	178								80	98		3	3
AEV	1972	H4A	3	Floor 2	MP	9	8					1			6	3		1	1
AEV	1972	H4A	4	Floor 3	MP	432	432								224	208		3	
AEV	1972	H4A	4	Floor 3	MP	21	21								13	8		1	
AEV	1972	H4A	5	Ditch fill	MP	141	141								72	69		1	2
AEV	1972/3	H4A	5	Ditch fill	EP/MP	15	15								11	4		1	
AEV	1973	H4A	nth wall			3	3								1	2			
AEV	1973	H4A	nth wall clearing			28	24							4	7	13	4		
AEV	1971	H4B	VB	surface	LP	436	435					1			106	212		1	1
AEV	1971	H4B	VB.2	Floor 1	LP	62	56				1	5			20	37		2	1
AEV	1971	H4B	VB.1	Floor 1	LP	54	52							2	21	33		2	
AEV	1971	H4B	1		MP	131	123					8			49	174			
AEV	1971	H4B	2		MP	211	200					4		7	69	141		5	12
AEV	1971	H4B	3	yard	MP	870	850					20			368	482		13	14
AEV	1971	H4B	4	yard	MP	163	153					10			61	92		4	1
AEV	1971	H4B	5	yard	MP	561	538					23			247	291		11	10
AEV	1971	H4B	sounding		MP	13	13								4	9			
AEV	1972	H4B	6	Floor 2	MP	13	12					1			1	11			
AEV	1973	H4B	6	Floor 2	MP	80	65					15			42	23		3	1
AEV	1973	H4B	8	Floor 2/ditch fill	EP	69	61					8			37	23		2	1
AEV	1973	H4B	wall			12	11					1			7	4			
AEV	1973	H5	superficial			346	320					23		3	168	144		8	9
AEV	1972	H5	superficial			373	317					50			137	172		8	11
AEV	1973	H5	door			8	8								2	6			
AEV	1973	H5	pit 1			28	20					8			13	7			
AEV	1973	H5	pit 2			25	21					4			15	6			
AEV	1973	H5	1	Floor 1	MP	1360	1212	1				145		1	428	468	16	23	15
AEV	1973	H5	2	Floor 2	MP	331	150					181		68	76		5	1	7
AEV	1973	H5	2	Floor 2	MP	818	771					47			469	302		15	15
AEV	1973	H5	2	Floor 2	MP	322	307				1	14			146	140		3	6
AEV	1973	H6	1	Floor 1	MP	51	51								27	24		2	1

Table 8.1 - Original pottery counts from Ayios Epiktitos *Vrysi*

SITE	YEAR	SQUARE	LEVEL	CONTEXT	PHASE	No. SHERDS	RW	RMP	MBW	PCb	CB	C	BUFFC	OTHER	OPEN	CLOSED	O/JC	SPOUTS	NECKS
AEV	1973	H6	1	Floor 1	MP	201	185					13			64	117		2	2
AEV	1973	H6	1	Floor 1	MP	94	93					1			54	39		1	2
AEV	1973	H6	1	Floor 1	MP	541	447					95			221	226		18	16
AEV	1973	H6	2	Floor 2	MP	381	200	1		2		176			90	104		9	16
AEV	1973	H6	2a	Floor 2	MP	39	34					3			19	15			2
AEV	1973	H6	2b	Floor 2 makeup	MP	1810	1562					102	128	28	750	810	3	17	58
AEV	1973	H6	3		EP	196	179						17		102	77		4	5
AEV	1971	H7	surface			174	174								59	115			7
AEV	1972	H7	1		MP	179	174					5			57	117			4
AEV	1972	H7	2		MP	19	19								6	13			
AEV	1972	H7	2		MP	822	822								334	488		4	23
AEV	1972	H7	2	Pit	MP	2962	2420					542			976	1444		9	17
AEV	1972	H7	3	Contaminated		663	663								238	425		6	11
AEV	1972	H7	3?	Contaminated		62	60					2			20	36			1
AEV	1972	H7	3A	Contaminated		142	129					12			45	84		1	
AEV	1972	H7	3B	Contaminated		195	195								70	125			3
AEV	1972	H7	4	Floor 1	EP	2712	1836					123		1	1112	1599	1	19	65
AEV	1973	H7	4TT	Trial trench		323	323								140	183		2	12
AEV	1973	H7	4TT	Trial trench		41	41								23	18			
AEV	1973	H7	4A	Floor 1	EP	1797	1753	10				34			768	985		18	71
AEV	1973	H7	4B	Floor 2	EP	1748	1427	1				297			685	742	10	8	30
AEV	1973	H7	5	Floor 2	EP	186	185					1			68	107		3	7
AEV	1973	H7	unstrat			35	33	1							25	5			
AEV	1973	H7	section			172	154					18			73	67		6	
AEV	1973	H7	section			257	243	2				12			123	127		9	6
AEV	1973	H7	under 4			6	6								3	3		1	
AEV	1973	H7	wall			129	117	2				12			54	60		4	3
AEV	1973	H9	ext		MP	86	82					2		2	50	31		1	
AEV	1973	H9	ext		MP	98	98								72	18		2	1
AEV	1973	H9	ext		MP	68	64					4			33	22			
AEV	1973	H9	ext		MP	43	37					6			24	11	2		1
AEV	1973	H9	ext		MP	1	1								1				
AEV	1973	H9	1	Floor 1	MP	35	21					14			14	7			
AEV	1973	H9	1	Floor 1	MP	130	71					53			47	30		4	1
AEV	1973	H9	2	Floor 2	EP/MP	178	165					13			67	96	37	1	6

Table 8.1 - Original pottery counts from Ayios Epiktitos *Vrissi*

SITE	YEAR	SQUARE	LEVEL	CONTEXT	PHASE	No. SHERDS	RW	RMP	MBW	Pcb	CB	C	BUFFC	OTHER	OPEN	CLOSED	O/C	SPOUTS	NECKS
AEV	1973	H12	superficial			86	66					2		14	37	30	3		2
AEV	1973	H12	n.wall		MP	13	11					2			2	9			
AEV	1973	H12	n.wall		MP	8	8								3	5			
AEV	1973	H12	inner wall		MP	7	7								1	6			
AEV	1973	H12	hearth		MP	14						4			3	6		1	
AEV	1973	H12	1		MP	143	128					15			61	59		1	4
AEV	1973	H12	1		MP	29	25					4			14	11		1	
AEV	1973	H12	1		MP	145	145								69	75		2	5
AEV	1973	H12	2	Floor 1	MP	43	33					10			26	7		3	1
AEV	1973	H12	2a	Floor 1	EP/MP	70	58					22			35	23		1	2
AEV	1973	H12	2a	Floor 1	EP/MP	343	310					33			134	191	18	6	6
AEV	1973	H12	2b	Floor 1	EP/MP	246	210					35			118	99		3	8
AEV	1973	H12	2b	Floor 1	EP/MP	136	99					37			52	40		1	3
AEV	1973	H12	2b	Floor 1	EP/MP	111	97					14			45	52			
AEV	1973	H12	2b-2c	Floor 1	EP/MP	3	3								2	1			1
AEV	1973	H12	2c	Floor 1	EP/MP	32	29					3			18	11			1
AEV	1973	H12	2c east	Floor 1	EP/MP	109	100					7			74	26			
AEV	1973	H12	3a	Floor 1	EP/MP	86	75			1		10			34	41		2	2
AEV	1973	H12	3a	Floor 1	EP/MP	124	11					114			3	7			
AEV	1973	H12	3a	Floor 1	EP/MP	120	98					22			47	51			
AEV	1973	H12	3a	Floor 1	EP/MP	43	1					42				1			
AEV	1973	H12	3b	Floor 1	EP/MP	1	1								1				
AEV	1973	H12	3b	Floor 1	EP/MP	168	135					33			55	76		1	2
AEV	1973	H12	3b	Floor 1	EP/MP	11	11								5	6			
AEV	1973	H12	3b	Floor 1	EP/MP	62						8			28	25			1
AEV	1973	H12	3b	Floor 1	EP/MP	161	98					8			40	58			8
AEV	1973	H12	4	Floor 1	EP/MP	38	20					2		7	8	12			
AEV	1973	H12	4a	Floor 1	EP/MP	53	44					9			27	17			4
AEV	1973	H12	4a	Floor 1	EP/MP	64	57								22	35			
AEV	1973	H12	4a (SE)	Floor 1	EP/MP	22	22								6	16			
AEV	1973	H12	4b	Floor 2	EP	412	306					77			133	173			
AEV	1973	H12	4b	Floor 2	EP	176	150					18		8	79	69		2	4
AEV	1973	H12	4b	Floor 2	EP	145	99					26		20	53	46			
AEV	1973	H12	4b (pit)	Floor 2	EP	146	94					10		34	32	62		1	4
AEV	1973	H12	5N			2	2								2				

Table 8.1 - Original pottery counts from Ayios Epiktitos *Trysi*

SITE	YEAR	SQUARE	LEVEL	CONTEXT	PHASE	No. SHERDS	RW	RMP	MBW	Pcb	CB	C	BUFFC	OTHER	OPEN	CLOSED	O/C	SPOUTS	NECKS
AEV	1973	VI (H16)	superficial			278	267					6			164	79		7	
AEV	1973	H16	fill			1	1								1				
AEV	1973	H16	1	Floor 1	LP	636	612					23		1	285	179	148	15	3
AEV	1973	H16	1	Floor 1	LP	37	35					2			21	14		2	1
AEV	1973	H16	1	Floor 1	LP	53	53								23	30		1	
AEV	1973	VI (H16)	1	Floor 1	LP	199	183					16			90	86	7	6	1
AEV	1973	H16	1A	Floor 1	LP	23	23					8			11	9			
AEV	1973	H16	1A	Floor 1	LP	176	168								92	68	7	7	2
AEV	1973	H16	1A	Floor 1	LP	8	8								5	3		1	
AEV	1973	H16	1A	Floor 1	LP	219	167					52			58	78	31	4	1
AEV	1973	H16	1B	Floor 2	MP/LP	103	82					21			25	55		4	3
AEV	1973	H16	1B	Floor 2	MP/LP	33	24					9			8	16			1
AEV	1973	H16	1B	Floor 2	MP/LP	212	165					26			77	88	21	3	8
AEV	1973	H16	1B	Floor 2	MP/LP	104	95					9			45	55	5	4	3
AEV	1973	H16	feature	Floor 2	MP/LP	19	19								9	8		1	1
AEV	1973	H16	1B	Floor 2	MP/LP	3	3								2	1			
AEV	1973	H16	1C	Floor 2	MP/LP	204	116					88			43	57	16		4
AEV	1973	H16	1D	Floor 2	MP/LP	29	27					1			15	12	1		1
AEV	1973	H16	2	west ext.	LP	185	95		5				70	21	33	52		2	
AEV	1973	H16	2	west ext.	LP	64	62					2			19	33	10	1	1
AEV	1973	H16	2	west ext.	LP	169	119					4			56	63	46		
AEV	1973	H16	2	west ext.	LP	218	218								90	88		7	1
AEV	1973	H16	3	north ext.	LP	70	67					3			27	24	16	3	1
AEV	1973	H16	3+4	north ext.	LP	194	190					4			106	84		3	6
AEV	1973	H16	5	north ext.	LP	69	67			2					29	30	8	4	
AEV	1973	H16	6	south ext.	LP	30	30								15	15		2	1
AEV	1973	VD	section			22	22								12	20			1
AEV	1972	VD	superficial			188	188					2			68	120		4	1
AEV	1973	VD				4	3					1			1	2			1
AEV	1973	VD	unstrat			64	61			1	1				30	29		3	
AEV	1972	VD	1		MP/LP	7				7								31	22
AEV	1972	VD	1		MP/LP	60	50							10	10	40			
AEV	1972	VD	1		MP/LP	48	46					2			22	24		1	
AEV	1972	VD	1 (pit)		MP/LP	2814	2614			2	1			197	1122	1492		32	46
AEV	1972	VD	1 (pit)		MP/LP	124	111					7		6	64	47		4	2

Table 8.1 - Original pottery counts from Ayios Epiktitos *Krysti*

SITE	YEAR	SQUARE	LEVEL	CONTEXT	PHASE	No. SHERDS	RW	RMP	MBW	PCb	CB	C	BUFFC	OTHER	OPEN	CLOSED	O/C	SPOUTS	NECKS
AEV	1972	VD	2		MP/LP	68	60					8			22	38			
AEV	1972	VD	2 hearth		MP/LP	32	32								22	10		2	1
AEV	1972	VD	3		MP/LP	19	19								11	8		2	
AEV	1972	VD	3		MP/LP	339	309					20			153	156		7	4
AEV	1972	VD	4		MP/LP	80	80								27	53			
AEV	1972	VD	5		MP/LP	87	78			2		7			37	41		7	
AEV	1972	VD	6		MP/LP	244	235			3	3	3			110	125		6	12
AEV	1972	VD	7		MP/LP	234	229					5			110	119		2	5
AEV	1972	VD	8		MP/LP	23	22					1			15	7			
AEV	1972	VD	9	Contaminated		372	345			5	2	20			159	186		7	3
AEV	1973	VD	9	Contaminated		174	159					15			58	96			5
AEV	1972	VD	10		MP	33	31			2					10	21			
AEV	1973	VD	10A		MP	38	35					3			12	17			
AEV	1973	VD	10A-16		MP	85	84					1			34	43		1	1
AEV	1972	VD	11	Contaminated		481	455			2	2	29			216	239		13	11
AEV	1972	VD	12		LP	942	928			1	1	12			422	506			
AEV	1972	VD	12		LP	49	48			1					28	21		1	
AEV	1972	VD	13		LP	40	40								36	3	1	5	3
AEV	1973	VD	14		EP/MP	85	75					10			32	43			5
AEV	1973	VD	15		EP/MP	115	108					7			41	66			3
AEV	1973	VD	16		EP/MP	132	129					32	1		65	62		1	7
AEV	1973	VD	16A		EP/MP	81	69					12			29	40		3	1
AEV	1973	VD	17		EP/MP	77	76					1			28	48			
AEV	1973	VD	17		EP/MP	49	42					6			17	25		1	2
AEV	1973	VD	18		EP/MP	83	82					1			33	47			
AEV	1973	VD-E	Misc	Contaminated		68	64			1			3		23	41		1	6
AEV	1973	VE	misc	Contaminated		63	59					4			33	25	1	2	1
AEV	1973	VE	superficial			79	76							3	36	31			
AEV	1973	VE	superficial			28	25							3 chalc	10	13			
AEV	1973	VE	1-5		LP	151	150					1			63	48		6	5
AEV	1973	VE	superficial			113	110					3			42	68		1	4
AEV	1973	VE	1		LP	271	226					6			83	143	39	4	8
AEV	1973	VE	1A		LP	1	1								1				
AEV	1973	VE	2	Contaminated		1057	1028			4		25			473	544	11	46	43
AEV	1973	VE	2	Contaminated		45	43					1		1	22	20		2	2

Table 8.1 - Original pottery counts from Ayios Epiktitos *ΜΥΣΙ*

SITE	YEAR	SQUARE	LEVEL	CONTEXT	PHASE	No. SHERDS	RW	RMP	MBW	PCb	CB	C	BUFFC	OTHER	OPEN	CLOSED	O/C	SPOUTS	NECKS
AEV	1973	VE	2A		LP	78	72					4			41	31	2	3	4
AEV	1973	VE	3		LP	681	617					60		4	328	289		15	9
AEV	1973	VE	3A		LP	313	271					35		7	159	112		15	15
AEV	1973	VE	4		LP	105	103					2			66	47		3	4
AEV	1973	VE	4B		MP/LP	576	565			6		5			292	274		16	12
AEV	1973	VE	4B		MP/LP	101	98					3			40	58		1	6
AEV	1973	VE	5		MP/LP	74	68			2		4			36	34		2	1
AEV	1973	VE	5		MP/LP	39	35			2		3			19	16		4	1
AEV	1973	VE	5		MP/LP	130	117			1		12			69	48		6	4
AEV	1973	VE	6	Mixed		209	201			2		6			116	85		1	12
AEV	1973	VE	6	Mixed		50	44					6			30	13		3	
AEV	1973	VE	6	Mixed		162	155			1		6			101	54		6	5
AEV	1973	VE	7		MP/LP	543	530			1		13			301	222	7	28	15
AEV	1973	VE	8		LP	170	165					5			72	92	12	9	3
AEV	1973	VE	8		LP	356	349			1		7			200	148			
AEV	1973	VE	7-9A		LP	212	203					3			156	137	6	12	7
AEV	1973	VE	8A		MP	142	140							2	71	60		3	2
AEV	1973	VE	8A		MP	83	82					1			34	47	1	3	2
AEV	1973	VE	8A		MP	487	460			1		6	5		254	206		24	10
AEV	1973	VE	9		MP/LP	432	419			3		5	10		225	192		8	12
AEV	1973	VE	10		MP	180	175								84	91			
AEV	1973	VE	11			13	13								5	8			
AEV	1973	super	dump			1	1								1				
AEV	1973	w.slope				18	16					1		1	10	5			
AEV	1973	w.slope	erosion			295	269					19	5	3	131	135	3	4	7
AEV	1973	passage B	superficial			127	127								69	58		4	2
AEV	1973	passage B	channel 1			12	12								8	3			1
AEV	1973	passage B				6	6								4	2			
AEV	1973	passage B-E	1			94	90					4			56	34		2	3
AEV	1973	passage B-E	1A			13	13								5	8			
AEV	1973	passage B-E	1B			11	11								6	5			1
AEV	1973	passage B-E	2		MP	162	162								55	96	11	4	2
AEV	1973	passage B-E	3		MP	130	127			1		2			43	84		2	5
AEV	1973	passage B-E	3		MP	154	149					5			48	99	2	7	6
AEV	1973	passage B-E	3		MP	274	265			1		8			95	109	1	3	8

Table 8.1 - Original pottery counts from Ayios Epiktitos *Vrysi*

SITE	YEAR	SQUARE	LEVEL	CONTEXT	PHASE	No. SHERDS	RW	RMP	MBW	PCb	CB	C	BUFFC	OTHER	OPEN	CLOSED	O/C	SPOUTS	NECKS
AEV	1973	passage B-E	3A		MP	14	14								5	9		1	
AEV	1973	passage B-E	4		MP	86	83			1	2				51	32	1	1	2
AEV	1973	passage B-E	4		MP	224	211				13				100	111		3	14
AEV	1973	passage B-E	4		MP	347	333				8				140	194		16	10
AEV	1973	passage B-E	4A		MP	57	53			4					24	29	8	1	5
AEV	1973	passage B-E	4B		MP	108	108								45	58	4		
AEV	1973	passage B-W				47	45			2					28	17			1
AEV	1973	passage B-W	1		MP	14	14								5	9			
AEV	1973	passage B-W	2		MP	13	12				1				3	9			1
AEV	1973	passage B-W	3		MP	46	46								16	30			
AEV	1973	passage B-W	4		MP	17	17								11	6			1
AEV	1973	passage B-W	5		MP	74	73			1					31	41	1	1	1
AEV	1973	passage B-W	6		MP	48	48								24	24		3	3
AEV	1973	passage B-W	7		MP	108	108								55	53		1	4
AEV	1973	passage B-W	8		MP	82	81	1							40	40		2	3
AEV	1973	passage B-W	10		MP	58	57				1				27	26	4		1
AEV	1971	Area Ib		Contaminated		4	4												
AEV	1971	Area Ib			MP	5		4			1								
AEV	1971	Area Ic	surface			119	117	1		1					53	56		6	
AEV	1971	Area Ic			MP/ILP	293	282	10			1				123	140		1	
AEV	1971	Area Ic		Contaminated		255	253				2				109	139		4	2
AEV	1971	Area Ic			MP	122	91				5			2	63	59		4	1
AEV	1973	Area Id				233	225				8				97	128		1	9
AEV	1973	Site 1d				95	93	1			1				27	65		1	
AEV	1973	superficial	superficial			54	51				1			1	2	17	32	2	
AEV	1973	superficial	superficial			49	49								25	24		1	2
AEV	1973	superficial	superficial			139	131				7			1	53	78		2	2
AEV	1973	superficial	superficial			175	145	1			18			8	74	72		4	
AEV	1973	superficial	superficial			182	172				8			2	86	86		3	4
AEV	1973	superficial	superficial			230	222				6			2	88	134		3	4
AEV	1973	superficial	superficial			237	209				22			6	102	101		5	5
AEV	1973	superficial	superficial			146	137				3			7	53	74			2
AEV	1973	superficial	superficial			210	197				13				84	80		4	2
AEV	1973	superficial	superficial	Contaminated		87	87								39	34	11	2	1
AEV	1973	superficial	superficial	Contaminated		33	32				1				15	18		1	

Table 8.1 - Original pottery counts from Ayios Epiktitos *Urns*

SITE	YEAR	SQUARE	LEVEL	CONTEXT	PHASE	No. SHERDS	RW	RMP	MBW	PCb	CB	C	BUFFC	OTHER	OPEN	CLOSED	O/C	SPOUTS	NECKS
AEV	1973	III	3	Contaminated		9	9								4	5			
AEV	1969	IV	1	Contaminated		107	98							9					
AEV	1969	IV	1	Contaminated		82	77							5					
AEV	1969	IV	2		MP/LP	178	168					3		7					
AEV	1969	IV	3		MP/LP	142	130					5		7					
AEV	1969	IV	3		MP/LP	189	181					8							
AEV	1969	IV	4		MP/lp	302	283					6		13					
AEV	1969	V	superficial			216	107					7		111					
AEV	1969	V	1		MP/LP	178	164					4		10					
AEV	1969	V	2	Contaminated		276	257					19		10					
AEV	1969	V	3	H 2B Floor 1		80	63					17							
AEV	1969	V	4	H 2B Floor 2	MP	97	95					2							
AEV	1969	V	4	H 2B Floor 2	MP	169	157					12							
AEV	1969	V	6	H 2A Floor 3	MP	107	101					6							
AEV	1971	Va	superficial			248	139					6		103	96	125		1	2
AEV	1971	Va	1	H 2A Floors 1/2		76	60					16			33	26			2
AEV	1971	Va	2		MP/LP	511	464					56		1	202	250		13	11
AEV	1971	Va	3		MP/LP	13	4					8		1	4			1	
AEV	1971	Va (H2)		H 2A Floors 1/2		119	98					21			44	52		3	2
AEV	1973	Vb	superficial			85	51	4				26			31	20		1	1
AEV	1973	Vb	tumble	Contaminated		11	10					1			2	7	1		
AEV	1973	Vb	s of H4B level 3			19	17					2			9	2		1	
AEV	1971	Vb	3	above H14		73	73					1			53	20			1
AEV	1973	Vb	3	above H14		32	28					4			10	12			
AEV	1973	Vb	4	H 14.0	MP/LP	12	6					6			3	3			
AEV	1971	Vb	5			180	178					2			35	143		2	5
AEV	1971	Vc	superficial			792	392					2		7	490	404		11	8
AEV	1973	Vc	3	Passage A.3	MP/LP	37	37								18	13			
AEV	1973	Vc	4	Passage A.4	MP/LP	11	6					1			3	8			
AEV	1973	Vc	5	Passage A.5	MP	402	213								228	215		16	9

Table 8.1 - Original pottery counts from Ayios Epiktitos *Kyysi*

SITE	YEAR	SQUARE	LEVEL	PHASE	TOTAL SHERDS	RW	PATTERN ANALYSIS																									
							1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				
AEV	1971	I	backfill		153	151	7	3	2	1	1	1	3	2																		
AEV	1969	I	2	MP	69	45	1	1				2																				
AEV	1969	I	3	MP	99	90			1	1	1	1																				
AEV	1969	I	4	MP	251	181	11	11	4	1	1	1	2	1																		
AEV	1969	I	5	MP	54	52	1	1	1	1																						
AEV	1969	I	6	MP	67	60		5																								
AEV	1969	I	6	MP	101	83						1	2	1																		
AEV	1971	I(H1)	2	MP	21	20																										
AEV	1971	I(H1)	2	MP	49	46					1																					
AEV	1971	I(H1)	3	MP	3	3		1																								
AEV	1971	I(H1)	3	MP	30	29					4	1																				
AEV	1971	I(H1)	4	MP	55	48	2				8																					
AEV	1971	H1	4/5	MP	11	4																										
AEV	1971	H1	5	MP	229	219	1		1	2	5		7																			
AEV	1971	H1	5/6	MP	37	36		6																								
AEV	1971	H1	6	MP	152	83			6	1		1																				
AEV	1971	H1	7	MP	166	160			2			3	2	1	3																	
AEV	1971	H1	wall	MP	17	16							2	1																		
AEV	1971	H1	8	MP	59	59																										
AEV	1972	H1	8	MP	316	277							12	3	3																	
AEV	1972	H1	9	MP	393	393			9			9	2	13																		
AEV	1972	H1	10	MP	207	182			1	3																						
AEV	1972	H1	8/10	MP	88	88							2																			
AEV	1972	H1	11	MP	402	402			1				1	10	1	4																
AEV	1972	H1	12	MP	1	1								1																		
AEV	1973	H1	12?	MP	4	3																										
AEV	1972	H1	12	MP	293	293										6																
AEV	1973	H1	13	EP	28	28							1																			
AEV	1973	H1	14	EP	147	131							1																			
AEV	1973	H1	15	EP	207	192																										
AEV	1973	H1	16	EP	223	215			1				2																			
AEV	1973	H1	16/17	EP	8	6																										
AEV	1973	H1	17	EP	146	134																										
AEV	1971	H2A	1		16	15																										

Table 8.2 - Original pattern counts from Ayios Epiktitos *Vrysi*

PATTERN ANALYSIS																												
SITE	YEAR	SQUARE	LEVEL	PHASE	TOTAL SHERDS	RW	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
AEV	1971	H2A	2	MP/LP	69	69		7	1	1																		
AEV	1971	H2A	3	MP	62	62	2	2																				
AEV	1971	H2A	4	MP	144	57		2					1															
AEV	1972	H2A	4	MP	192	154		3			10		3	3	1					2								
AEV	1972	H2A	5	MP	234	208	1		1		4		4	4														
AEV	1972	H2A	6	MP	144	125					3		2	2			1		2									
AEV	1972	H2A	6	MP	7	7					1		1	1				1										
AEV	1972	H2A	7	MP		44							4															
AEV	1972	H2A	7	MP	2	2							2															
AEV	1971	H2B	1	MP	709	654	36	14	1	5	3	1	7	7		4				2	1							
AEV	1971	H2B	2	MP	69	61	4	1												1								
AEV	1971	H2B	3	MP	397	358	21	5		2	2	1	2	2	1	1												
AEV	1971	H2B	4	MP	165	149	3	1		1	1		1	1	1	2												
AEV	1971	H2B	5	MP	209	201	4			1	1		2	2	1	2												
AEV	1972	H2B	5	MP	24	23	1									1												
AEV	1972	H2B	6	MP	143	111	2						1	1							1							
AEV	1972	H2B	7	MP		100																						
AEV	1972	H2B	8	MP		145																		1	1			
AEV	1972	H2B	9	MP	12	12																						
AEV	1972	H2B	9	MP	32	29																						
AEV	1969	II (H3)	2	MP	81	45		1		1	1		2															
AEV	1969	II (H3)	3	MP	12	8																						
AEV	1969	II (H3)	4	MP	99	72							2															
AEV	1969	II (H3)	5	MP	58	46							2															
AEV	1969	II (H3)	6	MP	125	101			2	1	4					1												
AEV	1969	II (H3)	7	MP	83	57					2		4															
AEV	1969	II (H3)	8	MP	121	118							1							1								
AEV	1969	II (H3)	9	MP	28	24			1	2										2								
AEV	1969	II (H3)	10	MP	30	26																						
AEV	1969	II (H3)	11	MP	35	22																						
AEV	1971	H3	2	MP	173	151	1				5			1														
AEV	1971	H3	3	MP	10	8																						
AEV	1971	H3	4	MP	45	44	1						1															
AEV	1971	H3	5	MP	296	261	1		1	3	7	4		4		1	6				2							

Table 8.2 - Original pattern counts from Ayios Epiktitos *Vrysi*

SITE	YEAR	SQUARE	LEVEL	PHASE	TOTAL SHERDS	RW	PATTERN ANALYSIS																					
							1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
AEV	1971	H3	6	MP	65	32					1	1	1															
AEV	1971	H3	7	MP	55	48							1	6														
AEV	1971	H3	8	MP	68	56					2																	
AEV	1971	H4A	surface		169	169	5				4											3	1					
AEV	1972	H4A	surface		234	226	6				1	1	3															
AEV	1971	H4A	1	LP	183	155	8	4					1	1	1													
AEV	1972	H4A	2	LP	91	90							1	1	1													
AEV	1972	H4A	3	MP		65							3															
AEV	1972	H4A	3	MP		178						1	3	2	1									1				
AEV	1972	H4A	3	MP		9	8	1					1											1				
AEV	1972	H4A	4	MP		432					11				14	1	1	8							1			6
AEV	1972	H4A	4	MP		21	21				2				2	1	1	5							1	6		
AEV	1972	H4A	5	MP		141										1		1	1									
AEV	1972/3	H4A	5	EP/MP		15	15									2		1	1							1		
AEV	1973	H4A	nth wall			3	3								1													
AEV	1973	H4A	nth wall clearing			28	24										2											
AEV	1971	H4B	VB surf	LP	436	435	3	25	3	1					1	3												
AEV	1971	H4B	VB.2	LP	62	56		2	1																			
AEV	1971	H4B	VB.1	LP	54	52		1	2																			
AEV	1971	H4B	1	MP		131	123	1	7																			
AEV	1971	H4B	2	MP		211	200	2	24							1												
AEV	1971	H4B	3	MP		870	850	3	81	3	1	1			3	3	2								1	1		
AEV	1971	H4B	4	MP		163	153	1	11	1	4	2			1	2												2
AEV	1971	H4B	5	MP		561	538	4	2	2	1	16			2	5	3	2										
AEV	1971	H4B	sounding	MP		13	13		4	1																		
AEV	1972	H4B	6	MP		13	12																					
AEV	1973	H4B	6	MP		80	65			1					7											1	1	
AEV	1973	H4B	8	EP		69	61								3											1	2	
AEV	1973	H4B	wall			12	11																					
AEV	1973	H5	superficial			346	320	19	8						3	2	1											
AEV	1972	H5	superficial			373	317	13	4		5				9													8
AEV	1973	H5.1	door			8	8																					
AEV	1973	H5	pit 1			28	20																					
AEV	1973	H5	pit 2			25	21																					

Table 8.2 - Original pattern counts from Ayios Epiktitos *Vrysi*

SITE	YEAR	SQUARE	LEVEL	PHASE	TOTAL SHERDS	RW	PATTERN ANALYSIS																					
							1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
AEV	1973	H9	ext	MP	68	64																						
AEV	1973	H9	ext	MP	43	37			3																			
AEV	1973	H9	ext	MP	1	1							1															
AEV	1973	H9	1	MP	35	21	1		2																			
AEV	1973	H9	1	MP	130	71	2	2	4	1	2	16	1							1								
AEV	1973	H9	2	EP/MP	178	165			2	2					2								2					
AEV	1973	H12	superficial		86	66	1																					
AEV	1973	H12	n.wall	MP	13	11																						
AEV	1973	H12	n.wall	MP	8	8								1														
AEV	1973	H12	inner wall	MP	7	7																						
AEV	1973	H12	hearth	MP	14	14																						
AEV	1973	H12	1	MP	143	128	1																					
AEV	1973	H12	1	MP	29	25							1															
AEV	1973	H12	1	MP	145	145	1				2		1	1								1						
AEV	1973	H12	2	MP	43	33								1														
AEV	1973	H12	2a	EP/MP	70	58			1	7																		
AEV	1973	H12	2a	EP/MP	343	310				5	5	1	3	1	2	8												
AEV	1973	H12	2b	EP/MP	246	210				1	8		3		3								4	3				
AEV	1973	H12	2b	EP/MP	136	99				2	3		2		2	1							2	2				
AEV	1973	H12	2b	EP/MP	111	97				6	2		4		1	2												
AEV	1973	H12	2b-2c	EP/MP	3	3																						
AEV	1973	H12	2c	EP/MP	32	29			1	2						1								2				
AEV	1973	H12	2c east	EP/MP	109	100				1						4								1				
AEV	1973	H12	3a	EP/MP	86	75				1	3		1		3	1												
AEV	1973	H12	3a	EP/MP	124	111																						
AEV	1973	H12	3a	EP/MP	120	98				2	6		1		5	2												
AEV	1973	H12	3a	EP/MP	43	43	1																					
AEV	1973	H12	3b	EP/MP	1	1																						
AEV	1973	H12	3b	EP/MP	168	135				1	1		1		1	15	2						1					
AEV	1973	H12	3b	EP/MP	11	11										1												
AEV	1973	H12	3b north	EP/MP	62								5			2							1					
AEV	1973	H12	3b	EP/MP	161	98										1							3					
AEV	1973	H12	4	EP/MP	38	20										1												
AEV	1973	H12	4a	EP/MP	53	44										3	1											

Table 8.2 - Original pattern counts from Ayios Epiktitos *Krysti*

SITE	YEAR	SQUARE	LEVEL	PHASE	TOTAL SHERDS	RW	PATTERN ANALYSIS																														
							1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22									
AEV	1971	Vb	3		73	73	4	14									1																				
AEV	1973	Vb	3		32	28	4				2																										
AEV	1973	Vb	4	MP/LP	12	6		2				1																									
AEV	1971	Vb	5		180	178	4	1	2					2			1																				
AEV	1971	Vc	superficial		792	392	16	39	2	2	2	2	8	1	1	5	7																				
AEV	1973	Vc	3	MP/LP	37	37	2																														
AEV	1973	Vc	4	MP/LP	11	6																															
AEV	1973	Vc	5	MP	402	213	16	12		1	3		3											3	3												

Table 8.2 - Original pattern counts from Ayios Epiktitos *Vrysi*

SITE	YEAR	SQUARE	LEVEL	PHASE	No. SHERDS	RW	RMP	MBW	Pcb	CB	C	MBW/CW	OPEN	CLOSED	O/C
Philia	1968	5.1	1		116	67	14	10	1	1	8	15	39	42	
Philia	1968	5.1	2	3	289	106	12	83		1	42	45	60	58	
Philia	1968	5.1	3	2	17	5	1	8				3	1	4	
Philia	1968	5.1	4	2	354	13	44	114			146	37	30	27	
Philia	1968	5.1	5	2	134	46	7	55			21	25	25	28	
Philia	1968	5.2	1		106	57		9	3			37	25	32	
Philia	1968	5.2	2		150	85		29		2	11	23	48	37	
Philia	1968	5.3	1		117	87		8	3	1		18	32	55	
Philia	1968	5.3	2		166	90		26	1	2	7	40			
Philia	1968	5.4	1		57	41	2	2	1		2	9	24	19	
Philia	1968	8	2		180	113	1	5		1	29	31	69	45	
Philia	1968	8	3		873	494	15	3	7	3	142	209	275	239	
Philia	1968	8	4		209	122	2	4	1		26	54	64	60	
Philia	1968	35	1		469	259	5	32	4	3	84	82	158	106	
Philia	1968	35	2	2	731	105	7	192	1		327	99	70	42	
Philia	1968	35	3	2	764	184	2	209			238	123	89	103	
Philia	1968	35	4	2	368	85	5	111	2		107	58	39	51	
Philia	1968	40	1		177	138	17	15			7		74	81	
Philia	1968	40	2	2	99	12	3	31			18	35	3	12	
Philia	1968	40	3	2	327	47	16	180			64	20	37	26	
Philia	1968	40	4	2	105	4		6			95				
Philia	1968	41	1		85	55	11	3	1		10	5	32	34	
Philia	1968	41	2	3	340	161	15	37	2	2	68	55	66	110	
Philia	1968	41	3	2	543	30	23	224	1		178	87	20	33	
Philia	1968	41	4	2	418		13	146			188	71			
Philia	1968	41	5	2	86	12	1	14			48	11	7	6	
Philia	1968	41	6	2	31	16	2	3			3	7	8	10	
Philia	1968	41	7	2	303	1	17	157			58	70	15	3	
Philia	1968	42	1		150	69	15	21		1	13	31	44	40	
Philia	1968	42	2	3	478	211	21	59	2	1	94	90	125	107	

Table 8.3 - Original pottery counts from Philia Drakos A

SITE	YEAR	SQUARE	LEVEL	PHASE	No. SHERDS	RW	RMP	MBW	Pcb	CB	C	MBW/CW	OPEN	CLOSED	O/C
Philia	1968	50	1		227	130	45	10		1	8		100	79	
Philia	1968	50	2	3	90	56	7	8		1	14	4	39	33	
Philia	1968	50	3	3	127	60	8	6		1	44	8	38	37	
Philia	1968	50	5	3	8	4	1				3	4			
Philia	1968	50	6	3	25	12	3	1			8	1	9	7	
Philia	1968	52	1		956	554	180	40	44	2	102	48	528	206	
Philia	1968	52	2	3	486	285	34	42	4	5	91	25	217	102	
Philia	1968	52	3	3	230	128	21	22			46	13	74	75	
Philia	1968	52	4	2	14	5		5			3	1	3	5	
Philia	1968	54	1		205	87	48	30		2	29	9	76	59	
Philia	1968	54	2	3	408	225	69	32	5	1	58	18	172	122	
Philia	1968	54	3	3	658	295	98	59	17		150	45	157	125	
Philia	1968	54	4	3	15	8	1	3	1		1	1	3	6	
Philia	1968	54	5	3	50	21		4			15	10	15	6	
Philia	1968	57	1		52	40	1				2	9	26	15	
Philia	1968	57	2	3	83	55	3			1	7	17	32	26	
Philia	1968	57	3	3	324	95	12	96		2	44	75	53	54	
Philia	1968	57	4	2	1473	49	30	465	2	2	725	200	35	44	
Philia	1968	57	5	2	365	42	9	112	1		159	32	29	22	
Philia	1968	57	6	2	260	51	6	84		1	104	14	27	30	
Philia	1968	60	1		111	69	7			3	13	18	31	45	
Philia	1968	60	2	3	91	35	4			3	43	6	24	15	
Philia	1968	60	3	3	116	74	12	2	1		10	17	45	41	
Philia	1968	62	1		489	232	78	2	4		132	41	155	153	
Philia	1968	62	2		152	60	8	1	2	10	69	10	44	24	
Philia	1968	62	3	3	188	100	19	3			34	12	64	52	
Philia	1968	62	4	3	255	159	15	10	2	1	42	26	71	103	
Philia	1968	62	5	3	273	120	30	17	5	4	70	27	70	80	
Philia	1968	62	6	3	69	35	7	3	1		16	7	27	15	
Philia	1968	62	7	2	51	16		18	1		9	7	6	10	

Table 8.3 - Original pottery counts from Philia Drakos A

SITE	YEAR	SQUARE	LEVEL	PHASE	No. SHERDS	RW	RMP	MBW	PCb	CB	C	MBWCW	OPEN	CLOSED	O/C
Philia	1968	62	8	2	36	9	1	9	1		12	5	5	5	
Philia	1968	62	9	2	146	22	7	24			46	47	10	19	
Philia	1968	62	10	2	350	191	17	43	16	2	78	6	94	111	
Philia	1968	62	11	2	83	32	7	7	1		31	5	20	19	
Philia	1968	64	1		159	52	50	8	2	1	25	21	66	36	
Philia	1968	64	2		263	91	69	5	7	2	60	29	95	65	
Philia	1968	64	3	3	241	114	51	1	3	2	41	29	80	85	
Philia	1968	64	4	3	42	16	7	2			10	7	11	12	
Philia	1968	64	5	2	190	7	4	119			57	3	2	9	
Philia	1968	64	6	2	231	39	8	83			93	8	24	21	
Philia	1968	67	1		107	37	41	1			15	13	46	32	
Philia	1968	67	2		804	320	218	17	3	5	178	63	267	271	
Philia	1968	67	3	3	627	153	87	51	4	3	294	35	122	118	
Philia	1968	67	4	2	157	18	1	28			104	6	8	11	
Philia	1968	67	5	3	26	18		6			1	1	2	16	
Philia	1968	67	6	1	15			10			5				
Philia	1968	67	7	3	255	124	29	21		9	69	3	53	100	
Philia	1968	67	8	4	159	98	7	27	3	1	20	3	45	60	
Philia	1968	67	9	3	221	120		22		1	70	8	98	22	
Philia	1968	68	1		348	164	60	24		1	71	28	130	94	
Philia	1968	68	2		1038	482	147	48	5	4	273	79	353	296	
Philia	1968	68	3	3	241	43	25	111			31	31	35	33	
Philia	1968	68	4	3	222	119	20	36	2	1	30	14	84	55	
Philia	1968	68	5	2	186	84	14	53	1	2	21	11	45	53	
Philia	1968	68	6	2	82	43	5	19			14	1	28	20	
Philia	1968	68	7	2	578	104	9	317	3	2	117	26	64	49	
Philia	1968	68	8	2	515	22	30	310	1		126	26	20	32	
Philia	1968	68	9	2	17	5		11				1	2	3	
Philia	1968	70	1		96	60	8	5		1	7	14	38	30	
Philia	1968	70	2	3	331	132	41	2	7	3	103	43	105	68	

Table 8.3 - Original pottery counts from Philia Drakos A
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SITE	YEAR	SQUARE	LEVEL	PHASE	No. SHERDS	RW	RMP	MBW	PCb	CB	C	MBW/CW	OPEN	CLOSED	O/C
Philia	1968	70	3	3	29	14	7	1			4	3	9	12	
Philia	1968	70	4	3	42	28	4				6	4	12	20	
Philia	1968	70	5	2	102	34	14	21		1	20	12	16	32	
Philia	1968	70	6	2	76	29	7	22	2		14	2	20	16	
Philia	1968	70	7	2	40	7	2	25			5	1	4	5	
Philia	1968	77	1		425	138	116	4	1		102	64	52	38	
Philia	1968	80	1		1309	722	45	150	10	18	230	134	384	383	
Philia	1968	90	1		173	74	33	14	3	6	29	14	47	60	
Philia	1968	90	2	3	63	24	10	6		1	13	9	20	14	
Philia	1968	90	3	3	175	82	32	1	1	2	28	30	49	65	
Philia	1968	90	4	3	151	84	30	10		1	11	15	47	67	
Philia	1968	90	5	3	9	8		1					5	3	
Philia	1968	90	6	3	135	61		11		2	43	18	32	29	
Philia	1968	97	1		1196	488	284	41	2	7	265	109	481	292	
Philia	1968	97	2		540	179	137	35	3	1	159	26	273	102	
Philia	1968	97	3	3	366	159	82	23	2	1	86	13	148	93	
Philia	1968	97	4		78	41	8	2	2	1	24		23	26	
Philia	1968	97	5	3	678	349	98	64	16	10	102	39	209	238	
Philia	1968	97	6	3	540	270	36	101	4	9	89	31	254	155	
Philia	1970	201	2	4	199	148	11	12	1	4	23				
Philia	1970	201	3	3	139	87	10	21	2		19				
Philia	1970	201	4	3	188	136	7	22	4		17	2			
Philia	1970	201	5	3	18	2		11			5				
Philia	1970	201	6	3	7	1	2				4				
Philia	1970	201	8	3	4			2			2				
Philia	1970	201	9	2	4	1	2				1				
Philia	1970	201	10	2	39	14		16			8				
Philia	1970	202	1		124	86	3	9	1	2	23				
Philia	1970	202	3		65	40	2	12			11				
Philia	1970	202	4	3	138	108		6	1		23				

Table 8.3 - Original pottery counts from Philia *Drakos* A

SITE	YEAR	SQUARE	LEVEL	PHASE	No. SHERDS	RW	RMP	MBW	Pcb	CB	C	MBW/CW	OPEN	CLOSED	O/C
Philia	1970	202	5	2	76	43	3	18	1		11				
Philia	1970	203	1		407	177	140	10	3	5	45			27	
Philia	1970	203	2		164	36	29	11	3		28			57	
Philia	1970	203	3		103	55	9	4	2		10			23	
Philia	1970	203	4		106	50	18		4		20			14	
Philia	1970	204	1		1300	702	36	31	4	8	477			42	
Philia	1970	204	2		1988	992	46	32	102	12	665			139	
Philia	1970	204	3		158	109	6	18	1		21			3	
Philia	1970	204	4	3	966	464	45	24	109	4	242			78	
Philia	1970	204	5	3	15	14	1								
Philia	1970	204	6	3	887	538	48	34	60	4	172			31	
Philia	1970	204	8	3	91	37		4	11		46			2	
Philia	1970	204	9	3	164	73	8	20	8		40			15	
Philia	1970	205	1		427	342	10	15	3	4	45			5	
Philia	1970	205	2		255	148	39	10	2		41			15	
Philia	1970	205	3	3	83	35	2	24		2	9			11	
Philia	1970	205	4	3	39	18	3	8			5			5	
Philia	1970	205	6	3	34	19	1	8			4			2	
Philia	1970	205	7	2	30	11		12			7				
Philia	1970	206	1		136	82	15	10	3	2	12			12	
Philia	1970	206	2		585	278	147	27	3		62			68	
Philia	1970	206	3	3	76	38	14	4			13			7	
Philia	1970	206	4	3	32	24	3				4			1	
Philia	1970	207	1		217	157	8	8	6		27			11	
Philia	1970	207	2		322	212	36	6	2		40			26	
Philia	1970	207	3	3	278	174	42	9	4	2	32			15	
Philia	1970	207	4	3	23	16	1	1	1		4				
Philia	1970	207	5	3	8	4	1				3				
Philia	1970	207	6	3	92	78	7				5			2	
Philia	1970	207	7	3	179	102	4	2	6		60			5	

Table 8.3 - Original pottery counts from Philia Drakos A

SITE	YEAR	SQUARE	LEVEL	PHASE	No. SHERDS	RW	RMP	MBW	PCb	CB	C	MBW/CW	OPEN	CLOSED	O/C
Philia	1970	207	8		28	17		3			3	5			
Philia	1970	207	9	3	109	54	7	4	9	1	27	7			
Philia	1970	207	10	3	55	32	2	6	4		9	2			
Philia	1970	208	1		439	348	11	29	2		20	29			
Philia	1970	208	2	4	648	476	17	43	2	3	67	40			
Philia	1970	208	3	3	287	164	7	49	3	2	44	18			
Philia	1970	208	4	4	284	159	32	11	3	3	50	26			
Philia	1970	208	4.2	4	19	17					2				
Philia	1970	209	1		380	280	19	16	2		40	23			
Philia	1970	209	2		757	422	72	40	16		131	76			
Philia	1970	209	3	3	107	65	5	1			32	4			
Philia	1970	209	4	3	376	244	12	35	13	10	43	19			
Philia	1970	209	5	3	238	63	59	3			111	2			
Philia	1970	209	6	3	107	67	21	2			17				
Philia	1970	209	7	3	289	145	23	23	9	2	67	20			
Philia	1970	209	8	3	68	33	6	12			8	9			
Philia	1970	210	1		327	206	5	8	4	3	79	22			
Philia	1970	210	2		163	128	2	1	24		6				
Philia	1970	210	3		282	169	24	3	7	8	48	17			
Philia	1970	211	1		116	46	14	9	1		14	11			
Philia	1970	211	2		65	44	2	2			15	2			
Philia	1970	211	3		317	187	42	8	2	1	54	11			
Philia	1970	205/201	5	2	231	98	6	79	9		13	26			
Philia	1970	205/201	7a	2	38	9	1	18	1		9				
Philia	1970	205/201	7b	2	127	69	4	34	6		7	7			
Philia	1968	52/62	1		962	509	168	22	19	1	183	65			
Philia	1968	62/64	2	3	151	85	12	12	2		33	7	52	45	
Philia	1968	62/64	3	2	134	28	3	28			63	12	19	12	
Philia	1968	90A	1		192	94	12	19		5	39	23	17	15	
Philia	1968	90A	2		246	151	9	26	1	2	41	16	79	81	

Table 8.3 - Original pottery counts from Philia Drakos A

SITE	YEAR	SQUARE	LEVEL	PHASE	No. SHERDS	RW	RMP	MBW	Pcb	CB	C	MBW/CW	OPEN	CLOSED	O/C
Philia	1968	90A	3	3	24	15		2			6	1	7	8	
Philia	1968	90A	4	3	152	87		17	2	4	36	6	34	53	
Philia	1968	90A	5	3	88	50		20	4	3	6	5	30	20	
Philia	1969	90A	6		92	49		7	1	2	33		23	26	
Philia	1969	90A	7	3	138	87	5	5		3	24	14	46	46	
Philia	1969	90A	8		36	33		1			2		10	23	
Philia	1969	90A	9	3	6		1	2	1			2			
Philia	1969	90A	10	3	286	158	13	39	2	4	27	43	61	141	
Philia	1969	90B	1		470	251	1	4	5	5	78	126	161	91	
Philia	1969	90B	2		242	146		4	3	1	20	68	81	65	
Philia	1969	90B	3	3	413	238	1	98	2	7	41	26	107	132	
Philia	1969	90B	4	3	12	6					2	4	2	4	
Philia	1969	90B	5	3	176	60		23	2	1	42	48	23	37	

Table 8.3 - Original pottery counts from Philia Drakos A
412

SITE	YEAR	SQUARE	LEVEL	PHASE	TOTAL SHERDS	RW	PATTERN ANALYSIS																																														
							1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22																									
Philia	1970	205/201	7b	2	127	69	1	1								1																																					
Philia	1968	52/62	1		962	509		8						2	2																																						
Philia	1968	62/64	2	3	151	85		1																																													
Philia	1968	62/64	3	2	134	28		3																																													
Philia	1968	90A	1		192	94		10																																													
Philia	1968	90A	2		246	151		3	8																																												
Philia	1968	90A	3	3	24	15			2																																												
Philia	1968	90A	4	3	152	87			1																																												
Philia	1968	90A	5	3	88	50																																															
Philia	1969	90A	6		92	49																																															
Philia	1969	90A	7	3	138	87			3	1																																											
Philia	1969	90A	8		36	33			1																																												
Philia	1969	90A	9	3	6																																																
Philia	1969	90A	10	3	286	158																																															
Philia	1969	90B	1		470	251		3	14																																												
Philia	1969	90B	2		242	146		2	1																																												
Philia	1969	90B	3	3	413	238		1	4																																												
Philia	1969	90B	4	3	12	6																																															
Philia	1969	90B	5	3	176	60																																															

Table 8.4 - Original pattern counts from Philia *Drakos* A
419

SITE	SQUARE	LEVEL	PHASE	No. SHERDS	RW	RMP	MBW	Pcb	CB	C	Other	OPEN	CLOSED	O/C
Troulli	Pit Gamma	level 0-20	Early	1		1						1		
Troulli	Pit Gamma	level 0-20	Early	40		40							40	
Troulli	Pit Gamma	level 0-20	Early	1	1							1		
Troulli	Pit Gamma	level 0-20	Early	1	1							1		
Troulli	Pit Gamma	level 0-20	Early	1	1								1	
Troulli	Pit Gamma	level 0-20	Early	1	1								1	
Troulli	Pit Gamma	level 0-20	Early	1	1								1	
Troulli	Pit Gamma	level 0-20	Early	1	1								1	
Troulli	Pit Gamma	level 0-20	Early	1	1								1	
Troulli	Pit Gamma	level 0-20	Early	1	1								1	
Troulli	Pit Gamma	level 0-20	Early	1	1								1	
Troulli	Pit Gamma	level 0-20	Early	4		4							4	
Troulli	Pit Gamma	level 0-20	Early	1								1		
Troulli	Pit Gamma	level 0-20	Early	1	1									
Troulli	Pit Gamma	level 0-20	Early	2	2							2		
Troulli	Pit Gamma	level 0-20	Early	1	1								1	
Troulli	Pit Gamma	level 0-20	Early	1	1								1	
Troulli	Pit Gamma	level 0-20	Early	1	1							1		
Troulli	Pit Gamma	level 0-20	Early	1	1								1	
Troulli	Pit Gamma	level 0-20	Early	16	16								16	
Troulli	Pit Gamma	level 0-20	Early	1	1								1	
Troulli	Pit Gamma	level 0-20	Early	3	3								3	
Troulli	Pit Gamma	level 0-20	Early	2	2								2	
Troulli	Pit Gamma	level 0-20	Early	2	2								2	
Troulli	Pit Gamma	level 0-20	Early	1	1								1	
Troulli	Pit Gamma	level 0-20	Early	1	1								1	
Troulli	Pit Gamma	level 0-20	Early	1	1								1	
Troulli	Pit Gamma	level 0-20	Early	1	1								1	
Troulli	Pit Gamma	level 0-20	Early	1	1								1	
Troulli	Pit Gamma	level 0-20	Early	1	1								1	
Troulli	Pit Gamma	level 0-20	Early	5	5								5	
Troulli	Pit Gamma	level 0-20	Early	11	11								11	

Table 8.5 - Original pottery counts from Klepini Troulli

SITE	SQUARE	LEVEL	PHASE	No. SHERDS	RW	RMP	MBW	PCb	CB	C	Other	OPEN	CLOSED	O/C
Troulli	Pit Gamma	level O-20	Early	2	2							2		
Troulli	Pit Gamma	level O-20	Early	2	2							2		
Troulli	Pit Gamma	level O-20	Early	2	2							2		
Troulli	Pit Gamma	level O-20	Early	1	1							1		
Troulli	Pit Gamma	level O-20	Early	1	1							1		
Troulli	Pit Gamma	level O-20	Early	2	2							2		
Troulli	Pit Gamma	level O-20	Early	1	1							1		
Troulli	Pit Gamma	level O-20	Early	9	9							9		
Troulli	Pit A	level O-20	Late	1	1							1		
Troulli	Pit A	level O-20	Late	1	1							1		
Troulli	Pit A	level O-20	Late	1	1	1						1		
Troulli	Pit A	level O-20	Late	2	2							2		
Troulli	Pit A	level O-20	Late	10								10		
Troulli	Pit A	level 20-40	Late	2	2							2		
Troulli	Pit A	level 20-40	Late	1	1							1		
Troulli	Pit A	level 20-40	Late	1	1							1		
Troulli	Pit A	level 20-40	Late	1	1							1		
Troulli	Pit A	level 20-40	Late	1	1							1		
Troulli	Pit A	level 20-40	Late	2	2							2		
Troulli	Pit A	level 20-40	Late	1								1		
Troulli	Pit A	level 20-40	Late	3								3		
Troulli	Pit A	level 20-40	Late	1	1							1		
Troulli	Pit A	level 20-40	Late	1	1	1						1		
Troulli	Pit A	level 20-40	Late	2	2							2		
Troulli	Pit A	level 20-40	Late	7								7		
Troulli	Pit A	level 20-40	Late	5								5		
Troulli	Pit A	level 40-60	Late	2	2							2		
Troulli	Pit A	level 40-60	Late	3	3							3		
Troulli	Pit A	level 40-60	Late	2								2		
Troulli	Pit A	level 40-60	Late	1	1	1						1		
Troulli	Pit A	level 40-60	Late	1	1							1		

Table 8.5 - Original pottery counts from Klepini Troulli
421

SITE	SQUARE	LEVEL	PHASE	No. SHERDS	RW	RMP	MBW	PCb	CB	C	Other	OPEN	CLOSED	O/C
Troulli	Pit A	level 100-120	Late	12	12							12		
Troulli	Pit A	level 100-120	Late	1	1								1	
Troulli	Pit A	level 100-120	Late	2	2								2	
Troulli	Pit A	level 120-140	Late	2								2		
Troulli	Pit A	level 120-140	Late	1								1		
Troulli	Pit A	level 120-140	Late	1								1		
Troulli	Pit A	level 120-140	Late	6								6		
Troulli	Pit A	level 120-140	Late	10									10	
Troulli	Pit A	level 120-140	Late	1	1							1		
Troulli	Pit A	level 120-140	Late	1	1							1		
Troulli	Pit A	level 120-140	Late	1	1							1		
Troulli	Pit A	level 120-140	Late	1	1							1		
Troulli	Pit A	level 120-140	Late	1	1							1		
Troulli	Pit A	level 120-140	Late	7	7							7		
Troulli	Pit A	level 120-140	Late	1	1								1	
Troulli	Pit A	level 120-140	Late	1	1								1	
Troulli	Pit A	level 120-140	Late	1	1								1	
Troulli	Pit A	level 120-140	Late	2	2								2	
Troulli	Pit A	level 120-140	Late	1	1								1	
Troulli	Pit A	level 120-140	Late	10	10								10	
Troulli	Pit A	level 140-160	Late	1								1		
Troulli	Pit A	level 140-160	Late	1								1		
Troulli	Pit A	level 140-160	Late	13									13	
Troulli	Pit A	level 140-160	Late	4								4		
Troulli	Pit A	level 140-160	Late	8	8								8	
Troulli	Pit A	level 140-160	Late	5	5								5	
Troulli	Pit A	level 140-160	Late	2	2								2	
Troulli	Pit A	level 140-160	Late	1	1								1	
Troulli	Pit A	level 140-160	Late	2	2								2	
Troulli	Pit A	level 140-160	Late	1	1								1	
Troulli	Pit A	level 140-160	Late	9	9							9		
Troulli	Pit A	level 140-160	Late	1	1							1		

Table 8.5 - Original pottery counts from Klepini Troulli
423

SITE	SQUARE	LEVEL	PHASE	No. SHERDS	RW	RMP	MBW	PCb	CB	C	Other	OPEN	CLOSED	O/C
Troulli	Pit A	level 140-160	Late	3	3							3		
Troulli	Pit A	level 140-160	Late	3	3							3		
Troulli	Pit A	level 160-180	Early	1	1	1						1		
Troulli	Pit A	level 160-180	Early	2	2	2						2	2	
Troulli	Pit A	level 160-180	Early	2	2							2		
Troulli	Pit A	level 160-180	Early	19									19	
Troulli	Pit A	level 160-180	Early	3						3				
Troulli	Pit A	level 160-180	Early	1	1							2		
Troulli	Pit A	level 160-180	Early	1	1	1							1	
Troulli	Pit A	level 160-180	Early	1	1								1	
Troulli	Pit A	level 160-180	Early	1	1							1		
Troulli	Pit A	level 160-180	Early	1	1									
Troulli	Pit A	level 160-180	Early	2	2	2						2		
Troulli	Pit A	level 160-180	Early	12	12								12	
Troulli	Pit A	level 160-180	Early	1	1								1	
Troulli	Pit A	level 160-180	Early	5	5								5	
Troulli	Pit A	level 160-180	Early	1	1								1	
Troulli	Pit A	level 160-180	Early	1	1									
Troulli	Pit A	level 160-180	Early	1	1									
Troulli	Pit A	level 160-180	Early	1	1									
Troulli	Pit A	level 180-200	Early	12						1		12		
Troulli	Pit A	level 180-200	Early	8									8	
Troulli	Pit A	level 180-200	Early	1	1	1						1		
Troulli	Pit A	level 180-200	Early	2	2	2						2		
Troulli	Pit A	level 180-200	Early	1	1							1		
Troulli	Pit A	level 180-200	Early	1	1							1		
Troulli	Pit A	level 180-200	Early	7	7							7		
Troulli	Pit A	level 180-200	Early	1	1							1		
Troulli	Pit A	level 180-200	Early	1	1							1		
Troulli	Pit A	level 180-200	Early	2	2	2						2		
Troulli	Pit A	level 180-200	Early	1	1							1		

Table 8.5 - Original pottery counts from Klepini Troulli
424

SITE	SQUARE	LEVEL	PHASE	No. SHERDS	RW	RMP	MBW	PCb	CB	C	Other	OPEN	CLOSED	O/C
Troulli	Pit A	level 180-200	Early	1	1							1		
Troulli	Pit A	level 180-200	Early	2	2							2		
Troulli	Pit A	level 180-200	Early	1	1							1		
Troulli	Pit A	level 180-200	Early	5	5								5	
Troulli	Pit A	level 180-200	Early	3	3								3	
Troulli	Pit A	level 180-200	Early	1	1								1	
Troulli	Pit A	level 200-220	Early	1								1		
Troulli	Pit A	level 200-220	Early	3								3		
Troulli	Pit A	level 200-220	Early	7									7	
Troulli	Pit A	level 200-220	Early	1	1	1							1	
Troulli	Pit A	level 200-220	Early	1	1							1		
Troulli	Pit A	level 200-220	Early	1	1							1		
Troulli	Pit A	level 200-220	Early	1	1							1		
Troulli	Pit A	level 200-220	Early	1	1							1		
Troulli	Pit A	level 200-220	Early	1	1							1		
Troulli	Pit A	level 200-220	Early	1	1							1		
Troulli	Pit A	level 200-220	Early	1	1							1		
Troulli	Pit A	level 200-220	Early	1	1							1		
Troulli	Pit A	level 200-220	Early	11	11								11	
Troulli	Pit A	level 200-220	Early	4	4								4	
Troulli	Pit A	level 200-220	Early	1	1							1		
Troulli	Pit A	level 200-220	Early	1	1							1		
Troulli	Pit A	level 200-220	Early	1	1							1		
Troulli	Pit A	level 200-220	Early	11	11							11		
Troulli	Pit A	level 200-220	Early	1	1							1		
Troulli	Pit A	level 200-220	Early	3	3							3		
Troulli	Pit A	level 200-220	Early	1	1							1		
Troulli	Pit A	level 200-220	Early	2	2							2		
Troulli	Pit A	level 220-240	Early	2								2		
Troulli	Pit A	level 220-240	Early	14								14		
Troulli	Pit A	level 220-240	Early	9									9	
Troulli	Pit A	level 220-240	Early	1	1	1						1		
Troulli	Pit A	level 220-240	Early	1	1	1						1		

Table 8.5 - Original pottery counts from Klepini Troulli
425

SITE	SQUARE	LEVEL	PHASE	No. SHERDS	RW	RMP	MBW	PCb	CB	C	Other	OPEN	CLOSED	O/C
Troulli	Pit A	level 260-280	Early	1		1						1		
Troulli	Pit A	level 260-280	Early	3		3						3		
Troulli	Pit A	level 260-280	Early	11		11						11		
Troulli	Pit A	level 260-280	Early	19								19		
Troulli	Pit A	level 260-280	Early	14									14	
Troulli	Pit A	level 260-280	Early	1	1							1		
Troulli	Pit A	level 260-280	Early	1	1							1		
Troulli	Pit A	level 260-280	Early	1	1							1		
Troulli	Pit A	level 260-280	Early	6	6							6		
Troulli	Pit A	level 260-280	Early	1	1							1		
Troulli	Pit A	level 260-280	Early	1	1								1	
Troulli	Pit A	level 260-280	Early	1	1								1	
Troulli	Pit A	level 260-280	Early	1	1								1	
Troulli	Pit A	level 260-280	Early	4	4							4		
Troulli	Pit A	level 260-280	Early	3	3							3		
Troulli	Pit A	level 260-280	Early	1	1							1		
Troulli	Pit A	level 260-280	Early	2	2							2		
Troulli	Pit A	level 260-280	Early	2	2							2		
Troulli	Pit A	level 260-280	Early	1	1							1		
Troulli	Pit A	level 260-280	Early	2	2							2		
Troulli	Pit A	level 260-280	Early	1	1							1		
Troulli	Pit A	level 260-280	Early	1	1							1		
Troulli	Pit A	level 260-280	Early	2	2							2		
Troulli	Pit A	level 260-280	Early	2	2							2		
Troulli	Pit A	level 260-280	Early	1	1							1		
Troulli	Pit A	level 260-280	Early	1	1							1		
Troulli	Pit A	level 260-280	Early	9	9							9		
Troulli	Pit A	level 280-300	Early	1								1		
Troulli	Pit A	level 280-300	Early	1		1						1		
Troulli	Pit A	level 280-300	Early	1	1							1		

Table 8.5 - Original pottery counts from Klepini Troulli
428

SITE	SQUARE	LEVEL	PHASE	No. SHERDS	RW	RMP	MBW	PCb	CB	C	Other	OPEN	CLOSED	O/C
Troulli	Pit A	level 280-300	Early	13	13							13		
Troulli	Pit A	level 280-300	Early	15	15								15	
Troulli	Pit A	level 300-320	Early	9	9							9		
Troulli	Pit A	level 300-320	Early	25	25								25	
Troulli	Pit A	level 300-320	Early	13								13		
Troulli	Pit A	level 300-320	Early	7									7	
Troulli	Pit A	level 300-320	Early	2								2		
Troulli	Pit A	level 300-320	Early	10						10				10
Troulli	Pit A	level 300-320	Early	1					1			1		
Troulli	Pit A	level 300-320	Early	1	1							1		
Troulli	Pit A	level 300-320	Early	1	1							1		
Troulli	Pit A	level 300-320	Early	1	1							1		
Troulli	Pit A	level 300-320	Early	1	1							1		
Troulli	Pit A	level 300-320	Early	1	1							1		
Troulli	Pit A	level 300-320	Early	1	1							1		
Troulli	Pit A	level 300-320	Early	1	1							1		
Troulli	Pit A	level 300-320	Early	4	4							4		
Troulli	Pit A	level 300-320	Early	2	2							2		
Troulli	Pit A	level 300-320	Early	9	9							9		
Troulli	Pit A	level 300-320	Early	5	5							5		
Troulli	Pit A	level 300-320	Early	1	1							1		
Troulli	Pit A	level 300-320	Early	1	1							1		
Troulli	Pit A	level 300-320	Early	8	8							8		
Troulli	Pit A	level 300-320	Early	1	1							1		
Troulli	Pit A	level 300-320	Early	1	1							1		
Troulli	Pit A	level 300-320	Early	10	10								10	
Troulli	Pit A	level 300-320	Early	3	3								3	
Troulli	Pit A	level 300-320	Early	1	1							1		
Troulli	Pit A	level 300-320	Early	1	1									1
Troulli	Pit A	level 300-320	Early	1	1							1		
Troulli	Pit A	level 300-320	Early	2	2							1		
Troulli	Pit A	level 300-320	Early	25	25							1		
Troulli	Pit A	level 300-320	Early										25	

Table 8.5 - Original pottery counts from Klepini Troulli

SITE	SQUARE	LEVEL	PHASE	No. SHERDS	RW	RMP	MBW	Pcb	CB	C	Other	OPEN	CLOSED	O/C
Troulli	Pit A	level 320-340	Early	3			3					3		
Troulli	Pit A	level 320-340	Early	2			2					2		
Troulli	Pit A	level 320-340	Early	4			4					4		
Troulli	Pit A	level 320-340	Early	1		1							1	
Troulli	Pit A	level 320-340	Early	10		10						10		
Troulli	Pit A	level 320-340	Early	24		24							24	
Troulli	Pit A	level 320-340	Early	1								1		
Troulli	Pit A	level 320-340	Early	20								10		
Troulli	Pit A	level 320-340	Early	15									15	
Troulli	Pit A	level 320-340	Early	1	1							1		
Troulli	Pit A	level 320-340	Early	1	1							1		
Troulli	Pit A	level 320-340	Early	1	1							1		
Troulli	Pit A	level 320-340	Early	1	1							1		
Troulli	Pit A	level 320-340	Early	1	1							1		
Troulli	Pit A	level 320-340	Early	4	4							4		
Troulli	Pit A	level 320-340	Early	1	1							1		
Troulli	Pit A	level 320-340	Early	2	2							2		
Troulli	Pit A	level 320-340	Early	10	10							10		
Troulli	Pit A	level 320-340	Early	1	1							1		
Troulli	Pit A	level 320-340	Early	1	1							1		
Troulli	Pit A	level 320-340	Early	2	2							2		
Troulli	Pit A	level 320-340	Early	8	8							8		
Troulli	Pit A	level 320-340	Early	7	7								7	
Troulli	Pit A	level 320-340	Early	1	1							1		
Troulli	Pit A	level 320-340	Early	1	1							1		
Troulli	Pit A	level 320-340	Early	1	1							1		
Troulli	Pit A	level 320-340	Early	1	1							1		
Troulli	Pit A	level 320-340	Early	7	7								7	
Troulli	Pit A	level 340-360	Early	3	3							3		
Troulli	Pit A	level 340-360	Early	2	2							2		
Troulli	Pit A	level 340-360	Early	2	2									2

Table 8.5 - Original pottery counts from Klepini Troulli

SITE	SQUARE	LEVEL	PHASE	No. SHERDS	RW	RMP	MBW	PCb	CB	C	Other	OPEN	CLOSED	O/C
Troulli	iii-6/1			3	3							3		
Troulli	iii-6/1			3	3								3	
Troulli	iii-6/1			27	27								27	
Troulli	iii-6/1			1	1								1	
Troulli	iii-6/1			5	5								5	
Troulli	iii-6/1			5	5								5	
Troulli	iii-6/1			1	1								1	
Troulli	iii-6/1			1	1								1	
Troulli	iii-6/1			1	1								1	
Troulli	iii-6/1			4	4							4		
Troulli	iii-6/1			1	1							1		
Troulli	iii-6/1			2	2							2		
Troulli	iii-6/1			2	2							2		
Troulli	iii-6/1			9	9							9		
Troulli	iii-6/1			3	3							3		
Troulli	iii-6/1			3	3							3		
Troulli	iii-6/1			3	3							3		
Troulli	iii-6/1			2	2							2		
Troulli	iii-6/1			2	2							2		
Troulli	iii-6/1			1	1							1		
Troulli	iii-6/1			1	1							1		
Troulli	iii-6/1			3	3							3		
Troulli	iii-6/1			3	3							3		
Troulli	iii-6/1			2	2							2		
Troulli	iii-6/1			1	1							1		
Troulli	iii-6/1			1	1							1		
Troulli	iii-6/1			1	1							1		
Troulli	iii-6/1			2	2							2		
Troulli	iii-6/1			1	1							1		
Troulli	iii-6/1			3	3							3		
Troulli	iii-6/1			2	2							2		

Table 8.5 - Original pottery counts from Klepini Troulli

SITE	SQUARE	LEVEL	PHASE	No. SHERDS	RW	RMP	MBW	PCb	CB	C	Other	OPEN	CLOSED	O/C
Troulli	iii-5/1			1	1							1		
Troulli	iii-5/1			3	3							3		
Troulli	Hut F	level O-40		1	1							1		
Troulli	Hut F	level O-40		6	6							6		
Troulli	Hut F	level O-40		2	2							2		
Troulli	Hut F	level O-40		2	2							2		
Troulli	Hut F	level O-40		20	20							20		
Troulli	Hut F	level O-40		2	2								2	
Troulli	Hut F	level O-40		1	1								1	
Troulli	Hut F	level O-40		1	1							1		
Troulli	Hut F	level O-40		1	1							1		
Troulli	Hut F	level O-40		2	2							2		
Troulli	Hut F	level O-40		3	3							3		
Troulli	Hut F	level O-40		2	2								2	
Troulli	Hut F	level O-40		1	1								1	
Troulli	Hut F	level O-40		1	1								1	
Troulli	Hut F	level O-40		1	1								1	
Troulli	Hut F	level O-40		2	2							2		
Troulli	Hut F	level O-40		1	1							1		
Troulli	Hut F	level O-40		2	2							2		
Troulli	Hut F	level O-40		1	1							1		
Troulli	Hut F	level O-40		1	1							1		
Troulli	Hut F	level O-40		2	2							2		
Troulli	Hut F	level O-40		1	1							1		
Troulli	Hut F	level O-40		1	1							1		
Troulli	Hut F	level O-40		3	3							3		
Troulli	Hut F	level O-40		5	5							5		
Troulli	Hut F	level O-40		17	17							17		
Troulli	Hut F	level O-40		3	3							23		
Troulli	Hut F	level O-40		5	5								5	
Troulli	Hut F	level O-40		17	17								17	

Table 8.5 - Original pottery counts from Klepini Troulli

SITE	SQUARE	LEVEL	PHASE	No. SHERDS	RW	RMP	MBW	Pcb	CB	C	Other	OPEN	CLOSED	O/C
Troulli	Hut F	level O-40		15	15								15	
Troulli	Hut F	level O-40		4	4								4	
Troulli	Hut F	level O-40		4	4								4	
Troulli	Hut F	level O-40		4	4								4	
Troulli	Hut F	level O-40		1	1								1	
Troulli	Hut F	level O-40		3	3								3	
Troulli	Hut F	level O-40		5	5								5	
Troulli	Hut F	level O-40		5	5								5	
Troulli	Hut F	level O-40		1	1								1	
Troulli	Hut F	level O-40		8	8								8	
Troulli	Hut F	level O-40		40	40								40	
Troulli	Hut F	level O-40		1	1							1		
Troulli	Hut F	level O-40		2	2							2		
Troulli	Hut F	level O-40		3	3							3		
Troulli	Hut F	level O-40		1	1							1		
Troulli	Hut F	level O-40		3	3							3		
Troulli	Hut F	level O-40		1	1							1		
Troulli	Hut F	level O-40		1	1							1		
Troulli	Hut F	level O-40		2	2							2		
Troulli	Hut F	level O-40		4	4							4		
Troulli	Hut F	level O-40		1	1							1		
Troulli	Hut F	level O-40		1	1							1		
Troulli	Hut F	level O-40		1	1							1		
Troulli	Hut F	level O-40		1	1							1		
Troulli	Hut F	level O-40		1	1							1		
Troulli	Hut F	level O-40		1	1							1		
Troulli	Hut F	level O-40		1	1							1		
Troulli	Hut F	level O-40		1	1							1		
Troulli	Hut F	level O-40		1	1							1		
Troulli	Hut F	level O-40		1	1							1		
Troulli	Hut F	level O-40		1	1							1		
Troulli	Hut F	level O-40		1	1							1		
Troulli	Hut F	level O-40		1	1							1		
Troulli	Hut F	level O-40		1	1							1		

Table 8.5 - Original pottery counts from Klepini Troulli

SITE	SQUARE	LEVEL	PHASE	No. SHERDS	RW	RMP	MBW	PCb	CB	C	Other	OPEN	CLOSED	O/C
Troulli	Hut F	level O-40		1	1							1		
Troulli	Hut F	level O-40		1	1							1		
Troulli	Hut F	level O-40		6	6							6		
Troulli	Hut F	level O-40		3	3							3		
Troulli	Hut F	level O-40		1	1							1		

Table 8.5 - Original pottery counts from Klepini Troulli
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Concordance Table of Motifs for Vrysi, Philia and Troulli				
Motif description	Motif Number			Motif
	Vrysi	Philia	Troulli	
Chevrons	1	1	55, 80	
Ripple	2	2	18, 19, 20, 21, 22, 30, 31, 32, 56, 66, 78	
Crescents	3	3	102	
Depending strokes	4	no match	no match	
Wavy lines	5	5	no match	
Wavy bands	6	6	16, 17, 113	
Latticed areas	7	7	33, 34, 35, 36, 45, 47 48, 53, 64	
Dot borders	8	no match	56, 57, 59	
Reserved circles	9	9	39, 42, 126	
Mottle	10	10	76, 77, 78	
Parallels in circles	11	11	91, 92	
Horizontal wavy bands	12	no match	90	

Table 8.7 - Concordance table of motifs for Vrysi, Philia and Troulli, based upon the motif categories established by the VPC

Concordance Table of Motifs for Vrysi, Philia and Troulli				
Motif description	Motif Number			Motif
	Vrysi	Philia	Troulli	
Festoons	13	no match	89	
Hatching lines/bands	14	14	2, 3, 4, 5, 6, 7, 8, 9	
Targets	15	15	41	
Vs and ladder	16	16	49, 23, 24, 25, 26, 27	
Parallel verticals	17	no match	no match	
Reserved ring	18	no match	43	
Bar and Target	19	no match	no match	
Parallel vertical dividers	20	no match	no match	
Reserved ovals	21	no match	no match	
Spots and Ovals	22	22	58, 86	

Table 8.7 - Concordance table of motifs for Vrysi, Philia and Troulli, based upon the motif categories established by the VPC

CHAPTER 9

STYLE AND SOCIETY IN SCU CYPRUS: SOME CONCLUSIONS

This thesis aimed to show that formal variation in the SCU ceramics is attributable to stylistic behaviour, and that style is the physical manifestation of the socio-economic and cultural relationships that governed everyday existence. Ultimately, this is what it achieved. It is apparent that SCU Cyprus participated in stylistic interaction, that pottery was at least one medium upon which stylistic messaging was attached, that many forms of stylistic messaging existed, and that the types of style present in any formal context are dependant upon the socio-economic, evolutionary, environmental and demographic parameters within which the early SCU societies interacted.

Many aspects of the Early Prehistoric Cyprus remain an enigma, particularly the island's insularity, and its distinctive and enigmatic formative growth. This thesis has not attempted to recapitulate on areas of research already thoroughly discussed by others (Held 1992b, 1992c, 1993; Le Brun 1996, Peltenburg 1985e, 1991b, 1993), but rather has concentrated on clarifying one specific aspect of material culture variation visible in one phase of Cyprus' formative growth. Consequently we still do not know why there are long occupation hiatuses between the Akrotiri Phase and the KCU, or between the KCU and the SCU, and we do not know whether the island continued to be occupied during these hiatuses. We also do not know why settlements are abandoned and new settlements are established not more than 2-3km from the original settlement, often during the same archaeological phase. We do not know why there are no material culture precursors in the archaeological record which would establish a mainland origin for the KCU and the SCU populations, and we only have an inkling of the reasons for the demise of the substantial and well developed KCU occupation, or for the settlement dislocation that happens at the end of the SCU.

There are many enigmas surrounding the Early Prehistoric Phase in Cyprus that will remain unsolved until further evidence is uncovered, but in the interim we can use the evidence currently available to interpret and address aspects of early human behaviour. Cyprus is very well placed to answer many of the outstanding questions regarding Early Prehistoric economic systems and interactive processes. The very fact that it was closed to external influences for most of its formative phase, enables archaeologists to assess and interpret material culture patterning, without the complications of cultural diffusion, acculturation and regional change brought about by shifting populations, economic stress, over-population, land exploitation and

the burgeoning social complexity so characteristic of the Mesolithic/Neolithic transition in Europe, and the Neolithic/Chalcolithic in the Levant. The idea of *islands as laboratories of culture change* (Held 1992c) is very pertinent to Cyprus, where throughout most of the prehistoric period, it was characterised by a combination of cultural retardation and material culture anachronisms, which set it apart from surrounding mainland cultures.

SCU Cyprus exhibits very specific stylistic patterning which, it is argued, represents formally structured social and economic behaviour. Agro-pastoralist societies are not usually associated with explicit social structures, however, and this thesis has argued that the characteristic early agricultural techniques of dry farming and mixed herding required seasonally rigid scheduling whereby most subsistence activities would have been restricted to certain times of the year. The strict economic parameters within which daily life was conducted would, in turn have promoted group maintenance in favour of the individual.

Egalitarian agro-pastoralist societies which practice dry farming techniques in semi-arid conditions are susceptible to risk factors such as seasonal rainfall fluctuations and herd and crop failure, which, in turn, contribute to long periods of draught and famine (Levy 1983, 1992; Sherratt 1980). In such conditions, population density remains relatively low, while being environmentally constrained. The population of SCU Cyprus never exceeded the island's carrying capacity in the Early Prehistoric period and, as such, village populations must have engaged in exogamic virilocal residence patterns as a means of population maintenance.

Sites form clusters around optimum areas of agricultural land and water supplies. This pattern of clustering is well attested throughout the Early Prehistoric period in Cyprus, but is equally well known as a characteristic of early farming communities in general (Sherratt 1980). As villages grow outside the limits of their maximum carrying capacities smaller populations break off from the parent community and establish themselves close to the parent population, within the bounds of the original agricultural catchment area. In this way an expanding and fissioning population will exploit increasingly smaller areas of the best arable land. This thesis has argued that this pattern of site fissioning, and environmental exploitation, would have created conflicting socio-economic factors which would have guided social interaction within village clusters. The combination of close kin ties established through village fissioning, and social exogamy, coupled with increasing resource competition, would have determined the role of style in local and regional interactive processes. Through social exogamy and regular hunting and foraging forays, the various SCU populations would have come into regular

contact with one another and these factors would also have contributed to long distance regional interactive processes.

Style is a function of human behavioural processes, and as such is a tangible gauge of varying levels of human interaction. Interaction can take the form of information exchange, commodity exchange (including personnel), competition, boundary maintenance, population survival, and evolutionary processes, and all are identifiable as stylistic patterning in SCU Cyprus. On a local and regional level, information exchange is necessary for the reduction of risk. It is often manifested as symbolic style in the archaeological record and it manifests itself in SCU Cyprus as subtle variations in the decorative schemes between all sites.

Competition and boundary maintenance are frequently interwoven. Where there is competition for resources, there is often boundary maintenance. In SCU Cyprus, the greatest competition for resources was within site clusters. However, inter-connected social and familial relations, and decreasing resource availability within agricultural catchment areas, contributed to elaborate stylistic patterning which evolved over time. In the case of Vrysi and Troulli, stylistic variation diverged with time. The Vrysi motif repertoire becomes more homogeneous with the domination of ripple design, thus displaying an inclination toward greater internal boundedness. At the southern sites, this pattern of site differentiation is less apparent. However, this is partly due to the reliability of the existing data and a general dearth of well phased assemblages. It is argued that with the stylistic analysis of the Kandou and Nissia ceramic assemblages, our knowledge of inter-cluster economic and social behaviour will be greatly increased. We look forward therefore to the final pottery reports from these sites.

Population maintenance is tied to information exchange. Both would have been crucial to the survival of the entire SCU population. There is no doubt that Cb Ware sites and RW Ware sites were in contact with each other and were part of the same general cultural sphere. Population levels would have been maintained through the inter-change of information and personnel. However, there are clear differences between the northern RW tradition and the southern Cb tradition, which are manifested as emblematic style in the ceramic assemblages. It is argued that these differences were predominantly a factor of the wider clan based social structure, rather than for the purpose of boundary maintenance. Closely proximate villages would have had stronger kin ties than very distant sites and differentiation in ceramic style would help to identify and differentiate sites with weaker familial relationships. That all sites shared the same ceramic tradition, and even the same design features, only in varying proportions, indicates that the SCU populations recognised themselves as similar, albeit distant groups. Moreover, it is suspected that the North/South divide is not as distinct as

traditionally thought. The ratio of RW to other wares at Philia for instance, places it as a borderline RW Ware site, even though traditionally it has always been referred to as falling well within the RW Ware tradition. Peltenburg (Peltenburg 1978), long ago suspected that the differences between the RW technique and the Cb technique were a product of modern typological constraints, and this thesis has rigorously tried to avoid these constraints. It is hoped that with the publication of the Nissia ceramics, which appears to be a mixed assemblage, not unlike Philia (Flourentzos 1997), the need for typing SCU ceramics as either Cb Ware assemblages or RW Ware assemblages will be shown to be inherently biased. The petrographic analysis of pottery samples from across the island will help to identify the degree of interaction between distant sites. The samples have been taken, and this work is planned as a further study in the future.

Evolutionary processes also influenced stylistic variation. The fissioning of sites into smaller nuclear communities, or site clusters, contributed to an very specific pattern of evolutionary development. For example, it is argued that during the process of budding-off from the parent community, the new population takes with it only a fraction of the original design repertoire, and this manifests itself as extreme conservatism in the new site's ceramic record. This conservatism is apparent at Troulli. Known as the *Founder Principle*, in bio-geography (Case and Cody 1982) this model has been applied to human population movement in Cyprus by Cherry (Cherry 1985) and others. I have used it here to explain the extreme retardation of the design motif repertoire at Troulli, compared with that of Vrysi. With time other processes come into play and influence design variation in other ways, but it is perhaps interesting to note here that similar patterns of cultural retardation are observable in the ECU (Clarke 1992 1993), particularly at more remote ecotone sites such as *Ayios Savvas tis Koronis Monastery A*. It is intended that the present writer will undertake more research on this phenomenon both in Cyprus and on the surrounding mainland, in future studies.

Underlying all of this apparent stylistic patterning is passive, unintentional style brought about by the *way in which people do things*. Isochrestic style, as it is called, is imbued in all material culture items and can be an aspect of function, or of decoration. Variation in hand-made pottery, attributable to an individual potter's hand or the specific choice of temper, fabric, and paint, are all aspects of isochrestic style. Both morphology and decoration are imbued with isochrestic style in SCU ceramics. However, it is more difficult to quantify isochrestic style than other forms of style in hand-made pottery, due to the vast array of unintentional variation that exists. Identifying individual potters is one step toward identifying different types of isochrestic style in the archaeological record. Further analysis on internal settlement arrangements will help to identify individual potters, or groups of potters. In SCU

Cyprus where pottery is almost certainly made by the household for household use, this information would be useful in identifying the process of pottery manufacture, and possible exchange systems. As no identifiable kilns or fire pits, specific to pottery manufacture have been found, information on intra-site deposition and stylistic patterning will contribute substantially to the limited information currently available.

At our current level of knowledge, there is little more that can be said about the SCU period in Cyprus. The most interesting aspect of this whole study is the relationship of stylistic diversity to subsistence strategies and social interactive processes. However, because of the nature of island societies, and the very unusual pattern of formative growth in Cyprus, mentioned at the beginning of this chapter, interpretation is both all encompassing and extremely limited. In order to understand entirely the interactive processes in Cyprus, other comparative cultures must be studied. In future studies I hope to undertake comparative work on the subsistence strategies and social interactive patterns of similarly positioned mainland coastal and hill country sites in both coeval and contiguous periods.

APPENDIX 1

Fabrics

The following catalogue describes the individual fabrics found at each site. The catalogue is in alphabetical order, by site. All fabric descriptions are standardised. Each site has one or more of fabric types and each fabric type has been given a corresponding letter to differentiate it from another fabric type at the same site. Therefore Philia has fabric types A-E, while Sotira has fabric types A and B, however, Fabric A at Philia is not the same as Fabric A at Sotira. Surface and paste colour have been standardised using the Munsell soil colour chart and readings are given in brackets after the colour description. The density of inclusions has been standardised using a special hand lens equipped with a one centimetre grid divided into 1mm squares. The grid is placed flush to the surface of the sherd and the density and size of inclusions counted. Concentration of inclusions is described as high, medium and low, with a high concentration accounting for over 75% of the fabric section and a low density averaging 15% or less of the fabric section. A medium density falls between 15% and 75%. Measurement is approximate.

Not all sites included in the text are included here in the appendix. Inclusion in the appendix depends upon the size of the sherd sample. The smaller survey samples are not representative enough to determine the predominant fabric types at any particular site. All excavated sites are included, and some of the larger survey sites.

Dhali

Only two fabric types are found at Dhali, a Monochrome Burnished Ware fabric and Type A Coarse Ware fabric.

Fabric A

(Monochrome Burnished Ware)

Sherds are characterised by a soapy, highly burnished surface, with a dark pinkish brown paste. Fingerprints can be seen on the surface. The paste is usually very hard with very few tiny grit inclusions, and no chaff temper.

Manufacture: handmade.

Fracture: smooth with a sharp break.

Finish: open surfaces are streak burnished, or highly burnished in some instances.
Surfaces are uneven and finger impressions can be observed. Very rarely a

self slip is applied to the surface. Inner surfaces of closed vessels are roughly smoothed or scraped.

Fabric colour: incompletely oxidised sherds are dark-brown to black. Oxidised sherds may be dark-pink to red or red/brown (5YR3/3-3/4).

Surface colour: may be dark-pink/red to pink/brown to dark-brown and even light beige (5YR3/3-3/4, 10YR3/4, 10YR5/4).

Inclusions: low concentrations of light coloured grits (0.1-0.6mm diam). No organic temper.

Fabric B

(Coarse Ware)

Dhali Coarse Ware fabric is paler than the ubiquitous Type A Coarse Ware fabric. It's inclusion with standard Type A is based upon shape, surface finish and the propensity for matt impressed bases and U-shaped openings on flanged based trays.

Manufacture: handmade.

Fracture: jagged.

Finish: wet smoothed, often with matt impressed bases. Evenly but incompletely fired. Voids left by burnt organic inclusions often present on the surface of the vessel.

Fabric colour: light brown or beige, but core is often black or dark grey (10YR4/3, 10YR5/3).

Surface colour: as fabric colour.

Inclusions: medium concentrations of chopped straw and seeds.

Kalavastos Kokkinoyia (Site A), and Pamboules (Site B)

The excavations of Kalavastos Site A and Site B have been included with the survey of Kokkinoyia and Pamboules (actually Site A and B respectively). The primary SCU fabric at Pamboules and Kokkinoyia (Fabric C) appears to be identical to Fabric C at Tenta. It is a relatively dense, hard, slightly gritty fabric with a jagged break that fires a deep red/brown or yellow/red with a grey core. It can be either self-slipped or have a thin red wash under paint which varies in colour from light red to red. The paint is applied thickly in dark red through to red brown. The fabric is more gritty and hard fired than many SCU fabrics. Kokkinoyia and Pamboules also produced very small quantities of Fabric A, also found at Tenta (also designated Fabric A at Kokkinoyia and Pamboules).

Fabric A

(Decorated Fine Wares)

Manufacture: handmade, flat coil built.

Fracture: jagged.

Finish: never slipped. Paint is applied directly to the wet smoothed, unburnished, or only very lightly burnished surface.

Fabric colour: white or buff (10YR 8/2-8/3, 7/3, 2.5Y 8/2, 7/2, 7/4).

Surface colour: usually the same as the paste. Paint is applied to the white or buff surface and may be orange/red, brown, dark brown, dark red brown (5YR 4/3-2.5YR 3/6).

Inclusions: high concentrations of igneous and chert grits (Baird, n.d.a.). Usually no organic temper.

Fabric B

(Glossy Burnished Ware)

A second fabric type, which occurs at Kokkinoyia alone, and only in the Cyprus Museum collection from Dikaios' excavations, is Glossy Burnished Ware fabric, recognised by Diane Bolger at the Early Chalcolithic site of Kissonerga *Mylothkia* (personal communication and observation). It is essentially a Red Monochrome Painted Ware fabric but its distinct, highly burnished orange surface finish has enabled it to be categorised as a separate ware type. It accounts for approximately 5% of the Kalavassos Site A sherds. The fabric fires a light orange/red and always has a grey core giving it a distinct "sandwiched" affect. The paste is fine with a medium density of grog temper, not usually seen in other SCU fabrics. Glossy Burnished Ware has been relatively dated by seriation to the Early Chalcolithic period and its presence at Kokkinoyia confirms the site's suspected longevity within the sequence.

Manufacture: handmade.

Fracture: smooth.

Finish: open surfaces are always painted and burnished to a high sheen. Closed inner surfaces are scraped or roughly finger smoothed.

Fabric colour: when completely oxidised it fires a light orange/red (5YR7/6-7/8), with a characteristic dark-grey core.

Surface colour: bright to light orange/red (2.5YR5/8, 4/8).

Inclusions: medium concentrations of grog temper (1mm-4mm diam).

Fabric C

(Decorated Fine Wares)

Manufacture: handmade.

- Fracture: smooth to jagged.
- Finish: outer surfaces of vessels have a thin wash or self slip onto which paint is applied then burnished to a high gloss.
- Fabric colour: reddish yellow to strong brown at surface and all shades of light to medium brown at core (7.5YR7/6-5/6).
- Surface colour: paint is usually a reddish brown to dark red (5YR4/3-2.5YR3/6).
- Inclusions: medium density of very small grey igneous grits (0.5mm-1mm diam). Low concentrations of chopped straw or chaff.

Fabric D

(Coarse Ware)

Only one type of Coarse Ware fabric is found at Kokkinoyia and Pamboules and it is typical of Coarse Ware type A fabrics across the island. It has low fired, coarse, crumbly paste red brown to dark brown in colour with a medium to high density of white inclusions (up to 2.5mm in diameter). There is almost no chaff temper.

- Manufacture: handmade.
- Fracture: soft, friable, very crumbly break.
- Finish: very roughly smoothed. Never burnished or slipped.
- Fabric colour: red/brown to dark/brown, never completely oxidised (7.5YR.3/2 - 2.5YR4/4-3/4 - 10R.3/6).
- Surface colour: always the same as fabric colour.
- Inclusions: medium to high concentrations of medium and large white (probably calcareous limestone) grits (1mm-2.5mm diam).

Kalavastos Tenta

Baird and Kromholz recognised three fabric types in the Decorated Fine Wares (Baird n.d.a., n.d.b.; Kromholz 1982, 18-20). My examination of the fabrics accord with Baird and Kromholz.

Fabric A

Fabric A accounts for approximately 90% of the Tenta pottery. It is a highly homogeneous, completely oxidised, pale buff firing fabric with high concentrations of rounded igneous grits and fragments of chert. Some organic temper. Fabric A is never slipped, and in Red on White Ware the paint is applied directly to the light surface.

- Manufacture: handmade, flat coil built.
- Fracture: jagged.

- Finish: never slipped. Paint is applied directly to the wet smoothed surface and not usually burnished or very lightly burnished.
- Fabric colour: white or buff (10YR 8/2-8/3, 7/3, 2.5Y 8/2, 7/2, 7/4).
- Surface colour: usually the same as the paste. Paint is applied to the white or buff surface and may be orange/red, brown, dark brown, dark red brown.
- Inclusions: high concentrations of igneous and chert grits (Baird, n.d.a.). Usually no organic temper.

Fabric B

There is more variation in Fabric B. It is frequently incompletely oxidised but fires a distinctive orange to orange brown, often with colour layering through the section. It contains a low density of limestone and/or light blue grey, igneous grits and some chaff temper. It is fine textured and relatively soft with a crumbly fracture.

- Manufacture: handmade, flat coil built.
- Fracture: smooth and crumbly.
- Finish: the surface is occasionally slipped, or more often has a thin orange or brown wash applied beneath the paint.
- Fabric colour: when oxidised it is a light orange to light orange/brown.
- Surface colour: orange (2.5YR 5/6, 5YR 5/5-6, 6/6) through to brown (5YR 5/3, 7.5YR 5/4, 7/6).
- Inclusions: medium concentrations of mostly limestone grits, or occasionally angular light blue/grey grits (0.5-1mm diam) never both together.

Fabric C

Fabric C equates with the primary fabric at Kokkinoyia and Pamboules (also Fabric C). It has a homogeneous, completely oxidised paste which fires a dark red or reddish yellow. It is a hard fabric with a high density of grit temper and no chaff.

- Manufacture: handmade.
- Fracture: sharp and craggy due to high concentration of grit temper.
- Finish: usually never slipped, although sometimes found with a thin orange wash beneath a dark rose/brown paint. Often highly burnished.
- Fabric colour: dark orange to dark rose-pink (5YR 5/6, 6/8, 2.5YR 4/4, 4/6), or lighter orange when not completely oxidised.
- Surface colour: thin slips and washes are light orange to orange red. Paint ranges from dark rose-pink to dark red brown (5YR 6/8).
- Inclusions: igneous and chert grits in high concentrations. No organic temper.

Cb Ware Fabric

Found only in Cb Ware.

Manufacture: handmade.

Fracture: soft, friable, with crumbly break.

Finish: paint always applied directly onto the surface. Frequently burnished to a high gloss on open vessels. Inner surfaces of closed vessels are finger smoothed or scraped.

Fabric colour: dark brown when oxidised but frequently poorly fired with grey to dark grey cores (10YR5/4-5/6).

Surface colour: usually dark brown or dark red/brown (7.5YR4/4). More rarely orange or orange/red.

Inclusions: limestone grits (1mm diam) in medium to high concentrations. More rarely, small igneous grits.

Coarse Ware Type A Fabric

Type A Coarse Ware fabric at Tenta corresponds to the standard SCU coarse wares fabrics found at all sites, frequently with matt impressed bases and U-shaped openings.

Manufacture: handmade.

Fracture: soft, friable, very crumbly break.

Finish: very roughly smoothed. Never burnished or slipped.

Fabric colour: dark grey to black, never completely oxidised (7.5YR3/4, 10YR3/3).

Surface colour: always the same as fabric colour.

Inclusions: organic temper (chaff and straw) in high concentrations. Medium to high concentrations of igneous and chert inclusions (1-4mm diam).

Coarse Ware Type B Fabric

Type B Coarse Ware is found only at Philia and the Kalavassos sites of Tenta and Ayios. It has been compared to MBW as a ware type, but it never occurs in the same shapes, indicating a different function. It fires a distinctive purple/red/brown and is often incompletely oxidised. However, it has a hard fabric with a high density of large igneous and limestone inclusions, which differentiates it from Type A Coarse Ware fabric. A similar ware class (although not fabric) has since been recognised in SCU/ECU contexts at Kissonerga *Mosphilia* and Kissonerga *Mylothkia*, clearly dating it to late in the temporal sequence.

Manufacture: handmade.

Fracture: sharp, jagged.

Finish: surfaces roughly smoothed. Also sometimes burnished, or painted and burnished.

Fabric colour: dark brown, dark red/brown (7.5YR3/4, 5YR3/4).

Surface colour: usually the same as fabric colour but sometimes with the addition of a dark red/brown paint (5YR3/4).

Inclusions: high concentrations of large (1-1.5mm diam) igneous and limestone inclusions and large crushed chert fragments. Also high concentrations of chopped straw and chaff.

Khirokitia

Khirokitia has three primary fabric types; a Decorated Fine Ware fabric (Fabric A), a coarse gritty fabric used primarily for RMP (Fabric B), and a standard SCU coarse ware (Fabric C). Because Fabric B is so distinctive, it has been given a separate "ware" designation number (19) in the data base.

Fabric A

(Decorated Fine Ware)

Evenly fired pale orange cream to pinky orange gritty paste, usually fired throughout, although some grey cores noted on closed vessels. Paint applied directly to the surface of the vessel which is then burnished to a high sheen.

Manufacture: handmade.

Fracture: smooth to slightly jagged.

Finish: outer surfaces slipped and painted, inner surface of closed vessels scraped or roughly smoothed.

Fabric colour: pale orange cream to pinky orange (5YR7/6, 5YR6/8, 5YR8/4).

Surface colour: slip is the same as fabric colour. Paint colour ranges from dark red to red/brown (7.5R3/8, 10R4/6-4/8).

Inclusions: medium concentration of small (0.1mm-0.4mm) black and grey grits. Organic temper rare.

Fabric B

(RMP)

Distinctive dark-red/brown gritty fabric found primarily in RMP sherds. A thin hard paint is applied directly to the surface. Characteristic surface crazing occurs commonly on these sherds.

Manufacture: handmade.

Fracture: jagged and gritty.

Finish: outer surfaces painted and burnished to a high gloss, inner surfaces scraped.

Fabric colour: dark-red/brown (5YR3/2-3/3, 2.5YR3/4)

Surface colour: always the same as fabric colour

Inclusions: very high concentration of large and small grits (0.4mm-2.5mm diam). No chaff temper.

Fabric C

(Coarse Ware)

Similar to CW Type A fabrics from other SCU sites.

Manufacture: handmade.

Fracture: soft, friable, very crumbly break.

Finish: very roughly smoothed. Never burnished or slipped.

Fabric colour: dark-grey to black, never completely oxidised (7.5YR3/4, 10YR3/3).

Surface colour: always the same as fabric colour.

Inclusions: Organic temper (chaff and straw) in high concentrations. Medium to high concentrations of igneous and chert inclusions (1-4mm diam).

Mari Paliambela

Mari has two fabric types in the Decorated Fine Wares, and one standard Type A Coarse Ware fabric. Fabric B is very fine pale white to beige fabric similar to Tenta and Kokkinoyia/Pamboules Fabric A.

Fabric A

(Decorated Fine Ware)

Manufacture: handmade.

Fracture: smooth but gritty.

Finish: open surfaces are always painted, closed surfaces are scraped or wiped.

Fabric colour: pale brown, evenly fired throughout (10YR7/4, 10YR6/4).

Surface colour: slips are rarely applied. Paint ranges from dark red to red brown (10R4/6, 2.5YR3/4-3/6).

Inclusions: high concentrations of small dark and light grey grits (0.5mm-2mm diam). No organic temper.

Fabric B

(Decorated Fine Ware)

Manufacture: handmade.

Fracture: smooth.

Finish: open surfaces are always painted, but not slipped or burnished. Inner surfaces of closed vessels are usually wiped.

Fabric colour: pale cream to white, always completely oxidised (7.5YR8/2, 10YR8/2).
Surface colour: the undecorated surface is identical to the fabric colour. Paint ranges from orange/red to red to red/brown (2.5YR5/6, 10R4/6-4/8).
Inclusions: low concentrations of fine grey or white grits (0.1-0.5mm diam), also some very fine chaff temper in very low concentrations.

Fabric C

(Coarse Ware)

Manufacture: handmade
Fracture: gritty, friable.
Finish: wet smoothed.
Fabric colour: light-brown to red/brown (7.5YR5/4, 5YR3/4).
Surface colour: same as fabric colour.
Inclusions: high concentrations of small grey, brown and white pebbles (0.5-2mm diam).

Orga

Fabric A

(Decorated Fine Ware)

Found in RW and possibly RMP. It has a coarse gritty texture with a crumbly break. Usually evenly fired and almost completely oxidised.

Manufacture: handmade.
Fracture: jagged.
Finish: open surface slipped and painted. Inner surfaces of closed vessels are hand smoothed or wiped, or roughly finger smoothed.
Fabric colour: very light creamy pink to orange to dark orange pink (5YR6/6, 7.5YR6/6, 5YR5/6).
Surface colour: slip ranges from light cream to beige (7.5YR8/4, 7.5YR7/4) beige/orange (7.5YR6/6), to pink/orange (5YR6/6). Paint ranges from orange, brown to mid-red/brown.
Inclusions: medium to high concentrations of grey pebbly grits (0.2-1mm diam). Also some small red and white grits in low concentrations. Organic temper is rare.

Fabric B

(Decorated Fine Ware)

A coarse gritty fabric with crumbly break found in the Decorated Fine Wares. Almost always evenly fired throughout to a light pink.

Manufacture: handmade.

- Fracture: jagged.
- Finish: painted sherds are slipped and burnished, inner surfaces of closed sherds are wiped.
- Fabric colour: light orange/pink to yellow beige (7.5YR7/6-7/8).
- Surface colour: slips range from creamy beige to pale orange pink (7.5YR8/4, 7/6). Paint ranges from mid - to light-brown (10YR5/4, 7.5YR4/4), through dark brown/red.
- Inclusions: the predominant filler is a conglomerate of grey grits similar to a tufa or pumice. It leaves characteristic pock-marks on the surface of the vessel. No chaff temper.

Fabric C

(Coarse Ware)

- Manufacture: handmade.
- Fracture: friable with a very jagged fracture.
- Finish: wet smoothed on inner and outer surfaces.
- Fabric colour: dark red/orange, up to 60% grey core.
- Surface colour: always the same as the paste.
- Inclusions: medium to high concentrations of very large red, white and grey pebbles (0.5-2.5mm diam). Also some smaller grey grits (0.5mm diam). Low concentrations of chopped straw.

Philia Drakos A

Fabric A

(Decorated Fine Ware)

Fabric A is the most common Philia fabric accounting for approximately 90% of the Decorated Fine Ware sherds in the Museum sample. It is found with RW, PCb, Cb and RMP decoration. It is usually incompletely fired with grey cores. Slips and paint are usually applied to the surface of RW, PCb and Cb. Red Monochrome Painted has no slip beneath the red paint. Slips and paints vary in colour depending on the firing. Cream slips are usually found with dark-red or brown paint, whereas pale orange slips are found with light red/orange paint.

- Manufacture: handmade, coil built.
- Fracture: smooth to slightly jagged depending on size of vessel and density of inclusions.
- Finish: open sherds are slipped and painted on inner and outer surfaces and burnished to a medium of high gloss. Sometimes the slip is left matt and only the paint

is burnished. Closed sherds may be scraped or wiped, in the case of holemouths; or left unfinished.

Fabric Colour: fabric ranges from light orange red (5YR 5/6-5/8, 6/6) when completely oxidised through to red/brown and dark red/brown (7.5YR 4/6, 5YR 3/4, 4/6). As much as 60% of the core in open vessels, and 80% of the core in closed vessels can be grey.

Surface Colour: slips range from yellow beige (10YR 7/3-7/4) through cream or pale orange (7.5YR 7/6). Paint ranges from light orange/red, to deep red to red/brown to mid brown and dark brown (5YR 5/6, 6/8, 2.5YR 3/4-3/6, 7.5YR 3/4, 4/4).

Inclusions: the predominant filler is a fine grey pebble grit 0.1-0.3mm diam found in high concentrations. Also present is a red pebble grit 0.4-0.6mm diam. Organic temper is absent or rare.

Fabric B

(Decorated Fine Ware)

Fabric B is found in the Decorated Fine Wares. It is similar to A, firing a light orange to pink (5YR 5/6-5/8) but is distinct for the presence of high concentrations of large grey tufa inclusions up to 4mm in diameter and no red or white pebbly grits. In general, the paste is coarser and grittier than in Fabric A, giving a jagged break. Unlike Fabric A, Fabric B is never tempered with chaff or straw. Fabric B accounts for approximately 6% of the Philia museum sample.

Manufacture: handmade, coil built.

Fracture: very jagged.

Finish: as in Fabric A.

Fabric colour: as in Fabric A.

Surface colour: as in Fabric A.

Inclusions: large grey tufa inclusions ranging from 0.5-4mm diam and found in very high concentrations. There is no red pebble grit and no organic temper.

Fabric C

(Decorated Fine Ware)

This fabric is characteristic of the ECU, however at Philia it is found with classic SCU painted design. Sherds are relatively thick in section, with thick white chalky slips and light orange/red paint.

Manufacture: handmade, coil built.

Fracture: jagged.

- Finish: open sherds are slipped and painted on both surfaces, while closed vessels are scraped on the inner surface. Slips and paints are left unburnished.
- Fabric colour: as in Fabric A.
- Surface colour: slips range from white (7.5YR8/4), to yellow/white to cream (10YR8/2-8/3). Paint ranges from light orange/red through to red (5YR5/6-5/8, 7.5YR5/6).
- Inclusions: medium concentrations of large (1mm-4mm) grey pebbles which show through on the surface of the sherd underneath the paint and slip. Medium concentrations of chaff temper.

Monochrome Burnished Ware Fabrics

There are two broad fabric types found in Classic Monochrome Burnished Ware. Fabric D is extremely hard fired, fine and "clinky" with a clean, smooth fracture. It ranges from dark-grey to grey/brown, through to a pale-grey and even beige in colour. The surface is always the same colour as the core and this fabric is always completely fired. Surfaces are usually left undecorated and burnished to a high sheen, but may be self-slipped and burnished, or left plain and unburnished. Inclusions are extremely small and in sparse concentrations and are primarily cream or white quartz grits. There is also some evidence of mica. Chaff temper is never added. This ware is fired in a reducing atmosphere which produces the dark paste.

Fabric E includes every other variation in the classic Monochrome Burnished Ware fabric range. It is extremely heterogeneous and can vary from black, through all shades of brown, red brown and beige and is usually soft and friable as opposed to the hard fine fabric of D. Surfaces vary with the quality of the fabric. A hard fabric will usually have a hard smooth burnished surface, whereas the poorer fired and crumbly fabrics can have a surface slip or paint, which is also friable. The major difference between Fabric's D and E, is the inclusion of chaff temper in the paste.

Fabric D

- Manufacture: handmade, coil built.
- Fracture: smooth.
- Finish: most commonly found in a highly burnished unslipped surface, but sometimes burnishing is rudimentary, or none at all. May also have a self slip.
- Fabric colour: dark grey, grey/brown, red/brown, or very rarely beige (10YR3/1-3/3, 7.5YR3/4, 10YR5/3 and 6/4).
- Surface colour: always the same as the paste.
- Inclusions: very fine grit tempers in low concentrations. Some mica.

Fabric E

- Manufacture: handmade, coil built.
- Fracture: sometimes smooth, but mostly crumbly.
- Finish: often found with a self slip, or even paint. Usually left unburnished or rudimentary burnishing.
- Fabric colour: black, dark grey, light grey, red/brown, brown, or grey brown (10YR3/1-3/2, 2.5Y3/2, 10YR4/2).
- Surface colour: can differ from the paste if a slip or paint is added. Black, dark grey, red/brown, brown red, yellow/red (10YR3/1-3/2, 2.5Y3/2, 10YR4/2, 10YR 5/6).
- Inclusions: small and large grits (0.1mm-0.5mm) in medium concentrations. Chaff and straw temper.

Fabric F

(Monochrome Burnished Ware Variant)

This fabric is only ever found in one shape, a wide flaring neck of an open vessel. It is very distinctive for its highly polished monochrome pink surface and very hard fine paste with very few inclusions.

- Manufacture: handmade, coil built.
- Fracture: smooth.
- Finish: always burnished to a very high gloss in the better fired examples. Less well fired examples also found. May also be self slipped.
- Fabric colour: in well fired sherds the colour of the surface and paste is always the same distinctive dark red/pink throughout. Less well fired sherds may be dark-pink/brown to dark-brown (7.5R3/8 10R4/8, 3/6, 2.5YR3/4).
- Surface colour: always the same as the paste.
- Inclusions: very tiny (0.1mm diam.) white grits in low concentrations. No chaff temper.

Coarse Ware Fabrics

Coarse Ware is found in two predominant variations, called CW Type A, and CW Type B. Coarse Ware Type A is the classic Coarse Ware found widely across the island. It is very coarse, soft and crumbly with large pebble inclusions and high concentrations of organic temper. It is always low fired and incompletely oxidised and usually shows traces of secondary burning on the surface. Coarse Ware Type B is

Fabric G

(Coarse Ware Type A)

- Manufacture: handmade.
- Fracture: very jagged, friable.
- Finish: wet smoothed, finger smoothed sometimes with rudimentary burnishing
- Fabric colour: grey/black to brown/black, to red/brown, dark brown or pink/brown (10YR4/4, 3/4, 7.5YR3/4).
- Surface colour: always the same as the paste.
- Inclusions: very large dark-brown and black pebbles (2-4mm diam) in high concentrations. Also some quartz pebbles. Chaff and straw temper.

Fabric H

(Coarse Ware Type B)

- Manufacture: handmade.
- Fracture: sharp, jagged.
- Finish: surfaces roughly smoothed. Also sometimes burnished, or painted and burnished.
- Fabric colour: dark brown, dark red/brown (7.5YR3/4, 5YR3/4).
- Surface colour: usually the same as fabric colour but sometimes with the addition of a dark red/brown paint (5YR3/4).
- Inclusions: high concentrations of large (1-1.5mm diam) igneous and limestone inclusions and large crushed chert fragments. Also high concentrations of chopped straw and chaff.

Fabric I

(Coarse Gritty)

A very gritty light fabric found in small quantities. Shapes included thumb pots and small dishes. Its most distinctive characteristic is the very pale paste and gritty surface.

- Manufacture: handmade.
- Fracture: jagged.
- Finish: finger smoothed, or scraped. Undecorated on inner and outer surface.
- Fabric colour: light-yellow buff or beige paste (10YR 6/3-6/4). Core often up to 80% grey.
- Surface colour: always the same as the paste.
- Inclusions: white grey and red grits (0.5-1mm diam) in medium to heavy concentrations. Some micaceous grits and some very large pebbles (2-4mm diam). Very little or no chaff temper.

Sotira

There are only two fabrics at Sotira, a Decorated Fine Ware fabric and a Coarse Ware fabric. The Decorated Fine Ware fabric is medium hard, usually orange-buff when completely fired with a medium density of white and grey pebbly grits (0.5mm-2mm in diameter), and some straw temper. Up to 70% of the sherds were incompletely fired leaving a grey core. The most distinctive feature of this fabric is the porous section (characterised by numerous voids), and the soft flaky surface finish, suggesting that the pottery may have been cleaned using an acid based solution. The Coarse Ware fabric is typical of Coarse Ware type A fabrics across the island. It is a low fired, friable, crumbly fabric with a high density of pebble and chaff temper (1mm-3mm in diameter). The surface colour varies from grey brown to dark brownish black and is always wiped or finger smoothed. There are no examples of burnishing or a self slip.

Fabric A

(Decorated Fine Ware)

Manufacture: handmade, coil built.

Fracture: smooth.

Finish: open and closed sherds are slipped and painted. The inner surface of closed sherds is either wiped or scraped.

Fabric colour: orange/red to light-orange/red (7.5YR6/6-6/8), usually incompletely fired leaving a grey core

Surface colour: slips are either pale-orange or cream (7.5YR7/6). Paint varies from orange through red, through brown and dark-brown (5YR6/8, 5YR5/8, 5YR4/6).

Inclusions: white and grey pebble grits (0.5-2mm diam) in low to medium concentrations. Chaff temper in medium concentrations.

Fabric B

(Coarse Ware Type A)

Manufacture: handmade.

Fracture: jagged and friable.

Finish: wiped or wet smoothed, never slipped like Philia.

Fabric colour: dark brown, dark grey brown (10YR3/3).

Surface colour: always the same as the paste.

Inclusions: large dark brown and grey pebbles (2-6mm in diam) in medium concentrations. Chaff and straw temper in medium concentrations.

Troulli

Fabric A

(Decorated Fine Ware)

Fabric A is the only fabric which occurs in the Decorated Fine Wares. The colour of the paste is characteristically orange, and can range from very pale orange to a very bright orange in well oxidised sherds. The texture is usually gritty and slightly crumbly.

Manufacture: handmade.

Fracture: jagged.

Finish: slipped and painted on outer surface, smoothed or scraped on inner surface.

Fabric colour: light orange/brown to orange to light orange buff (7.5YR5/6, 6/6).

Surface colour: sherds usually have a thin hard self slip which can vary from a cream pink to orange to light orange brown. Paint is usually brown to red/brown or dark brown. Slip and paint is usually highly burnished (5YR4/6, 5YR3/4).

Inclusions: high to very high concentrations of quartz grits (0.4-1.5mm diam). Also some shell temper. No organic temper.

Fabric B

(Coarse Ware Type A)

Manufacture: handmade.

Fracture: jagged and friable.

Finish: wiped or wet smoothed, never slipped like Philia.

Fabric colour: dark brown, dark grey brown (10YR3/3).

Surface colour: always the same as the paste.

Inclusions: large dark brown and grey pebbles (2-6mm in diam) in medium concentrations. Chaff and straw temper in medium concentrations.

Zoulofidhes

Only one fabric recognised. It is very gritty with a much darker paste than sites like Sotira and Khirokitia. Apparently Fabric C of Tenta.

Manufacture: handmade.

Fracture: jagged.

Finish: outer surfaces are slipped and painted, inner surfaces are wiped or scraped.

Fabric colour: dark red to purple brown (2.5YR3/4, 4/6).

Surface colour: usually slips are either thin red washes or self slips (2.5YR5/8, 5YR 7/6).
Paint is a dark purple red (2.5YR3/4-4/4).

Inclusions: medium concentrations of pebble grits (2-3mm diam), low concentrations of chaff temper.

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THE CERAMIC NEOLITHIC PERIOD IN NORTHERN CYPRUS*

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Introduction

After an apparent hiatus of some 1000 years following the end of the Aceramic Neolithic in Cyprus, the advent of a pottery manufacturing culture, known as the Ceramic Neolithic, is heralded by the appearance of a number of new sites across the island and the reoccupation of some of the former aceramic villages. This new culture is interesting in itself for the seemingly advanced level of technical skill already evident in the ceramics, and though many hypotheses have been put forward as to its origins, it seems most likely that an earlier pottery tradition may still be missing from the archaeological record.

Perhaps one of the most interesting features of the Ceramic Neolithic period is the island wide uniformity that is evident in the architecture, religious practices and material culture. Even the ceramic tradition shows, on a technical and functional level, a high degree of homogeneity between the north and south of the island. This cultural similarity tends to signify that the separate village populations must have been in fairly regular contact with each other. More difficult to predict is the intensity of the inter-site interaction that took place at this period.

In contrast with this technical and functional uniformity apparent in the ceramic industry, there are clear connections between sites on a stylistic level. This is most evident in the decorative techniques applied to the surface of the pottery in the north and south of the island. Two major traditions exist (Peltenburg, 1975). In the south it is characterized by the predominance of combed decoration seen at Sotira *Teppes*, Khirokitia *Vounoi* and a number of survey sites clustered around the Pissouri area. In the north, the major decorative technique is the application of red paint to a plain or white slipped surface and is known as Red on White Ware after its discovery by Dikaios in the forties. Although all sites produce a certain percentage of both wares, there is no doubt that the preference for Red on White Ware was much stronger in the north (Watkins, 1973).

Due to the wider scope for individual expression that painted decoration automatically allows, the plotting of inter-site variation in decorative schemes can be performed relatively easily for the Ceramic Neolithic sites of the north. Four sites will be discussed, Klepini *Troulli*, Ayios Epiktitos *Vrysi*, Orga *Paliolona* and Philia *Drakos A*. All have produced classic Ceramic Neolithic pottery assemblages of the Red on White tradition and all can be shown to overlap chronologically using both known radio-carbon dates and pottery seriation. Any apparent differences between decorative schemes can therefore be inferred to be due to spatial rather than temporal factors.

Using simple statistical evidence based on sherd counts of the relevant ceramic assemblages stored in the Cyprus Museum, it will be shown that local stylistic traditions existed, not only between regions but also between sites. In the case of *Vrysi*, for which the ceramic material remains inaccessible in Kyrenia Castle, the site report by Edgar Peltenburg (1982b) will be used.

The study of social interaction theory (or the Deetz-Longacre Hypothesis, so called after its' best known exponents) has gained in impetus over the last twenty years since it was first argued that 'the similarity of design elements between groups will be proportional to the direction and intensity of social interaction between members of those groups' (Rice, 1987, p.252). A number of analytical approaches that aim to quantify and interpret the archaeological data in relation to this theory have since been developed. In response, there have been many criticisms put forward regarding the validity of most of these analytical processes. Probably the strongest criticisms regard the need to standardize the database (Plog, 1978, pp.167-77). This is difficult in archaeology where differing retrieval methods and biased samples will almost always adversely affect any quantification analyses, there are, however, methods of reducing the effects of sample bias and the tendency for archaeologists to be subjective when analysing large bodies of data.

Simple statistical studies developed in the scientific disciplines have been used by anthropologists and ethnologists to imply numerically degrees of social interaction (Frankel, 1975). Other more complex methods of dealing analytically with archaeological data involve the manipulation of multiple variables such as multivariate analysis.

Ultimately the application of these techniques will be of primary importance to the results of any research undertaken on the Ceramic Neolithic period. The evidence presented in this paper, however, is in the form of a general introductory overview of social interaction between sites and the possible ramifications this has for the study of the earliest period in Cypriot history.

Geography

Three of the four sites that are of concern are located on the narrow coastal strip that separates the Kyrenia range from the sea. *Troulli* and *Vrysi* are situated on coastal promontories just four kilometres apart while *Orga*, lying 40 kilometres to the west of *Troulli*, occupies a saddle shaped plateau roughly one kilometre from the sea but still in sight of it. *Philia Drakos A*, on the other hand, is situated in the Ovgos Valley, south of the Kyrenia range in the western Mesaoria.

Contact between the three coastal plain sites would have been easy via movement along the coastal fringe. If one assumes that *Troulli* and *Vrysi* were contemporaneous, their close geographical relationship would suggest that each was aware of the other's existence. Movement to the south, across the Kyrenia range, would have been via one of three major passes, the *Vasilia*, the *Kyrenia* or the *Lefkoniko*. We should take into consideration that there may have been many, as yet, undiscovered sites scattered over the general area of the north coast and the western Mesaoria during this period that may have influenced patterns of

contact (Watkins, 1973). However, on the basis of geographical evidence alone, *Vrysi* and *Troulli* would be the most likely sites to be in close contact. For Orga, contact with *Vrysi* and *Troulli* would have been no more difficult than with Philia was only 20 km to the south over the low hills of the Western Kyrenia range. Contact between Philia and *Troulli* or Philia and *Vrysi* would have been via Orga along the north coast and then south through the Vasilia pass, or south through the Kyrenia pass and then west.

Based on geographical evidence then, one would expect *Troulli* and *Vrysi* to have the most similar painting traditions and Philia and *Troulli* or Philia and *Vrysi* to have the most disparate.

The sites

Before presenting the ceramic evidence it is necessary to describe briefly the nature of the sites.

Klepini *Troulli* was first reported in 1935 by Porphirios Dikaios, and in 1941 two small soundings were excavated on the southern slopes of the promontory, while a large exposure called area C, was excavated on the leeward side of the hill. The site is best known for its aceramic occupation. However, Dikaios reported that aceramic deposit, in the tradition of Sotira *Teppes*, was in evidence in the upper levels of the two soundings, following directly on from the aceramic phase (SCE IV:1A, 1962, pp.63-72). In 1979, Peltenburg, following the conclusions reached by Watkins (1973) was able to prove that *Troulli* 1 and *Troulli* 2, as the two periods were now being called, were not contiguous at all but were separated by a sterile layer that, in Pit A, the major sounding, measured at least one meter in depth (1979, p.21ff).

Dikaios excavated *Troulli* in 20 cm spits. The lower levels in Pit A, which lie at a depth of 360-550 cm below surface, contain aceramic material while the ceramic material is found at a depth of 360 cm below surface to present ground level.

Architectural evidence for the ceramic phase is limited to four irregular structures and a passage way uncovered in Area C. The passageway separates three contiguous structures from a free standing building 25 m square. In Pit A there is evidence of a dry stone wall 1 m wide and 1,2 m high. Unfortunately this wall does not seem to be in association with floors.

Ayios Epiktitos *Vrysi* is without doubt one of the most important Ceramic Neolithic sites yet excavated. It is situated, like *Troulli*, on a coastal promontory that in winter suffers from the extremes of the weather. It may have been for this reason that the site is almost completely subterranean, the major architectural phases having been built into two large man-modified hollows cut into bedrock and measuring over 6 meters in depth and each at least 20 m square. Within these hollows were found a number of dwellings each showing major rebuilding phases. Because the structures were built into these massive hollows, erosion has had no serious effects on the surviving Early and Middle Phase deposits, and therefore *Vrysi* remains one of the best securely stratified Ceramic Neolithic sites excavated.

Using a combination of stratigraphical evidence and morphological and stylistic change in the pottery sequence, Peltenburg was able to elucidate three stages of development

in the ceramic industry that tied in well with three major phases of architectural development (1982a, pp.38-39; 56-58). The Early Phase was represented in the hollows by a dearth of architectural elements. What evidence there was consisted of occupation deposits found in association with pits lying directly above sterile soil.

The Middle Phase included all major architectural features within the hollows, some 4 to 5 meters of deposit. There were roughly 6 to 8 dwellings to each hollow with a narrow passage in the tradition of *Troulli*, dividing the dwellings into groups of 3 to 5. Also like *Troulli*, a number of the dwellings were contiguous with no visible means of entry.

The Late Phase was located in only a few areas of the site and is separated stratigraphically from the Middle phase by a period of abandonment evidenced by a sterile deposit. This phase included all above ground dwellings that had not been lost by erosion. As buildings were no longer confined to the limits of the hollows, a greater diversity in spatial arrangement is in evidence during this phase.

Philia *Drakos A* is unfortunately not yet finally published and evidence used in this report has been obtained from interim reports (Watkins, *BCH*, 1966-1971). However, it appears that unlike *Vrysi*, Philia, sitting on the southern slopes of the Ovgos Valley, suffered massive erosion and redeposition and stratified sequences of any length were few.

Philia is most interesting for its combination of architectural structures, in the tradition of *Sotira Teppes* (Dikaïos, 1961), *Vrysi* (Peltenburg, 1985a) and *Troulli* (Dikaïos, 1962) and numerous subterranean pits, cut into the surrounding bedrock, in the fashion of *Kalavastos A* (Dikaïos, 1962), *Kalavastos Pamboules* (Dikaïos, 1962) and *Kalavastos Ayious* (Baird, n.d.). As the depth of deposit varied considerably across the site, the excavator concluded that the topography of the existing ground surface had been greatly modified since ancient times (Watkins, 1970a).

The earliest occupation, the excavator says, was in «subterranean» pits or hollows and as the later population grew the hollows continued but were accompanied by above ground dwellings (Watkins, n.d.).

As with *Vrysi*, a four phase sequence of development for the Philia pottery has been suggested by the excavator on the basis of stratigraphic evidence and ceramic development (Watkins, 1970a, p.7ff). Phase 1, where it occurs, lies directly on sterile soil and is characterised by a distinct type of pottery known as Monochrome Burnished Ware, or, as it was originally called, Dark Faced Burnished Ware, after its apparent similarity to its mainland namesake. Phase 2 deposits are always stratified above Phase 1 deposits and are distinct for the first appearance of Red on White pottery occurring in small percentages alongside MBW. Phase 3 is harder to separate from Phase 2 but where it occurs, it is always found stratified either above Phase 1 or Phase 2 deposits. On statistical counts of the ceramics, Phase 3, does show a general disparity with Phase 2 in percentages of wares and therefore has been called a distinct phase by the excavator. Phase 4 is separated from Phase 2 and 3 by a sterile layer of marl suggesting the site was abandoned at some stage during its history and soon after re-occupied by inhabitants whose ceramic assemblage was in the same tradition as the Late Neolithic occupants, albeit somewhat more developed.

Both *Philia* and *Vrysi* were fortified, at least at some stage in their history, and there is evidence that *Troulli* may well also have been.

Orga, being a survey site, does not have any stratigraphical or architectural evidence. However the pottery from the survey is classic Late Neolithic in character (Peltenburg, 1985a, p.101).

Morphology

One of the most interesting features of the Late Neolithic in Cyprus and one that was mentioned briefly earlier is the homogeneity in the types of vessels produced during this period. The repertoire is limited and consists primarily of large milk bowls with and without spouts, holemouth jars and large, narrow necked flasks with globular body and flat, rounded or omphalos base. Aside from these few basic shapes which can be found in Red on White, Monochrome Red and Combed Ware, there are also a number of smaller shapes which occur exclusively in Monochrome Burnished Ware and a lively Coarse Ware tradition (fig.3a). Not only is there virtually no differentiation in the standard Red on White shapes across the island but each site also follows a similar basic process of development beginning with concave hemispherical bowls to standard hemispherical bowls and deep bowls, then with the introduction of the Early Chalcolithic period, the straight sided shallow platter (fig.3b). Changes in closed shapes are from globular flat or omphalos based flasks to ovoid flasks with pointed bases in the Early Chalcolithic. Morphology therefore can be used as a criterion for cross site seriation at the end of the Neolithic period.

The pottery traditions and the chronology

Diachronic change in the ceramic traditions of *Vrysi*, *Philia* and, to a lesser extent, *Troulli* will naturally adversely affect the accuracy of any results gleaned through pattern analysis unless the separate phases of each site can be cross-related. Therefore it is necessary to arrange the sites into a chronological framework. To do this evidence will be taken from both radiocarbon dating and stylistic seriation of the ceramic industries where they show similarities.

Vrysi has been well dated by C14 methods and each of the three phases have dates that have come from securely stratified contexts (Peltenburg, 1982a, p.460). The earliest date for *Vrysi* is around 3600 b.c. uncalibrated. This date comes from the Early Phase, but not, it must be stressed, from a basal deposit sitting on bedrock and therefore does not represent the earliest dating of the site. The Middle Phase covers roughly 200 years with the mean date falling around 3550 b.c, uncalibrated. The Late Phase extends down to 3231 80 b.c, uncalibrated (BM 1906). All 15 dates for *Vrysi* are unusually consistent with the stratigraphic evidence and only one date could be discounted as being too low.

There is only one radiocarbon date for *Philia*, dating phase 3 to 3478 100 b.c. uncalibrated (BIRM-72) (Watkins and Gelling, 1966). Although Held (1989, pp.247-248) has shown that with just one standard deviation this date could be contemporary with the Early

Phase of *Vrysi*, on stylistic grounds the dating of phase 3 fits much better with the Middle Phase at *Vrysi*.

Troulli has been dated by thermoluminescence (Peltenburg, 1982b, p.115) and is therefore very hard to correlate with *Vrysi* and *Philia*. However, one of the dates falls within the range of *Vrysi* Middle Phase partly supporting its contemporaneity with that site.

Peltenburg, in his re-assessment of *Troulli* (1979, p.21ff), has relied heavily on stylistic seriation of the pottery with *Vrysi*. This is possible as the two sites seem to be not only contemporary but also only 4 km apart and can be shown to follow similar development patterns. As the Early Phase of *Vrysi* is characterised by standard early painted motifs, wavy line decoration and reserved circles and dots (fig.4a-e), and the Middle Phase sees the first introduction of both Combed Ware and ripple decoration (fig.4i-j), which are characteristic of the later Ceramic Neolithic period, Peltenburg concluded that the Early Phase of *Vrysi* was contemporary with the lower levels of the ceramic phase in Pit A at *Troulli* due to the dearth of both combed design and ripple pattern in these levels. The Middle Phase of *Vrysi* was contemporary with the upper levels in *Troulli* Pit A as both combed decoration and ripple motif were represented (1979, pp.30-31). Furthermore, on the basis of morphology, it can be shown that this is indeed the case.

The graphs shown in figure 5 and 6 illustrate the percentages of bowl types for each period at *Vrysi*¹. What is obvious on first glance is that in the early period the ratio of standard hemispherical bowls to concave sided hemispherical bowls is just under half. In the Middle Phase this pattern is reversed and the standard hemispherical bowl becomes the most popular shape.

At *Troulli* this pattern of development is also present² (fig.7a-b). In the early levels there is a preference for concave hemispherical bowls and this is later replaced by a preference for standard hemispherical bowls in the later levels.

In the Late Phase of *Vrysi* (Fig.6a) the presence of a more evolved stylistic and morphological tradition, (evidenced here by the presence of platters and characteristic of the Late Neolithic Early Chalcolithic transition) would suggest that the occupation of this site outlasted *Troulli*, which lacks evidence for the new morphology (i.e., the platter) and design elements of the Early Chalcolithic transition³ (fig.7).

At *Philia* a similar morphological and stylistic development to *Troulli* and *Vrysi* exists⁴ (fig.8a-b). However, the concave hemispherical bowl of the earliest period is absent at this site. This may not necessarily suggest a chronological difference between sites but more likely a spatial difference or, in the case of *Troulli*, a problem of retrieval methods. In fact, the presence of Monochrome Burnished Ware stratified beneath painted wares suggests that the beginnings of *Philia* is chronologically earlier than at other sites (Watkins, 1970, pp.1-9).

The predominance of reserved circle and wavy line decoration in the 2nd and 3rd phases of *Philia* supports a contemporaneity between the Early Phase of *Vrysi*, the lower levels at *Troulli* and *Philia* phases 2 to 3. The further presence of ripple pattern at the end of the 3rd phase of *Philia* suggests there is some overlap with the Middle Phase of *Vrysi* and the upper levels at *Troulli*. By the 4th phase of *Philia*, ripple decoration has hit its zenith but the lack of classic Early Chalcolithic shapes suggests it too does not outlive the Late Phase at

Vrysi. Therefore there would seem to be an overlap between Philia phases 3 and 4 and *Vrysi* Middle to Late Phases. The end of Philia must, however, occur sometime before the end of the late phase at *Vrysi*.

Orga cannot be placed into a specific chronological framework with the other three sites as it has only been surface collected. The presence of concave hemispherical bowls (fig.6b), standard hemispherical bowls and the use of reserved circle, wavy lines and ripple decoration all suggest that it too, lasted through successive phases of development and can be generally dated to the Late Neolithic ceramic tradition as a whole.

To summarise, the Early Phase at *Vrysi* is contemporary with the earliest levels in Pit A at *Troulli* and phases 2 and 3 at Philia *Drakos A*. The Middle Phase at *Vrysi* is contemporary with the upper levels in Pit at *Troulli* and Philia *Drakos A*, levels 3 to 4. By the Late Phase at *Vrysi*, *Troulli* has died out and Philia is in the last stages of period 4 (fig.1).

T I M E			Philia <i>Drakos A</i> phase 1
↓			
3 6 0 0 b.c.	Ayios Epiktitos <i>Vrysi</i> Early Phase	Troulli Pit A 360-180cm	Philia <i>Drakos A</i> phase 2
↓			
3 5 5 0 b.c.	Ayios Epiktitos <i>Vrysi</i> Middle Phase	Troulli Pit A 180-0cm	Philia <i>Drakos A</i> phase 3
↓			
3 2 3 1 b.c.	Ayios Epiktitos <i>Vrysi</i> Late Phase		Philia <i>Drakos A</i> phase 4

Figure 1 : Relative Chronology

Regional diversity

The evidence from radio-carbon dates, coupled with morphological and stylistic development of the pottery, argues for contemporaneity between the northern Ceramic Neolithic sites. All four sites display classic Late Neolithic characteristics. Moreover, on preliminary appraisal, the painting schemes used to decorate the pottery show a marked similarity in theme. In the earliest phases Red on White decoration is robust and bold (fig.4a-h). Patterns are almost always curvilinear, thick and thin wavy bands, concentric circles, targets

and reserved circles. By the middle phases linear motifs come into play. The broad band, common in the early period, is now joined by thin vertical and diagonal lines, triangles, and rectilinear zones filled with a variety of linear motifs. Multiple brush techniques such as ripple decoration (fig.4i-m) make their first appearance as filler motifs between thin bands and in zones. By the late phase thinner lined lattices executed with a multiple brush are common and linear decoration is the order of the day. Painted schemes become minimalist with larger areas of the vessel being left undecorated or covered in thick red paint. A common theme on closed vessels is to paint large areas of the body and neck in wide vertical bands. These differ from earlier examples in that the painter now leaves only a small area of slip in reserve. Conversely, open shapes tend to have large areas of the body left unpainted with rim bands and base bands being the only form of decoration. It is not uncommon in this phase to find many sherds that are monochrome red or monochrome white and yet probably originated from a Red on White vessel.

On closer examination, however, subtle yet distinct differences exist between each site.

When looking at regional differences in painting schemes of the Neolithic period the very nature of the decoration, a loose freehand style, puts restraints upon our ability to classify separate motifs. For this reason it is more sensible to study the orientation of the motifs, the combinations most favoured, and the execution of the painted styles. Another useful study is the proportions of structural motifs compared to decorative motifs. Structural motifs are less susceptible to social and symbolic influences and therefore are useful in gauging spatial variation (Bolger, 1991; Rice, 1987, p.266). Structural motifs are those that emphasise or define the shape of the vessel. These include rim bands, base bands, and motifs that define the shoulder of closed vessels or the presence of a spout. Decorative motifs, on the other hand, are any that purely decorate the vase and usually occupy the main field of the body. Decorative motifs are less regimented and therefore more susceptible to random variation.

Using simple statistical counts based on the samples in the Cyprus Museum, differences in the proportions of structural motifs are evident between the four sites⁵ (fig.9). For example, at *Philia*⁶ in the early phases, rim bands are found on two thirds of open vessels, but at *Vrysi* less than half the open vessels have rim bands and at *Troulli* only 10% of open vessels exhibit structural decoration around the rim. Although the sample from *Orga* is much smaller and represents the entire chronological development of the site, it too has only 10% of its rims displaying rim bands increases. *Philia* retains its preference for rim bands and *Troulli* never seems to have favoured them.

Decorative motifs are harder to gauge statistically than structural motifs as they rarely occur on their own. Generally speaking, however, at *Troulli* the use of single dots (fig.2c; motif 7) to decorate the main field of the vase is the most preferred decorative scheme in the early phase while parallel wavy bands (fig.2c; motif 5) and circular motifs (fig.2c; motifs 10, 11, 12, 14) are also popular. At *Vrysi* reserved dots and wavy bands are also common with Peltenburg recording that 30-50% of the total motif tally belong to these groups (1982, fig.6, p.66). In the early phases at *Philia* broad bands (fig.2b; motif 15) and thick parallel wavy lines

(fig.2b; motif 5) are by far the most popular decorative motifs. In contrast to *Vrysi* and *Troulli* reserved circles and dots (fig.2b; motifs 11, 12, 14) are less popular. At Orga we again see that reserved circles (fig.2a; motif 11) are a popular motif, as too are wavy bands (fig.2a; motif 5).

Orga-Pallalona															
Phase	Red-on White Motifs														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
			2		3						3				2

Philia Drakos A															
Phase	Red-on White Motifs														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Early	6		4		12						1				12
Late	18		16		17		1	4			1				20

Klepini-Troulli															
Phase	Red-on White Motifs														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Early			2		3		17			1	1	2		2	
Late	1	1		2	1		1	1							

Figure 2 : Motif Counts

In the second phase of *Troulli* ripple pattern (fig.2c; motifs 1 and 2) and thin vertical wavy lines (fig.2c; motif4) appear and at *Vrysi* ripple pattern makes up three quarters of the decorative preference. At *Philia*, too, ripple (fig.2b; motif 1) also becomes popular but this popularity is tempered by the continued use of broad bands (fig.2b; motif 15) and thick parallel wavy lines (fig.2b; motif 5). In the latest phase, *Troulli* has finished but *Vrysi* still shows a strong preference for ripple decoration, while the introduction of multiple brush lattice also accounts for a large proportion of the preferred decorative motifs. At *Philia* thin minimalist linear decoration heralds a divergence from *Vrysi*. Ripple decoration is still very popular but as with both succeeding phases the more linear nature of the decoration at *Philia* stands out.

In interpreting the statistical evidence one fact is immediately obvious. *Philia Drakos A* has a more distinct linear style of decoration right throughout its life than either *Vrysi*, *Troulli* or *Orga*. Structural motifs are far more popular, and the use of broad and thin vertical lines are used to emphasise this. This divergence in painting schemes between the coastal sites and *Philia* fits well with similar studies in patterns of regional variability that have been conducted for other periods in Cypriote history. Frankel (1974), for example has already noted that in White Painted Ware of the Middle Bronze Age the level of similarity between sites is proportional to geographical distance. The similarities between *Vrysi*, *Troulli* and *Orga* therefore are to be expected considering they are all geographically accessible to each other.

What is not so obvious, until vast quantities of material from each site are compared, is the divergences that exist in the execution and orientation of the preferred motifs. In comparing *Vrysi* and *Troulli* one can see that they both display similar design elements but the way they are combined in the field is completely different. For example, at *Vrysi*, concentric circles and targets often occur in a frieze of metopes and triglyphs (fig.10; motifs 2j, 2ji, 2jii). At *Troulli* this type of decorative scheme rarely occurs and the reserved dots are almost always found floating free (fig.10; motifs 3j, 3ji). In this respect *Vrysi*'s use of friezes is more similar to *Philia* which also has a preference for metopal design but rather than triglyphs dividing the frame into separate windows, broad bands are used (fig.10; motif 1j). At *Troulli*, wavy bands are often pendant from the rim band as they are at *Vrysi* but the boldness of their execution is more reminiscent of *Philia* (fig.10; motifs 1e, 2e, 3e).

On a wider scale then, both *Troulli* and *Vrysi* display characteristics in their painting traditions that show greater similarities with *Philia* than with each other. At *Troulli* and *Philia* brush strokes are thick and bold and evenly applied and each motif is neatly executed: whereas, at *Vrysi*, there is a tendency to be more sloppy in the application of paint, brush strokes are thinner, wavy lines are irregular and linear decoration is seldom straight. For *Vrysi* and *Philia* similarities exist not in the execution of the motifs but in the chosen decorative scheme. Both sites show a tendency to break the field of the vase into horizontal and vertical zones.

I would like to return briefly to the question of ceramic variability. It was mentioned at the beginning of this paper that there are a number of analytical techniques available to the archaeologist that can be used to measure levels of social interaction through functional, technological or stylistic variability. Before attempting to interpret the evidence presented here, I would like to outline the various methods which would be pertinent to the question of regional diversity in the Ceramic Neolithic period and the possible pit falls that could be encountered.

The most widely used method of measuring regional diversity is through cluster analysis. This can involve the relatively simple manipulation of data through either the recording of the presence and absence of variables in a unit, or the recording of the relative frequency of the variables between units. In the case of complex multivariate analysis the number of variables used can be dramatically increased and the clustering process becomes hierarchical, that is, each unit forms a cluster with its most similar neighbour and then these are clustered with the next similar unit and so on.

In the case of the Ceramic Neolithic period, one would first have to elucidate which group of variables would generate the most relevant information base. For example, since shapes vary little from site to site, morphology would be of limited value. On the other hand, in the case of decorative styles, a number of different sets of variables could be used, such as a simple presence or absence study of structural motifs across sites. In this instance each separate motif would be a variable and the sites would be the units. This type of study would give a relatively accurate gauge of the sites that show the greatest similarity in their use of this type of motif. On its own, however, it tells us very little about inter-site variability as it does not show the relationship between structural motifs to decorative motifs.

Therefore any form of cluster analysis undertaken for the Ceramic Neolithic period would have to involve the study of the entire motif repertoire. This raises the question of subjectivity and what constitutes an individual motif. Decorative schemes consist of individual elements which go into making up separate motifs, but are these to be our variables or are the variables to be the motifs, and where do we set the boundaries between them ?

In the Middle Bronze Age, where a more «centralized» production ensures a certain level of standardization in the decorative motifs used at different sites, the problem of discerning what constitutes a separate motif is not as critical a consideration. In the Late Neolithic, though, the heterogeneous quality of the decorative schemes almost guarantees that a level of subjectivity will be involved when classifying motifs.

Therefore any form of multivariate analyses that looks at regional diversity between decorative schemes of the Late Neolithic period would first require that the individual motifs are broken down into their separate elements and occurrence percentages of combinations recorded to elucidate what groupings constitute a motif. This is an enormous task and one that could not be performed without the help of specific computer programs generated for this purpose.

Once single motifs had been delineated the whole process could then be repeated for determining what constitutes a decorative scheme. Ultimately, the study of decorative schemes and where they occur on a particular vessel will tell us more about regional diversity in the Late Neolithic period than will the study of separate motifs alone. Such studies are the planned programme for the future.

Summary conclusion

It remains to attempt to interpret the evidence for and against inter-site regional diversity during the Ceramic Neolithic period. On a functional level there is a surprising homogeneity in the morphology of the Late Neolithic ceramic tradition. As the manufacturing of pottery was most probably carried out by one or more members of each family unit who would have supplied the needs of the household, this homogeneity would suggest that a common cultural tradition existed that may have been brought about by regular inter-site contact.

Although we can prove that there was cultural unity in the north during the Late Neolithic, the stylistic evidence gleaned from the analyses of painted decoration on the pottery points to a certain level of inter-site variability. Separate site individuality was expressed

through the painting tradition. As has been mentioned, similarity in motifs between sites should be directly proportional to distance. There are mitigating factors however. Although motifs are most similar between sites that are most geographically accessible to each other, there does appear to be a greater diversity in execution and combinations of motifs between geographically close sites than those that are some distance from each other. This may reflect a desire for each site to differentiate itself culturally from its neighbours.

It is odd that by the Early Chalcolithic period this local stylistic individuality has almost disappeared and as Bolger (1991) has pointed out in a recent study, the functional uniformity that exists in the Late Neolithic extended to decorative traditions in the Early Chalcolithic pottery as well. By the Middle Chalcolithic the increased level of craft specialization sees a return to a form of regional diversity characteristic of separate centralized manufacturing centres.

NOTES

- * I wish to thank Dr Trevor Watkins for allowing me to use previously unpublished material from *Philia Drakos A* in this report. I would also like to thank both Dr Watkins and Dr E.J. Peltenburg for their comments and advice,
- 1. The statistical data for bowl types at *Vrysi* comes from museum collections and sherd counts in Peltenburg, 1982b and therefore can only be taken as a general indication of trends.
- 2. Again, statistical data is based on the collection in the Cyprus Museum and therefore only represents a general trend.
- 3. The standard hemispherical bowl and the platter are shapes previously characterised and noted by Peltenburg (1982b, 1987) and Bolger (in Peltenburg et.al., 1985b), The concave hemispherical bowl is a subset noted by the present author.
- 4. For *Philia*, statistical data used in this article is based on unpublished total sherd counts (Watkins, n.d.) and the collection in the Cyprus Museum. Although the evidence presented here can be considered more reliable than statistical counts based on museum collections alone, a certain sample bias must still be assumed.
- 5. The evidence presented here should be considered only an indication of trends as data based on museum samples can not be considered reliable, however, it is interesting to note the high level of discrepancy between the sites.
- 6. For both *Philia* and *Vrysi* there are good statistical counts available for motifs (Watkins, n.d.; Peltenburg, 1982b). I have used them here where possible.

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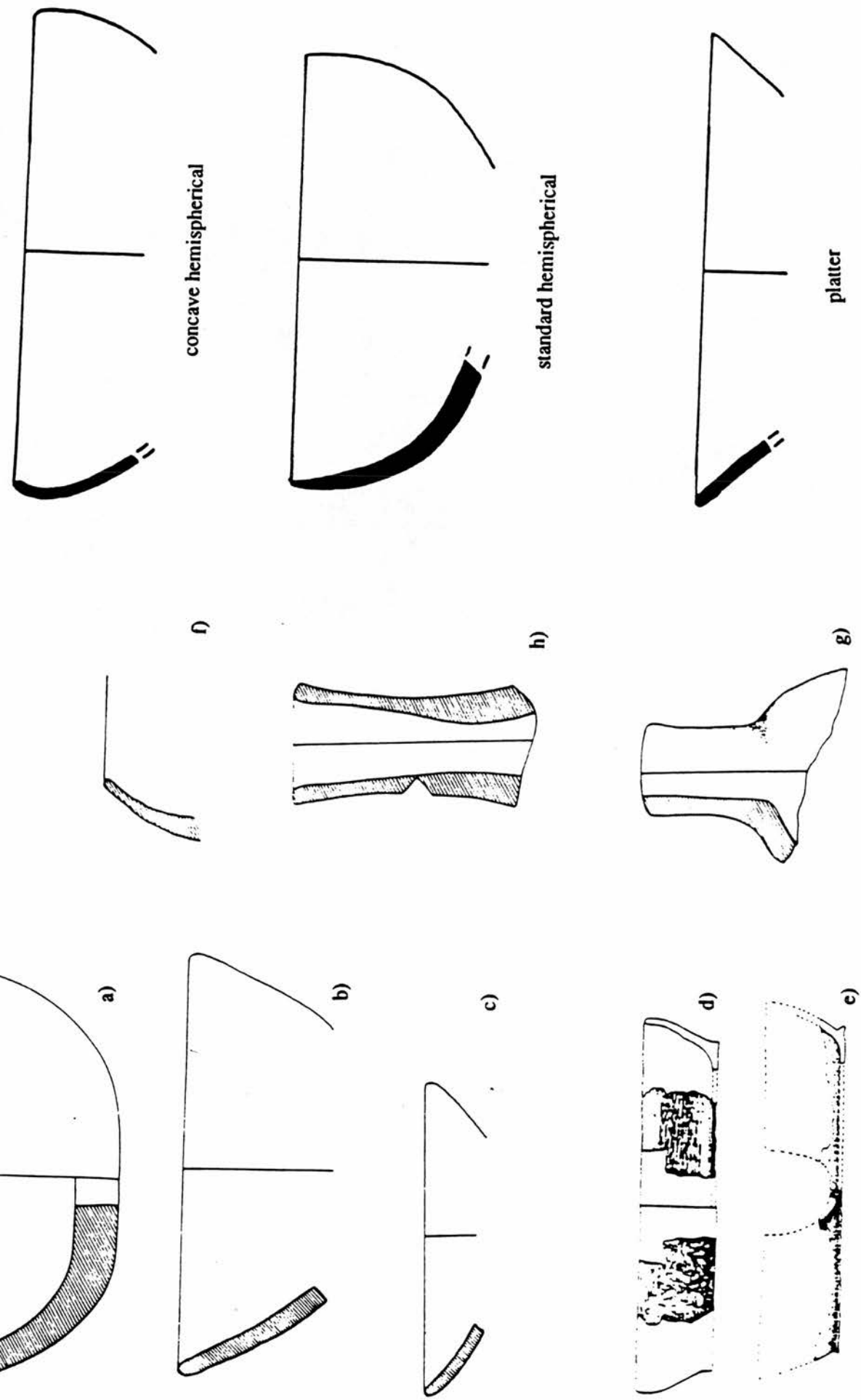


Figure 3:

Figure 3a; Late Neolithic pottery shapes; a-c, Philia *Drakos A* open shapes; d-e, Ayios Epiktitos *Vrysi CW* shapes; f-h, Philia *Drakos A*, closed shapes

Figure 3b: Development of the standard bowl shape

Figure 4:

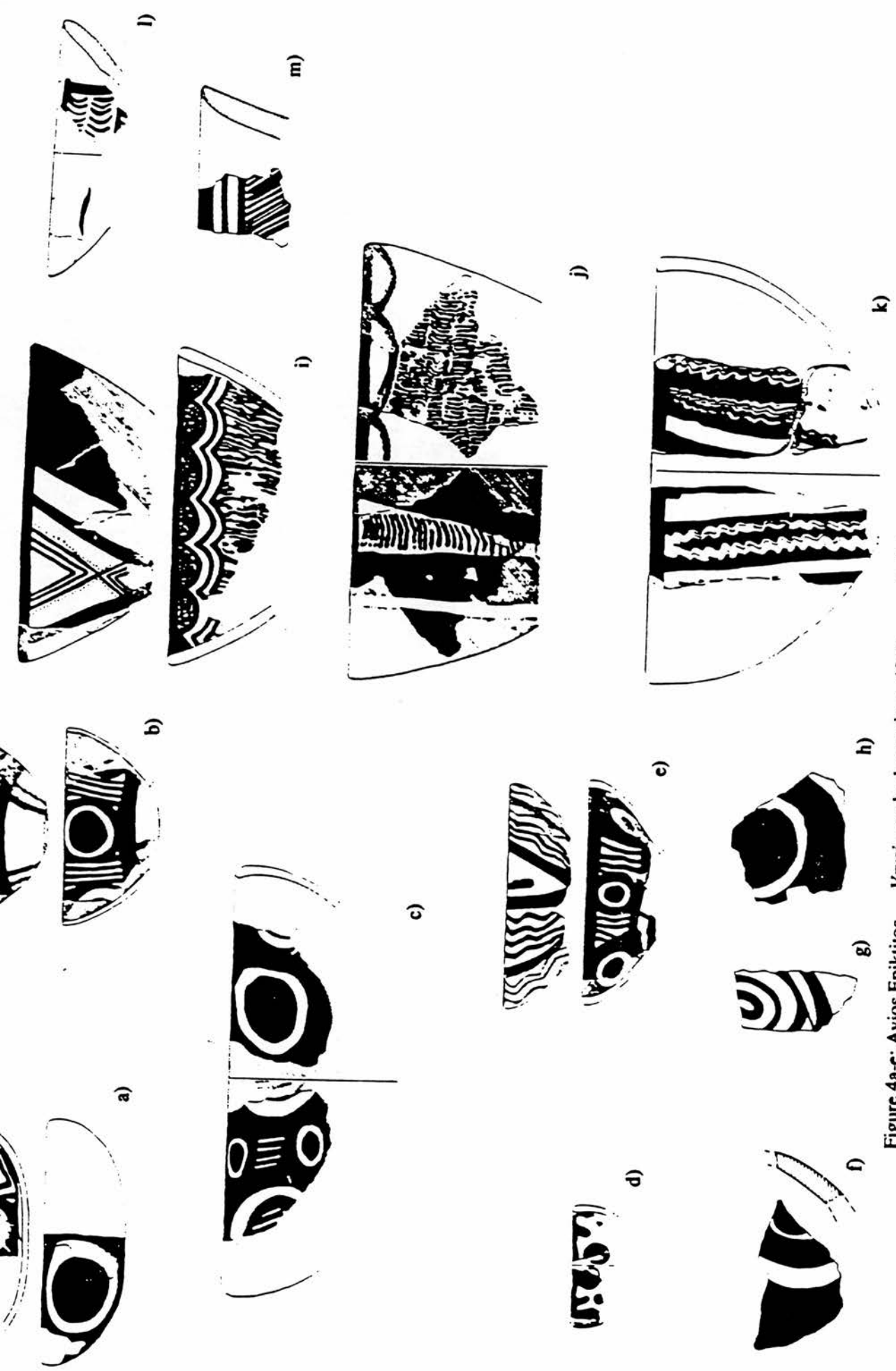
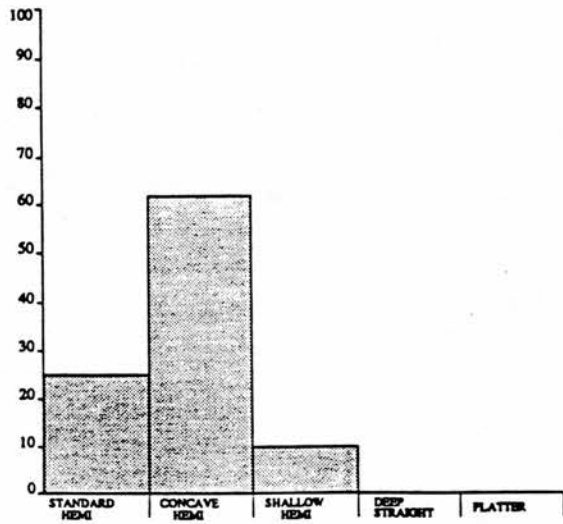
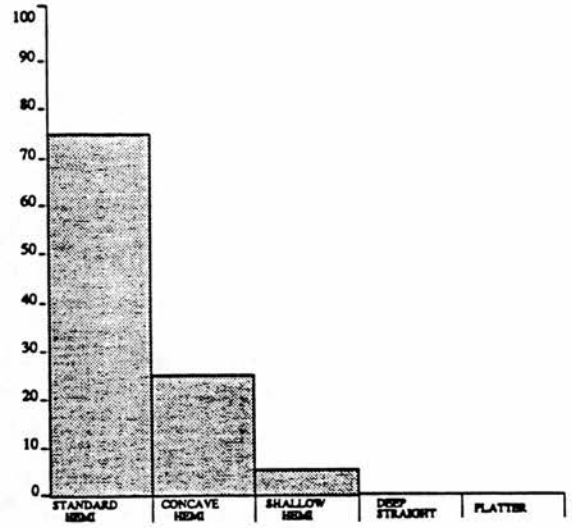


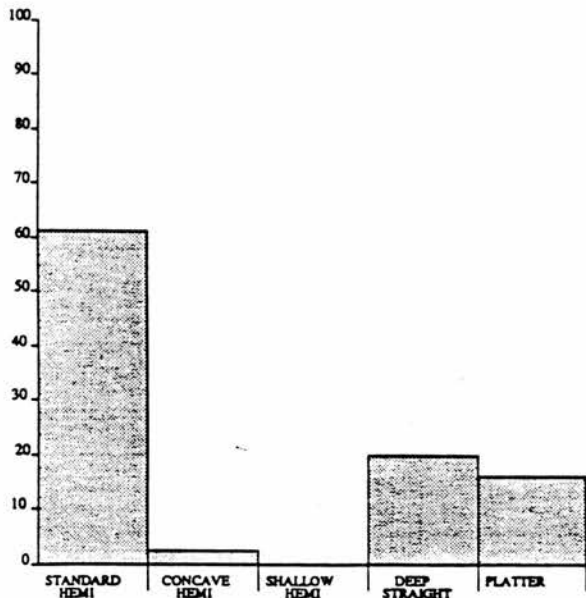
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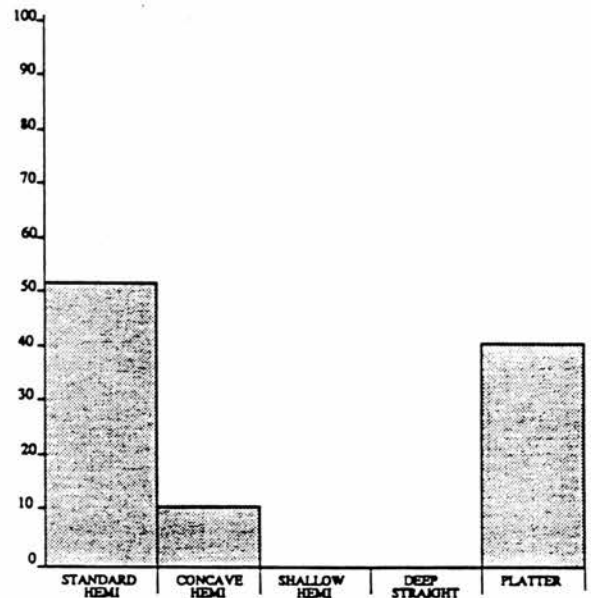
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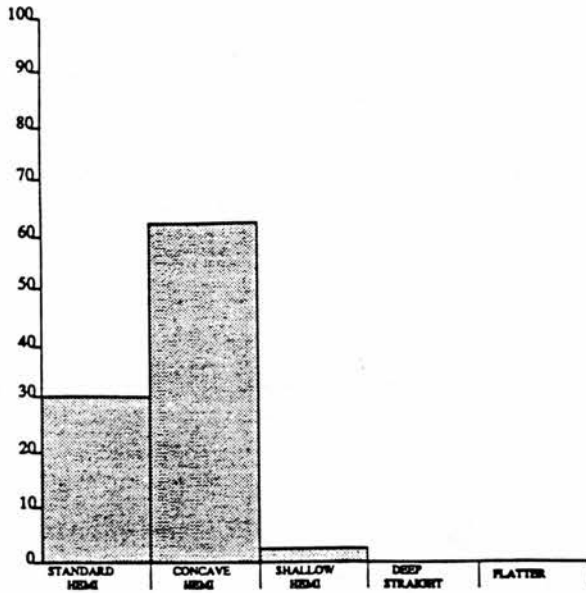
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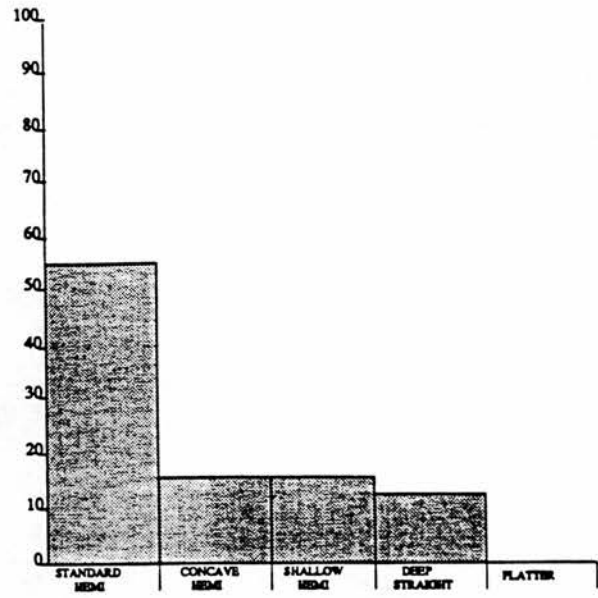
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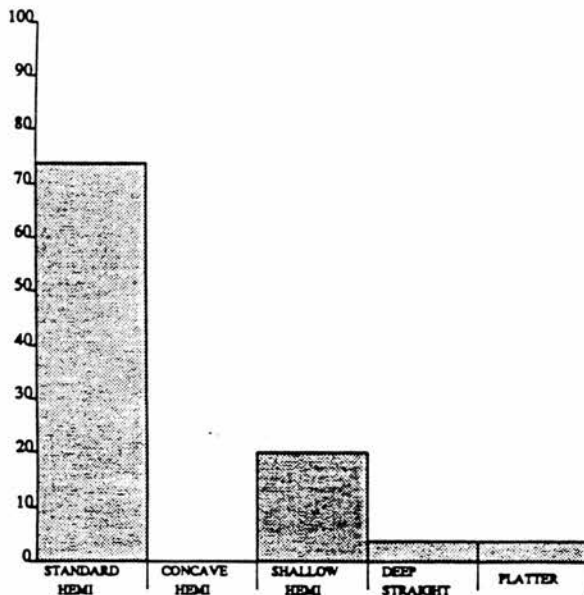
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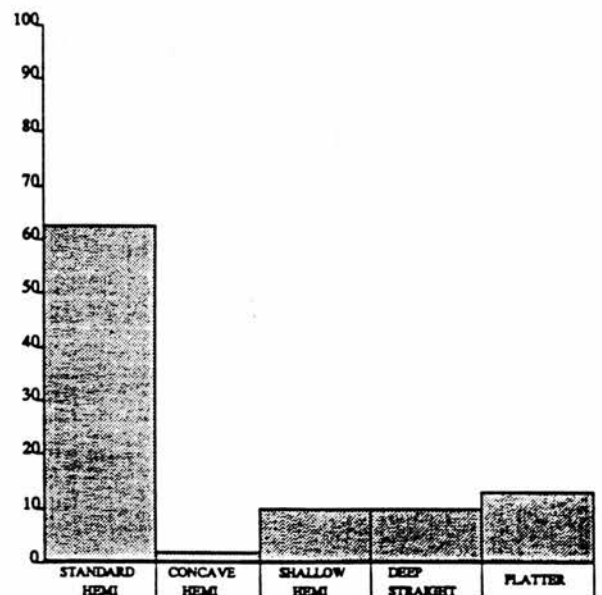
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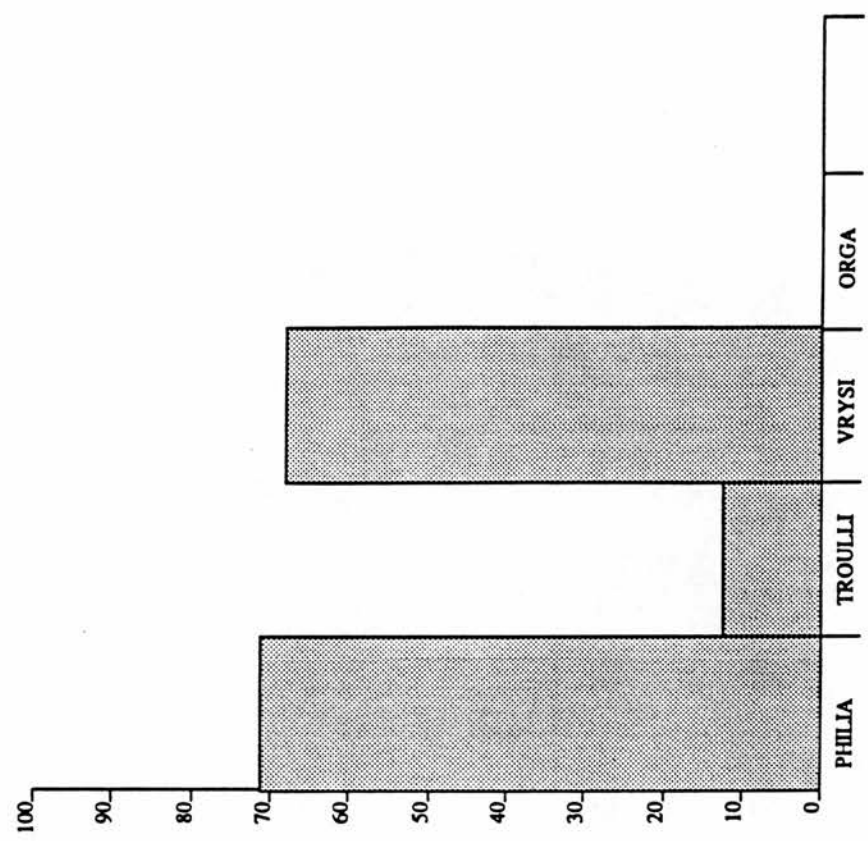
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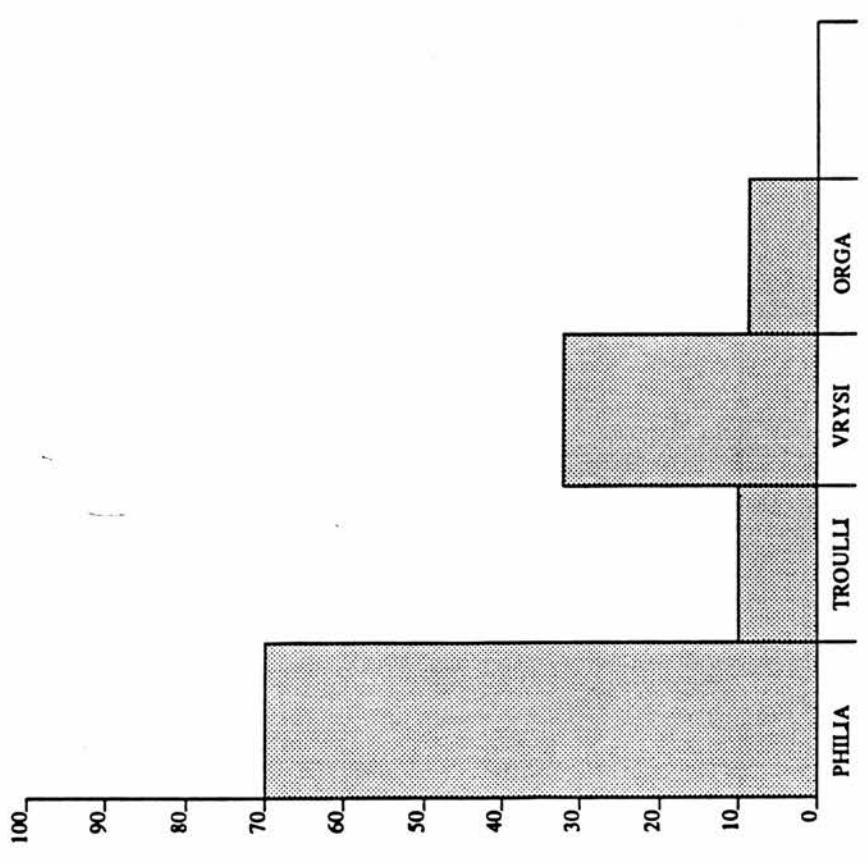
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b) Rim Bands - Late



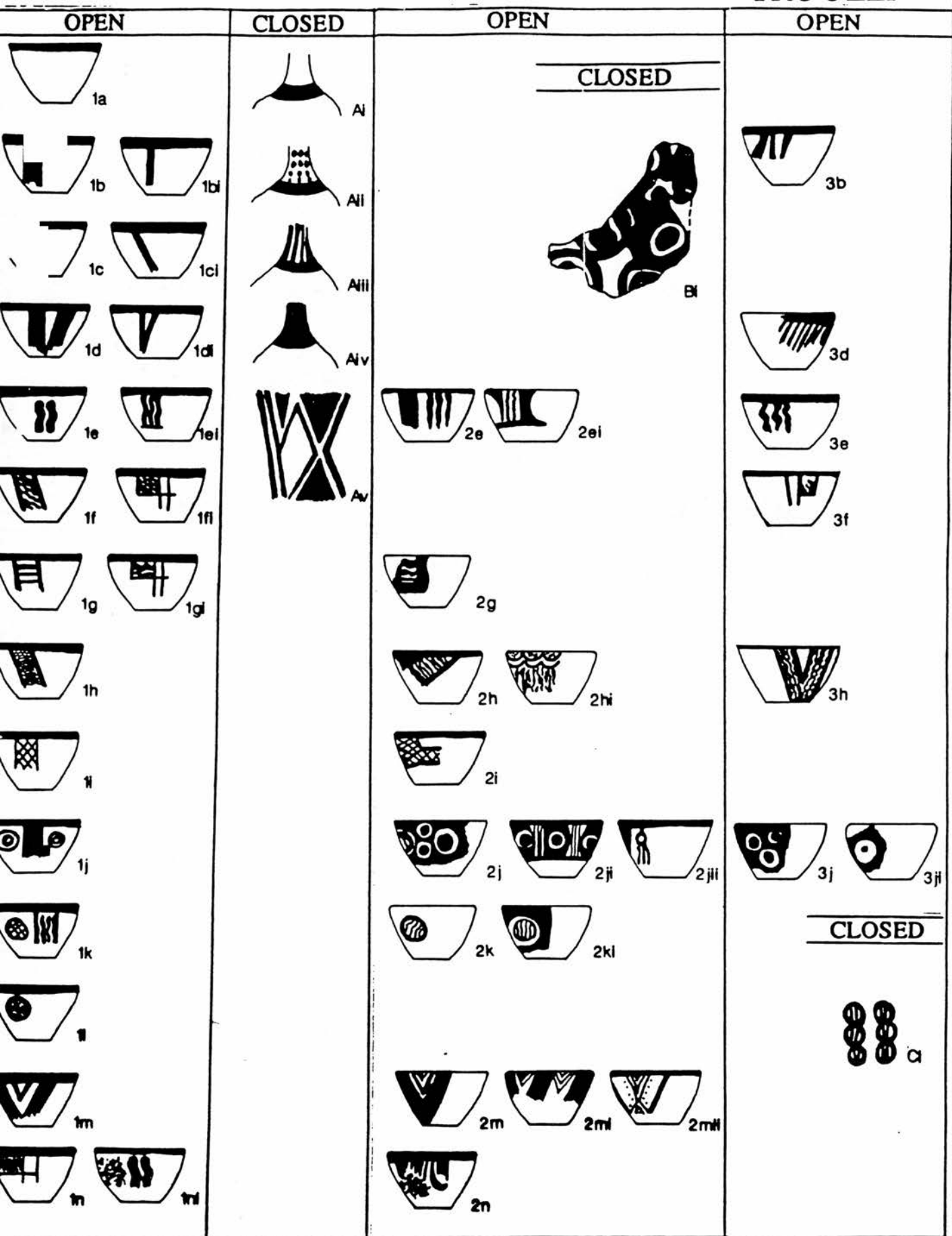
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Figure 10:

PHILIA

VRYSI

TROULLI



ΕΠΙΣΤΗΜΟΝΙΚΗ ΕΠΕΤΗΡΙΣ
ΤΟΥ ΤΜΗΜΑΤΟΣ ΑΡΧΑΙΟΤΗΤΩΝ
ΚΥΠΡΟΥ, 1992



REPORT OF THE
DEPARTMENT OF ANTIQUITIES
CYPRUS, 1992

ΕΚΔΟΘΗΚΕ ΑΠΟ ΤΟ ΤΜΗΜΑ ΑΡΧΑΙΟΤΗΤΩΝ ΚΥΠΡΟΥ
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CANADIAN PALAIPAPHOS SURVEY PROJECT: 1991 FIELD SEASON

David W. Rupp, Joanne T. Clarke, Cesare D'Annibale and Sarah T. Stewart

INTRODUCTION

The survey crews of the Canadian Palaipaphos Survey Project (hereafter CPSP) were in the field for 19 days from July 22 through August 14, 1991¹ (for work of the main phase of the CPSP between 1979 and 1986 see Rupp 1981, Rupp *et al.* 1984, Rupp *et al.* 1986, Rupp 1987).² The CPSP research zone encompasses a 364 square km area in the Paphos District in western Cyprus (Fig. 1). The primary research objectives of the 1991 field season were threefold. The principal object was to investigate Chalcolithic (Erimi Culture) settlement sites previously identified by CPSP field crews in the 1979, 1980, 1983 or 1986 field seasons or similar ones known from the work of other researchers in the CPSP research zone. The attribution of the CPSP sites to the Chalcolithic period had been made by Ms Pia Guldager-Bilde in 1984 and in 1986 after an examination of the sherds that had been collected from them in the course of the extensive surveying (see Sørensen 1983, 283-5, 291; Sørensen *et al.* 1987, 259-63). Members of the Lemba Archaeological Project advised her on these assignments from time to time and, in some cases, Mr William A. Fox's analyses of the chipped and ground stone collected at the sites augmented the basis for assignment (Fox 1987, 24-7, Ills 8-9, fig. 2). These sites were to be sampled by controlled surface collection. The aim of this research was to define more accurately the boundaries of the artifact scatter; to identify areas of higher densities of sherds and/or lithic material, and, thus, possible functional variation across the site; and to ascertain if there is apparent chronological variation in the distribution of the material across the site. In this context ceramic material collected at these sites by previous CPSP field crews was re-examined by Ms Joanne T. Clarke.

The secondary aim was to continue the extensive survey of the Dhiarizos River Valley begun in 1979. The main goal for this field work

was to identify additional prehistoric sites. The final objective was to select an Early Prehistoric site in the CPSP research zone that would be suitable for a multi-year interdisciplinary excavation project. Thus, the field work conducted in 1991 represents the final phase of the CPSP research and the logical bridge to an excavation project by the principal author at one of the sites found during the CPSP fieldwork. Excavation projects at other CPSP sites by members of the

1. The senior staff members were as follows Dr David W. Rupp (Brock University) Principal Investigator/Project Director; mr Cesare D'Annibale (Canadian Parks Service) Field Director and Lithics Analyst; Ms Joanne T. Clarke (University of Sydney) Ceramics Analyst; Ms Helen Dunlop (Canadian Parks Service) Field Office Manager; Ms Margaret E. Morden (University of Michigan) Assistant Field Office Manager and Assistant Ceramics Analyst; Dr Richard W. Parker (Brock University) General Assistant; and Ms Kristina Ålveby (Swedish Department of Antiquities) Assistant Field Director and Assistant Lithic Analyst. The basic field crew members were Ms Rachel Burch, Ms Wenda Thomson and Mr George Findlater. They were augmented from time to time by volunteers. The majority came from the WSBA Archaeological Society led by Mr Gerald F. Hennings. This field work was carried out with the permission and support of Mr Michael C. Loulloupis, Director of the Department of Antiquities of the Republic of Cyprus. The CPSP is an affiliated research project of the American Schools of Oriental Research. Our work was aided in innumerable ways by Mr Onisiphoros Loucaides, Archaeological Technical at the Kouklia Archaeological Museum. Mr Spyros Koliarios, the *demarchos* of Kouklia, helped to make our stay in Kouklia both pleasant and productive.

The research was funded primarily by a grant from the Institute of Aegean Prehistory and a grant from the Social Sciences and Humanities Research Council of Canada block grant to Brock University. In addition, the thirty five individuals who gave contributions to The Western Cyprus Fund of Brock University for the 1991 field and study seasons enabled the researchers to achieve their many goals. One donation in particular, that of Mr David MacKenzie of Ridgeville, Ontario, was crucial to the success of our endeavors. We thank him and the others for their generosity, support and foresight.

2. The final publication of this material will be in the volumes of *In the Land of the Paphian Aphrodite. The Canadian Palaipaphos Survey Project*. These are now in the final stages of editing by the principal author and Lone Wriedt Sørensen. They will be submitted for publication in the *Studies in Mediterranean Archaeology* series in 1993.

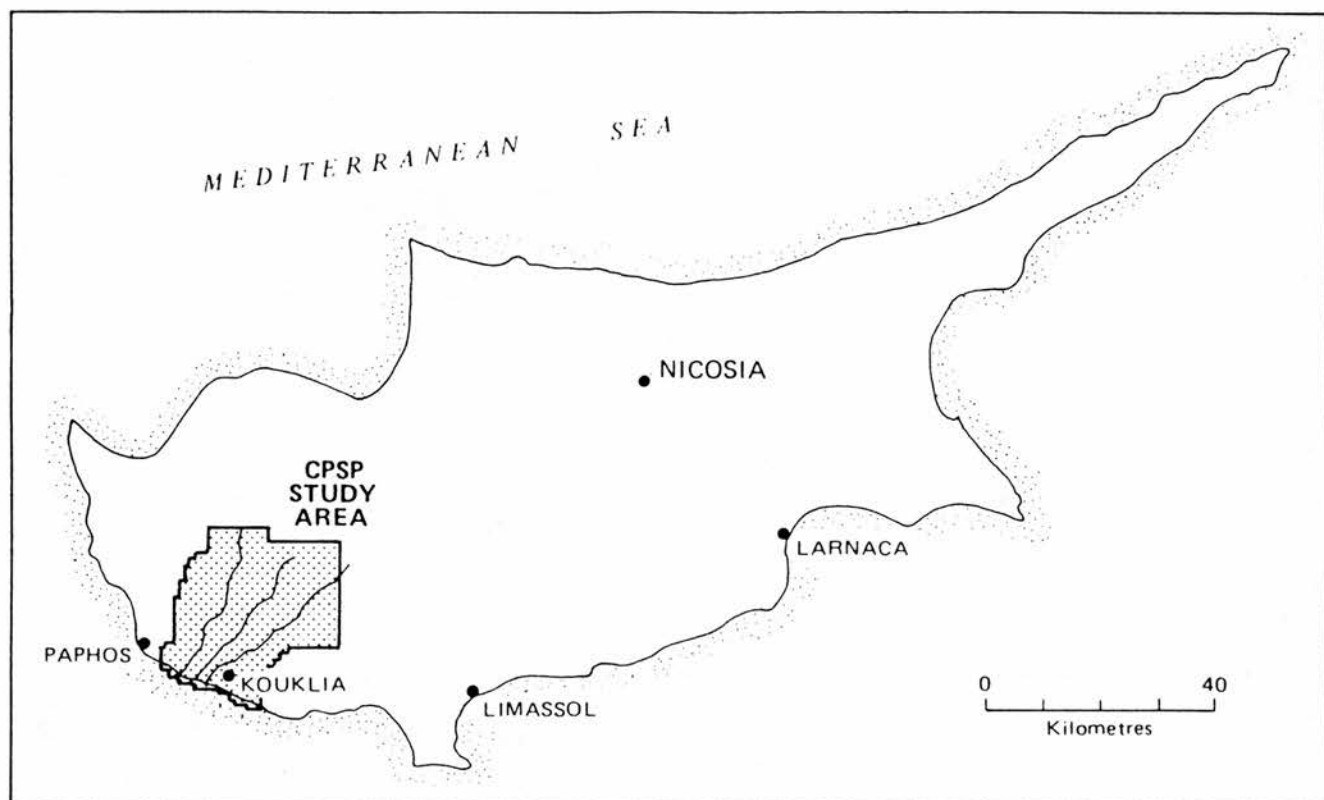


Fig. 1. Map of Cyprus showing the location and extent of the CPSP research zone (drawn by Loris Gasparotto).

91-D-1:	Marona-Kilinjiries — Hellenistic/Roman farmstead (1991 2/4.1) [CASIMAP No. 6069007] ³
91-D-2:	Ayios Yeorgios-Arkolies — Roman farmstead(?) (1991 2/9.1) [CASIMAP No. 6020001]
91-D-3:	Kithasi-Mylona — Hellenistic/Roman settlement with isolated tombs(?) (1991 3/1.1, 2.1) [CASIMAP No. 6049002]
91-D-4:	Kithasi-Phrakti tou Frangou — Hellenistic/Roman and Medieval settlement with possible prehistoric component (1991 3/8.1) [CASIMAP No. 6049003]
91-D-5:	Kithasi-Plevra — Late Neolithic settlement with hellenistic/Roman settlement over it (1991 3/8.2) [CASIMAP No. 6049004]
91-D-6:	Prastio-Old Village A — Medieval to recent settlement (1991 5/1.1, 3.1, 4.1) [CASIMAP NO. 6102007]
91-D-7:	Prastio-Ekklesies — lower Cypro-Archaic settlement (1991 5/8.3) [CASIMAP No. 6102008]
91-D-8:	Prastio-Old Village B — upper Cypro-Archaic settlement (1991 5/7.1) [CASIMAP No. 6102009]
91-D-9:	Prastio-Old Village C — Hellenistic/Roman settlement (1991 5/6.1, 7.1) [CASIMAP No. 6102010]
91-D-10:	Prastio-Katsirkes A — Hellenistic/Roman farmstead (1991 5/1.2) [CASIMAP No. 6102011]
91-D-11:	Prastio-Katsirkes B — Middle Bronze Age settlement with looted Middle Bronze Age tombs (1991 5/4.4) [CASIMAP No. 6102012]
91-D-12:	Kithasi-Old Village — Medieval to recent settlement (1991 1/1.1-2, 2.2, 3.1) [CASIMAP No. 6049005]
91-D-13:	Phasoula-Old Village — Medieval to recent settlement (1991 4/3.1, 4.1) [CASIMAP No. 6093012]
91-D-14:	Phasoula-Melanoudhia A — 3 looted Cypro-Archaic(?) rock-cut tombs (1991 4/1.2) [CASIMAP No. 6093013]
91-D-15:	Phasoula-Melanoudhia B — 2 looted Hellenistic? rock-cut tombs (1991 4/2.1) [CASIMAP No. 6093014]

Table 1. Archaeological sites discovered by CPSP survey crews in 1991.

original CPSP research team as well as by other archaeologists are anticipated in the coming years.

2. EXTENSIVE SURVEY

Five 500 x 1000m. units were surveyed by two crews in the Dhiarizos River valley (Fig. 2). The units were chosen on the basis of elevational and topographical parameters that were derived

3. CASIMAP stands for Cyprus Archaeological Survey Information Mapping Project. CASIMAP was initiated in 1986 by D. W. Rupp. The long term objective of CASIMAP is to create a detailed, accurate and up-to-date register of archaeological sites for Cyprus. The chronological range of this computerized data base is the 9th millennia cal. B.C. to the present century. The sites are organized by District and Village; within each village territory each separate site or findspot is assigned a number.

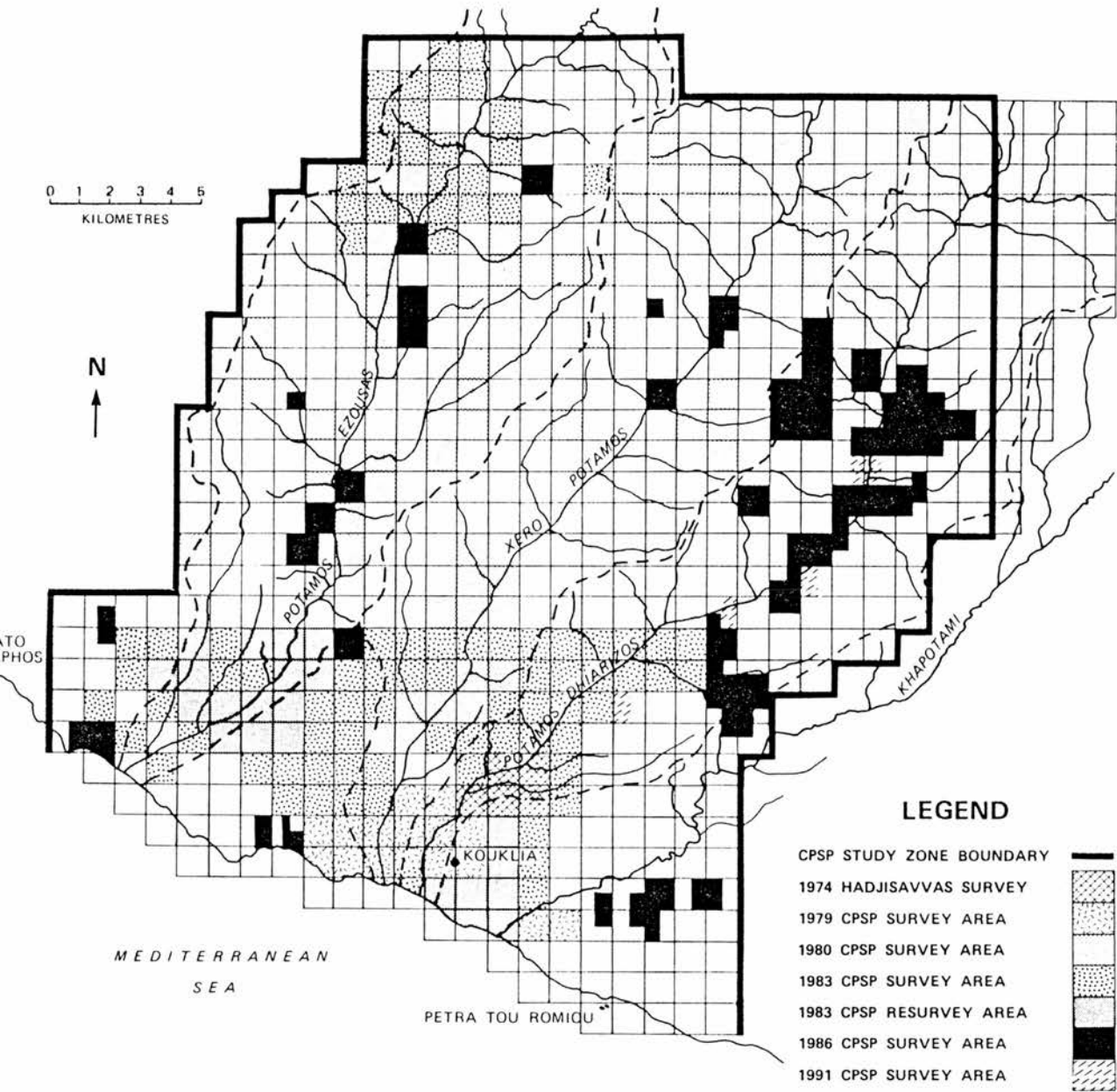


Fig. 2. Map of the CPSP research zone indicating areas surveyed between 1974 and 1991 (drawn by Loris Gasparotto).

from the positioning of previous known 4th/3rd millennium B. C. sites in western Cyprus. Approximately 2.5 square kilometres were investigated using the survey methods developed by the CPSP in the 1983 and 1986 field seasons (Rupp *et al.* 1986, 29-30; Rupp 1987, 217-8).⁴ Fifteen new sites were identified in the course of this research (Fig. 3; Table 1).

CONTROLLED SURFACE COLLECTION

The primary field work activity for the 1991 field season was the investigation of CPSP and non-CPSP sites in the CPSP research zone thought to

have been occupied in the 4th and 3rd millennia B. C. The main data acquisition strategy used was the controlled collection of artifacts and eco-facts from the surface and upper plough zone. After an initial cursory survey of a specific site 2 x 2m. squares were placed every 10m. along a series of crossing collection lines laid over the site. These lines were placed to intersect areas with high concentrations of artifacts. The length

4. The crews varied in size from 3 to 5 members. Mr D'Annibale and Ms Morden served as crew leaders. The surveying was done between July 22nd and 24th.

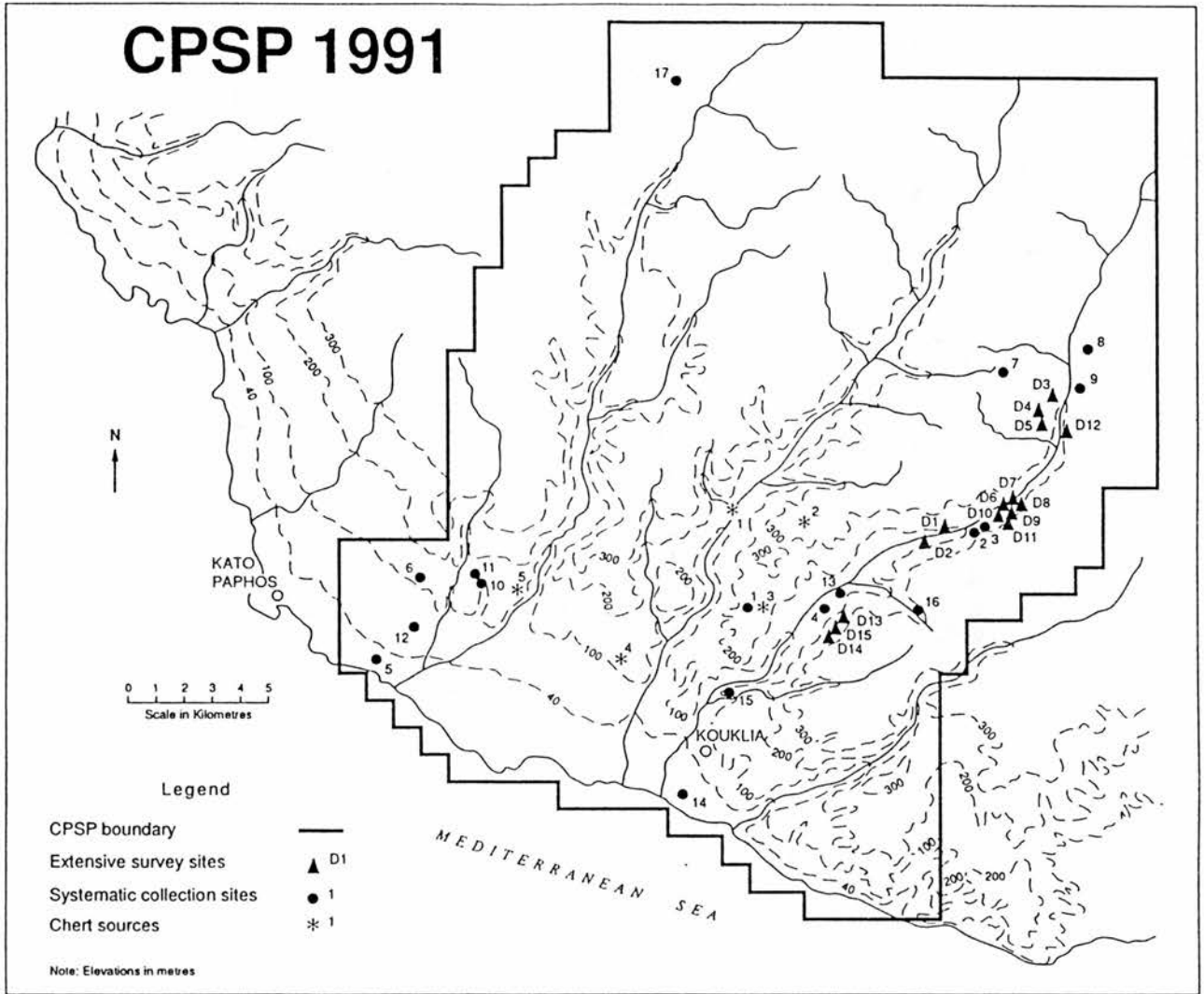


Fig. 3. Map of the CPSP research zone with the location of sites discovered during the 1991 extensive survey, the sites investigated by controlled surface collection in 1991 and chert sources referred to in the text: 1. Lefkara basal/translucent = *Nata-Yeratses*; 2. Moni = Stavrokono; 3. Moni = *Souskiou-Ayia Irini*; 4. Moni = Anarita; 5. Moni = *Argakin tou Karoti* [after Stewart 1987, Map 2] (drawn by Loris Gasparotto).

of the lines varied, most were either 50 or 100m. long. For smaller sites or for areas of larger sites with clearly visible dense artifact scatters the squares were placed every 5m. along the lines. In addition, diagnostic artifactual material seen in other parts of the site was also picked up and grouped according to its general location. For two sites, 91-9 and 91-16, because of the either sparse or spatially limited nature of the artifact scatter, or the difficult topography and/or dense vegetation a non-systematic approach was used. In these cases crew members walked across the site in a crisscrossing fashion and picked up diagnostic artifacts and ecofacts. These collections were grouped by topographical and/or agricultural field areas. These data acquisition strategies

were adopted in order to produce a maximum amount of information from each site in as efficient manner as possible which then could be compared readily to the data collected from the other sites (Redman 1987, 257-62).⁵ Seventeen sites were investigated using these two strategies (Fig. 3).

4. SITE GAZETTEER

Site 91.1: Kholetria-Ayia Irini [CPSP 79-D-15; CASIMAP No. 6110019]⁶

5. Mr D'Annibale, Ms Ålveby and/or Dr Rupp acted as field directors of this component. The crew size ranged from 5 to 15. This field work took place between July 25th and August 11th.
6. The scatter lies within the village boundaries of Kholetria not Souskiou as originally published. The area of the site was surveyed in 1983.

Topo. map: 52 IX; Coord.: 6301 4599;⁷ Topo. setting: a moderately to steeply sloping hillside near the divide between the Dhiarizos and Dhiarizos drainages; numerous terraces; Elevation: 20-284m.; Aspect: SW/W; Water: 50m. to stream bed; Present land use: vines, wheat, ruined medieval church, asphalt

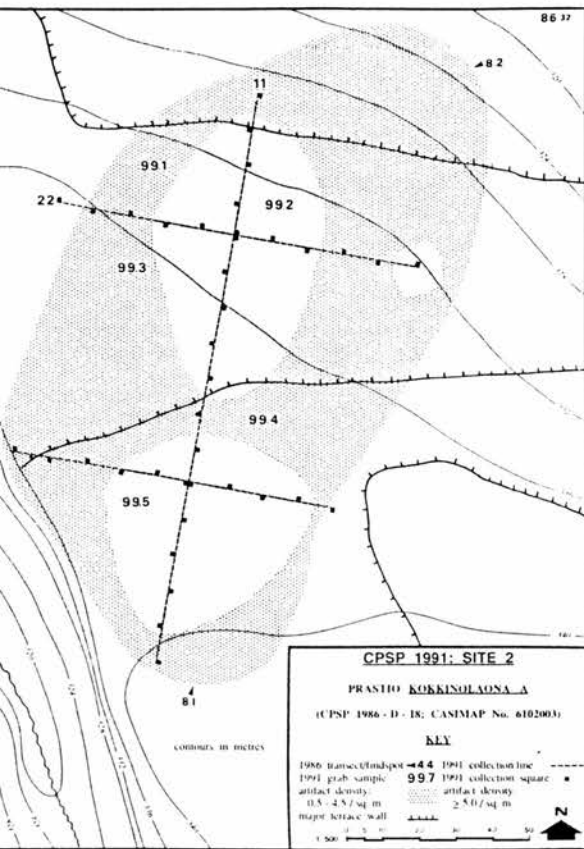


Fig. 4. Topographical sketch map of Site 91-2, Prastio-Kokkinolaona A (CPSP 1986-D-18) with the extent of the artifact scatter and other information shown (drawn by David Rupp and Kevin Fisher after a sketch by Kristina Älveby).

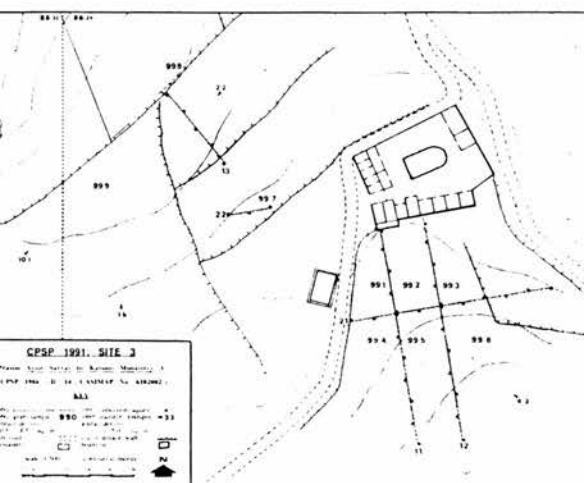


Fig. 5. Topographical sketch map of Site 91-3, Prastio-Ayios Savvas tis Karonos Monastery A (CPSP 1986-D-14) with the extent of the artifact scatter and other information shown (drawn by David Rupp and Kevin Fisher after a sketch by Cesare D'Annibale and Kristina Älveby).

road; Extent of scatter: 2.5 ha.; Occupation: Chalcolithic? and Medieval (Rupp 1981, 262).⁸

Site 91-2: Prastio-Kokkinolaona A [CPSP 86-D-18; CASIMAP No. 6102003] (Fig. 4)

Topo. map: 52 V; Coord.: 7138 4872; Topo. setting: on the top and on the gentle to moderately sloping sides of a short ridge overlooking the Dhiarizos flood plain to the north; Elevation: 323-341m.; Aspect: N/NE; Water: 30-40m. to nearest stream beds; Present land use: vines, grass/fallow; Extent of scatter: 1.6 ha; Occupation: Late Neolithic/Early Chalcolithic(?)

Site 91-3: Prastio-Ayios Savvas tis Karonos Monastery A [CPSP 86-D-14; CASIMAP No. 6102002] (Fig. 5)

Topo. map: 52 V; Coord.: 7159 4878; Topo. setting: on the top and gently sloping sides of a terraced, short ridge overlooking the Dhiarizos flood plain to the north; the ruins of the 12th/14th century A. D. monastery called Ayios Savvas tis Karonos lie immediately to the north; Elevation: 319-346m.; Aspect: NW; Water: spring outside monastery; 40-110m. to nearest stream beds; Present land use: vines, grass, fallow, scattered olives and almonds, gravel road; Extent of scatter: 2.4 ha; Occupation: Early/Middle Chalcolithic (Rupp 1987, 220).

Site 91-4: Phasoula-Mavroloizos [CPSP 79-D-14; CASIMAP No. 6093011] (Fig. 6)⁹

Topo. map: 52 x; Coord.: 6569 4603; Topo. setting: gently to steeply sloping hillside immediately above the flood plain of the Dhiarizos to the north; two broad sections parallel to the

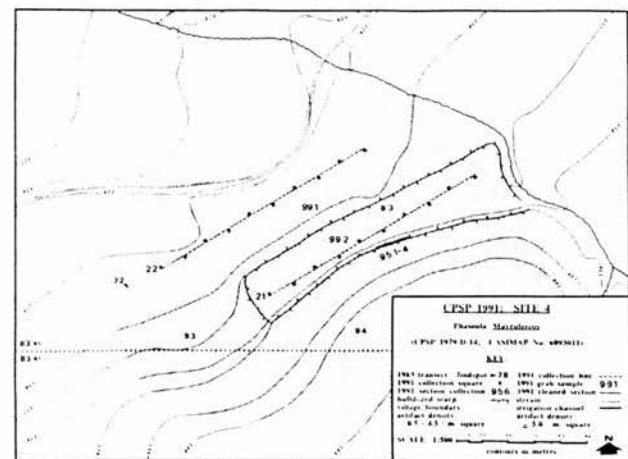


Fig. 6. Topographical sketch map of Site 91-4, Phasoula-Mavroloizos (CPSP 79-D-14) with the extent of the surface scatter and other information shown (drawn by David Rupp and Kevin Fisher after a sketch by Kristina Älveby).

7. The UTM coordinates (all VD, easterly, northerly) are for the approximate centroid of the artifact scatter.
8. The original assignment of a Chalcolithic component to this site was made by D. Rupp based on the reported find of a stone cruciform-style figurine (Paphos Museum Reg. no. 1005) at the locality of Ayia Irini in the village territory of Souskiou (Stanley Price 1979, 150, P. 60). The presence of Early Prehistoric chipped stone artifacts (see D'Annibale discussion) suggests that there was, in fact, a Chalcolithic site in this general area.
9. The area of this site was resurveyed in 1983.

slope have been bulldozed to make level fields, a 2m. high section of the site is revealed in the southern bulldozer scarp; *Elevation*: 126-150m.; *Aspect*: NW/N; *Water*: 1-5m. to stream bed; 150m. to Dhiarizos bed; *Present land use*: wheat, scrub, scattered olive, carob and almond trees; *Extent of scatter*: 1.7ha; *Occupation*: Late Neolithic/Early Chalcolithic (Rupp 1981, 262).

Site 91.5: Yeroskipou-Chouflijin tis Yermaninis A [CPSP 86-E-1; CASIMAP No. 6124011]

Topo. map: 51 XI; *Coord.*: 4932 4457; *Topo. setting*: gently sloping coastal plain near shoreline; *Elevation*: 10-15m.; *Aspect*: SW; *Water*: no definite present water course nearby, the existence of a chain of shallow "wells" of unknown date in the area of the site suggests that the ground water is near to the surface; *Present land use*: irrigated fields with same trees along field lines; *Extent of scatter*: 2.5 ha; *Occupation*: Late Neolithic (?) and Early/Middle Chalcolithic (Rupp 1987, 220; Fox 1987, 25).

Site 91.6: Yeroskipou-Argakin tou Koliokremnou [CPSP 83-E-59; CASIMAP No. 6124001] (Fig. 7)

Topo. map: 51 IV; *Coord.*: 5105 4723; *Topo. setting*: gently sloping hillside on either side of a small stream near the base of an escarpment, some terracing; *Elevation*: 87-100m.; *Aspect*: SW; *Water*: a spring lies within 20m. and a stream bed within 5m.; *Present land use*: almond orchard, wheat, grass,

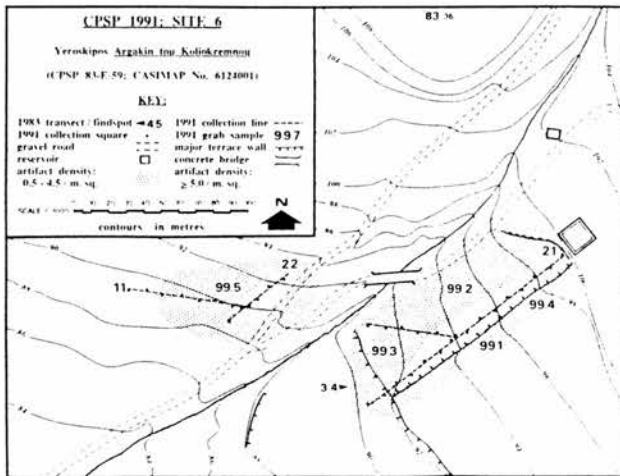


Fig. 7. Topographical sketch map of Site 91-6, Yeroskipou-Argakin tou Koliokremnou (CPSP 1983-E-59) with the extent of the artifact scatter and other information shown (drawn by David Rupp and Kevin Fisher after a sketch by Kristina Älveby).

fallow, stream bed and gravel road; *Extent of scatter*: 3.0 ha; *Occupation*: Late Neolithic/Early Chalcolithic and Late Chalcolithic.

Site 91-7: Salamiou-Stiadhin tou Arostimenou [CPSP 86-D-31; CASIMAP No. 6106002]

Topo. map: 46 XXI; *Coord.*: 7149 5491; *Topo. setting*: moderately to gently sloping hillside between two small streams; numerous terraces; *Elevation*: 612-640m.; *Aspect*: SE/S; *Water*: 2-3m. from stream beds; *Present land use*: vines, scattered olive and almond trees, fallow, asphalt road; *Extent of scatter*: 3.1 ha; *Occupation*: Middle Cypriote (Rupp 1987).

Site 91-8: Kedhares-Pezoules/Poupoutis/Menikos [non-CPSP; CASIMAP No. 6106002]

Topo. map: 46 XXII; *Coord.*: 7542 5516; *Topo. setting*: a gentle slope at the northern edge of a plateau sloping downward toward the Dhiarizos flood plain to the west, numerous terraces; *Elevation*: 460-505m.; *Aspect*: W/NW; *Water*: 220-30m. to a stream bed; *Present land use*: vines, scattered almonds and olives, fruit trees, gravel road, numerous terraces; *Extent of scatter*: ca. 6.9 ha; *Occupation*: Chalcolithic¹⁰ and Middle Cypriote.

Site 91-9: Kedhares-Kasparis [CPSP 86-D-32; CASIMAP No. 6038002]

Topo. map: 46 XXII; *Coord.*: 7465 5393; *Topo. setting*: in the saddle between an isolated hill to the west and higher ground of a ridge to the east and gently to steeply sloping hillside leading down to the Dhiarizos flood plain to the NW, numerous terraces; *Elevation*: 340-404m.; *Aspect*: N/NW; *Water*: 5-20m. to stream bed; *Present land use*: vines, grasses, scrub, dirt road; *Extent of scatter*: 1.5 ha; *Occupation*: Chalcolithic? (Rupp 1987, 220; Fox 1987, 26).

Site 91-10: Marathounda-Loukkarka A [CPSP 83-E-20; CASIMAP No. 6068001]

Topo. map: 51 V; *Coord.*: 5305 4708; *Topo. setting*: steep to moderate sloping terraced hillside and summit of a prominent hill overlooking a small stream valley leading to the Argakin tou Karkoti; *Elevation*: 160-172m.; *Aspect*: NE; *Water*: 50-150m. to stream beds; *Present land use*: vines, grasses and scrub; *Extent of scatter*: 2.9 ha; *Occupation*: Middle/Late Chalcolithic + Late Cypriote (Rupp et al. 1986, 34).

Site 91.11: Ayia Marinoudha-Kochatis Stream [CPSP 83-E-13; CASIMAP No. 6014004]¹¹

Topo. map: 51 V; *Coord.*: 5275 4732; *Topo. setting*: low ridge between the Kochatis stream and small side stream; *Elevation*: 121-123m.; *Aspect*: SW; *Water*: 20m. to streams; *Present land use*: grass; *Extent of scatter*: 0.4 ha; *Occupation*: Late Neolithic/Early Chalcolithic and Middle Cypriote.

Site 91.12: Koloni-Sirmintirin [CPSP 83-E-44; CASIMAP No. 605006] (Fig. 8)¹²

Topo. map: 51 XII; *Coord.*: 5123 4552; *Topo. setting*: gently sloping marine terrace above coastal plain to south of a small stream; *Elevation*: 43-57m.; *Aspect*: W/SW; *Water*: 5m. to stream; *Present land use*: vines, cereals, fruit trees, gravel road; *Extent of scatter*: 5.8 ha; *Occupation*: Late Neolithic/Early Chalcolithic and Middle Chalcolithic and Late Cypriote (Rupp et al. 1986, 34; Fox 1987, 25).

10. The presence of Early Prehistoric chipped stone artifacts (see D'Annibale discussion) suggests that there was, in fact, a Chalcolithic site in this general area despite the lack of diagnostic pottery. The location of a Chalcolithic site at these localities is based on the lithic and sherd material recorded by Stanley Price (1979, 142-3, P. 20) as coming from this site. He had difficulty as well ascertaining the exact location and extent of the site.
11. This area was first surveyed in 1980.
12. This site was erroneously labelled as Koloni-Ennea Skales (CPSP 83-E-18) by Fox (1987, 25).

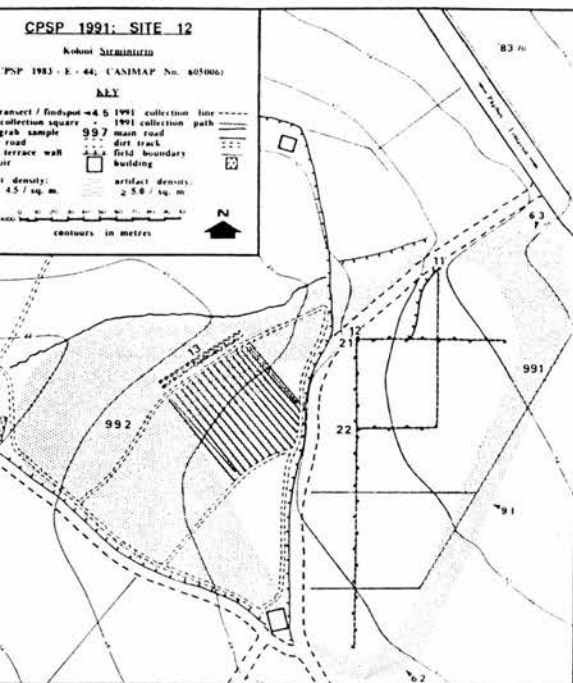


Fig. 8. Topographical sketch map of Site 91-12, Koloni-niriri (CPSP 1983-E-44) with the extent of the surface scatter and other information shown (drawn by David Rupp and Kevin Fisher after a sketch by Kristina Älveby).

91.13: Mamonía-Kalamos A [CPSP 83-D-25; CASIMAP No. 6065001]

Topo. map: 52 II + III; *Coord.:* 6644 4672; *Topo. setting:* top of a distinct ridge overlooking Dhiarizos flood plain; extensively terraced; *Elevation:* 159-165m.; *Aspect:* NW; *Water:* 25-50m. to small stream and riverbed; *Present land use:* olive trees, vines; *Extent of scatter:* 1.7 ha; *Occupation:* Early Chalcolithic(?) (Rupp *et al.* 1986, 34).

91.14: Kouklia-Liskiovouno A [CPSP 83-D-1; CASIMAP No. 6052001] (Fig. 9)¹³

Topo. map: 51 XXXII; *Coord.:* 6049 3956; *Topo. setting:* coastal plain just near present beach and stream; *Elevation:* 11-12m.; *Aspect:* W/SW; *Water:* 120m. to streambed; *Present land use:* irrigated fields; *Extent of scatter:* 1.0 ha; *Occupation:* Neolithic (Rupp *et al.* 1986, 33-4, Fig. 7; Fox 1987, 24-25).

91.15: Souskiou-Laona A [CS 2310; CASIMAP No. 6110019] (Fig. 10)

Topo. map: 52 XVII; *Coord.:* 6222 4302; *Topo. setting:* sun-steeply to moderately sloping sides of a pronounced narrow ridge between the Dhiarizos river and the Vathyn Argakin stream; *Elevation:* 140-166m.; *Aspect:* S/SE; *Water:* 50m. to stream; *Present land use:* grass, scrub, uncultivated; *Extent of*

This site was visited numerous times in 1984 and in 1986. Material collected during these visits was incorporated into the site's collection. Roger H. King (University of Western Ontario) in 1984 systematically took soil samples from the site for soil phosphorus analysis. The locality name was initially given as Liskiovouno [in Rupp *et al.* 1986, 33]. This error has been repeated by various authors since then.

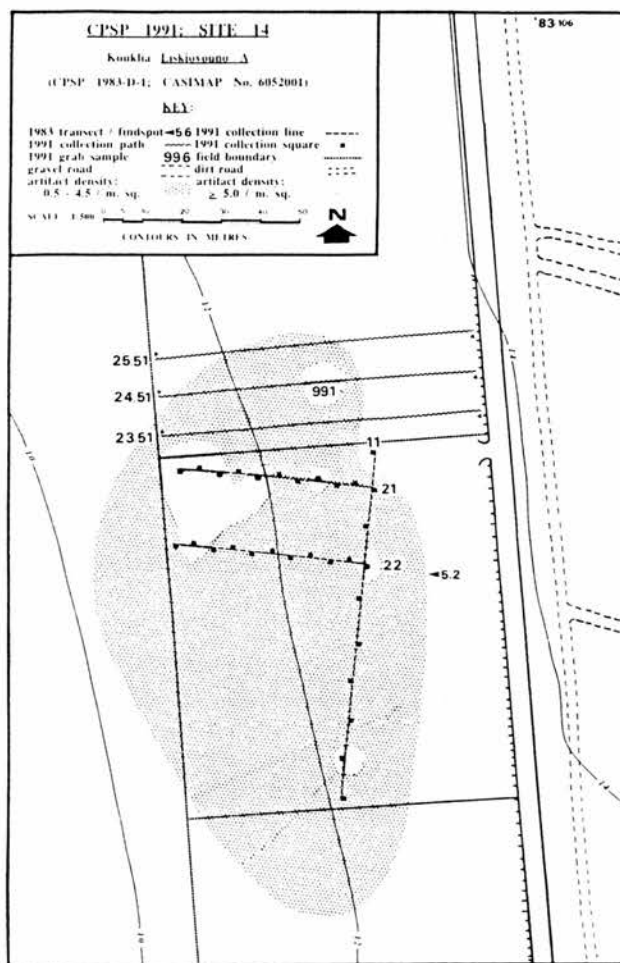


Fig. 9. Topographical sketch map of Site 91-14, Kouklia-Liskiovouno A (CPSP 1983-D-1) with the extent of the surface scatter and other information shown (drawn by David Rupp and Kevin Fisher after a sketch by Kristina Älveby).

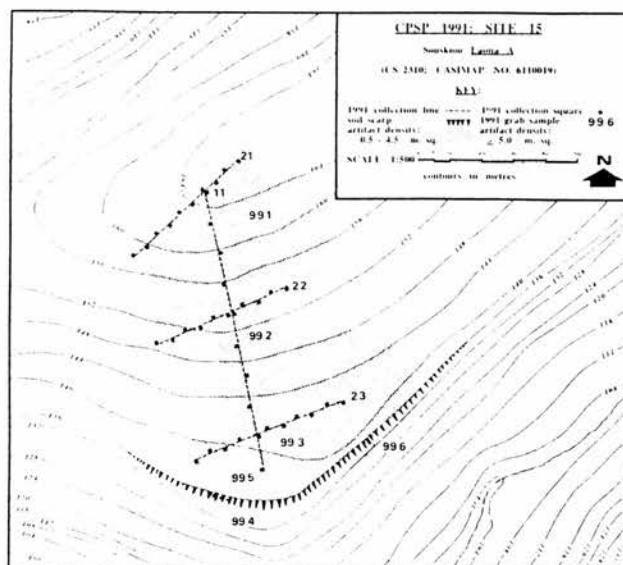


Fig. 10. Topographical sketch map of Site 91-15, Souskiou-Laona A (CS 2310) with the extent of the surface scatter and other information shown (drawn by David Rupp and Kevin Fisher after a sketch by Kristina Älveby).

scatter: 1.4 ha;¹⁴ Occupation: Middle Chalcolithic.

Site 91.16: Pano Arkhimandrita-Phroukalia A [CPSP 86-D-21; CASIMAP No. 6083015]

Topo. map: 52 XII; *Coord.:* 6912 4587; *Topo. setting:* gently to moderately sloping terraced ridge and steep sides overlooking the *Mnoukhos* Stream leading to Dhiarizos River; *Elevation:* 265-308m.; *Aspect:* SW; *Water:* 15-50m. to stream beds; *Present land use:* vines, scattered almond trees, grass, scrub; *Extent of scatter:* 1.6 ha; *Occupation:* Chalcolithic(?) (Fox 1987, 25-6).

Site 91.17: Kritou Marottou-Limnes [CPSP 80-E-45; CASIMAP No. 6054017]¹⁵

Topo. map: 35 XXXII; *Coord.:* 6009 6433; *Topo. setting:* gently sloping terraced hillside next to small ravine overlooking *Argakin tis Annous* stream; *Elevation:* 432-452m.; *Aspect:* S/SE; *Water:* 140-150m. to small stream bed; *Present land use:* vines, scattered olive trees, grass, scrub; *Extent of scatter:* 0.4 ha; *Occupation:* Late Chalcolithic(?) (Rupp *et al.* 1984, 152).

Site 91.D.5: Kithasi-Plevra [SPSP 91.D.5; CASIMAP No. 6049004]

Topo. map: 46 XXIX + XXX; *Coord.:* 7362 5304; *Topo. setting:* steeply top moderately sloping terraced hillside above a small stream leading to the Dhiarizos; *Elevation:* 344-362m.; *Aspect:* SW; *Water:* 20-30m. to a small stream bed; *Present land use:* vines, grass; *Extent of scatter:* 0.6 ha; *Occupation:* Late Neolithic and Hellenistic/Roman.

5. CERAMIC ANALYSIS AND OCCUPATIONAL ASSIGNMENTS

(by Joanne T. Clarke)

5.1 Introduction

Fifteen of the seventeen sites in the Diarizos Valley that were surveyed or re-surveyed by the CPSP in 1991 produced ceramic material that could be dated to the Early Prehistoric period. Of these there were eleven sites that were positively identified as being of the Chalcolithic period. Six of these eleven sites also produced material that was Late Neolithic in character. The ceramic material from all seventeen sites will be examined separately below. The Early Prehistoric sherds from previous years' survey that are mentioned below are identified by its registration number and publication reference where relevant. As previously noted the material from the CPSP sites recovered prior to 1991 (and referred to below) have been studied by Ms Pia Guldager-Bilde of the Institute of Prehistoric and Classical Archaeology, University of Copenhagen and will appear in Volume II of the final publication of the 1979-1986 field work entitled, *In the Land of the Paphian Aphrodite: The Canadian Palaiaphos*

Survey Project edited by Lone Wriedt Sørensen and David W. Rupp (n.d.). The purpose of these analyses are, therefore, to assess the findings from previous years' survey (Sørensen, 1983; Sørensen *et al.* 1987; Guldager-Bilde n.d.) using the material collected during the 1991 field season and to expand upon these findings where necessary in the context of a preliminary report of the additional survey work.

5.2 Ceramic Analyses by Site¹⁶

Abbreviations used (based on Dikaïos and Stewart 1962; Bolger 1988):

MR	- Red and Black/Burnish	BTW	- Painted and Combed Ware
RW	- Red on White Ware	PCb	- Painted and Combed Ware
CW	- Coarse Ware	SW	- Spalled Ware
Ch	- Combed Ware	RR	- Red on Red Ware
RB/B	- Red and Black/Burnish	BTW	- Black Topped Ware

Site 91.1: The site did not produce any material that could be identified as Early Prehistoric (Table 2). The greatest proportion of ceramic material was Mediaeval fine wares and unknown

14. S. Hadjisavvas (1977, 228, fig. 1) asserts that the artifact scatter is more extensive than this and that it extends farther to the southwest; this was not apparent in 1991.
15. The area of this site was resurveyed in 1986.
16. More than 11000 sherds were examined over a four week period. Over 80% of the sherds collected were unidentifiable coarse wares of all periods, as well as small quantities of Cypro-Archaic, Hellenistic, Roman or Medieval wares. All unidentifiable and non-diagnostic ceramic material was counted and recorded using a system that subdivided the sherds by ware, shape, vessel component and decoration. Sherds of the same generic type were then given a collective registration number before being discarded at the site of origin. Those that were diagnostic or unusual were each given unique registration numbers. Sherds of the Early Prehistoric period that were to be discarded were treated the same way. The decision to keep certain material was primarily a subjective one. There were a number of criteria used, however, to determine whether sherds were to be kept or discarded later at the site of origin. These were as follows:
 - a) One or two examples of every shape and fabric type diagnostic for the Early Prehistoric period were kept.
 - b) Well preserved decorated sherds of the Early Prehistoric period were kept, as were examples of unknown but unusual decorative schemes.
 - c) Any sherds to be drawn or photographed, regardless of whether other examples of this type had been kept, were also saved.

This strategy ensured that a good cross section of the sherdage would be accessible in future years but that the limited space within the apotheke at the Kouklia Archaeological Museum would not be taken up through the storage of unnecessary sherds. As every sherd was separately accounted for using the recording system described above reliable statistics on the total collection are available for future reference.

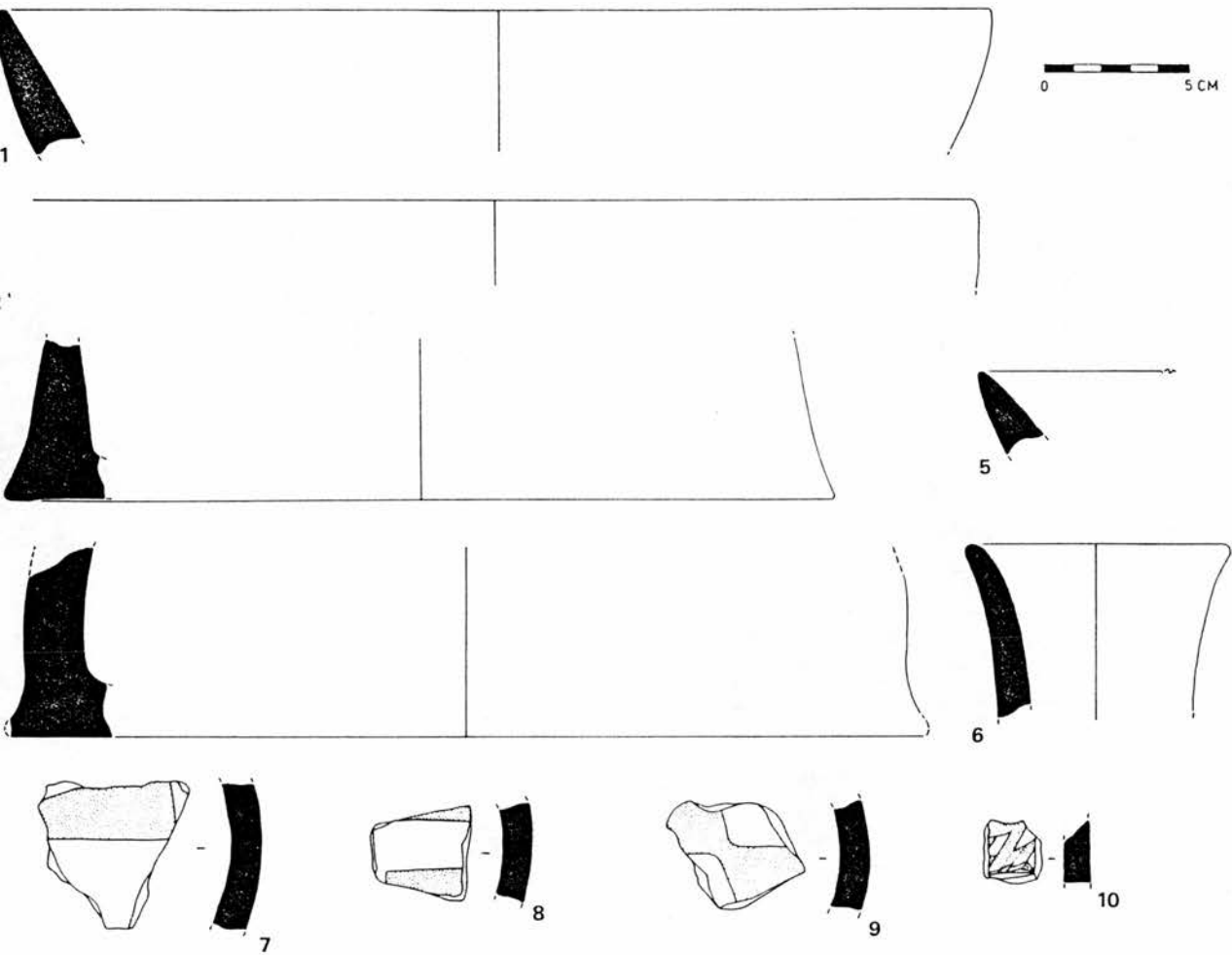


Fig. 11. Ceramic vessel profiles: 1. 91.3.22.3.7.8; 2. 91.3.21.3.17.2; 3. 91.3.21.3.7; 4. 91.3.21.1.7.1; 5. 91.3.11.5.7.1; 6. 91.3.99.5.7.2.; 7. 91.3.99.3.7.2; 8. 91.3.99.3.7.1; 9. 91.3.22.1.7.1; 10. 91.3.22.2.7.4 (drawn by Janie Ravenhurst).

arse wares of all periods. As access to the material from the 1979 field season (Rupp 1981) is not possible, the attribution of this site to the Neolithic period cannot be confirmed by the present writer based on the ceramic evidence.

At site 91.2: Less than 2% of the ceramics found (Table 2) were Early Prehistoric and all, apart from two omphalos bases belonging to open bowls, were undiagnostic MR sherds. On the basis of such a small sample it is difficult to say at what chronological period the Early Prehistoric occupation at *Kokkinolaona A* dates. The consistency of the fabric and the quality of the finish on all preserved sherds is, however, very homogeneous which may suggest that the Early Prehistoric ceramics all date to the one period. All have a relatively fine, well levigated and well fired, pinkish brown fabric (10YR 7/3 - 5YR 7/4).

SITE NUMBER	TOTAL SHERDS	EP SHERDS	DIAGNOSTIC EP SHERDS
91-1	322	0	0
91-2	406	11	2
91-3	642	286	121
91-4	143	98	24
91-5	934	201	23
91-6	581	90	5
91-7	399	0	n.a.
91-8	346	0	n.a.
91-9	51	0	n.a.
91-10	14	0	n.a.
91-11	17	16	0
91-12	3199	910	170
91-13	118	45	7
91-14	2415	99	15
91-15	211	199	32
91-16	7	0	n.a.
91-17	486	20	0
91-D-5	n.a.	5	1

Table 2. Analysis of the ceramic assemblages from CPSP sites investigated in 1991.

The surface slip may vary from red through to brown (2.5YR 5/8 - 5YR 3/4) but is usually thick and well burnished. Overall the ceramic assemblage from *Kokkinolaona A* bears a greater resemblance to the Late Neolithic and Early Chalcolithic ceramic assemblages than to the coarser, less well burnished MR wares of the Middle Chalcolithic period.

Site 91.3: This site is one of the richest Chalcolithic sites surveyed by the CPSP. It has produced large quantities of ceramic (Table 2) and lithic material, both from the 1986 survey and again in 1991. The site is predominantly Middle Chalcolithic but some earlier shapes have been recognised (Fig. 11:1, 2, 5). The most frequently occurring wares found were MR, RW, CW. Shapes include rims of straight-sided bowls, holemouths and flanged bases to Coarse Ware trays (Fig. 11:3-4). Decoration on RW sherds is primarily linear—converging bands, dot borders, checkerboard pattern and rectilinear motifs similar to motifs found on RW vessels from Middle Chalcolithic levels at *Lemba-Lakkous* (Peltenburg *et al.* 1985) and *Erimi-Pamboula* (Bolger 1988, figs 11-17) (Fig. 11:7-10). One closed body sherd of a small RW jar (91.3.99.6.7.2) has a band of running step motif around the body and shoulder of the outer surface of the vase. This motif is common in main phase Chalcolithic levels at *Lemba-Lakkous* (Peltenburg *et al.* 1985) and *Erimi-Pamboula* (Bolger 1988, fig. 4:11). Coarse ware flanged trays also occur in some numbers at *Ayios Savvas*. These trays were often slipped in a thick, soft, pink to white slip (5YR 8/2-5YR 8/3) or the clay surface was burnished to a high sheen. The technique of slipping or burnishing CW trays is a characteristic never seen in the Late Neolithic period but is common in the Early Chalcolithic period (Baird n.d.a, n.d.b).

Two different fabric types have been identified as occurring in MR and RW wares. Fabric A: this is a relatively fine, well-levigated and well-fired light orange buff fabric containing sparse concentrations (<15%) of black and grey grits. Shapes occurring in Fabric A include hemispherical bowls and platters. Fabric B: a less well-fired, dark pinkish red, coarse fabric with large grey, red and white pebbles 1-2.5mm. in diameter. The sherds in Fabric B are generally

thicker than in Fabric A suggesting that shapes in B were possibly larger. Unfortunately no diagnostics were found in Fabric B. Both fabrics occur in MR and RW sherds and, therefore, the two separate fabrics may represent a chronological or functional difference in the pottery.

The ceramic evidence from the 1986 survey supports a date in the Early to Middle Chalcolithic period for *Ayios Savvas* (Guldager-Bilde n.d.). Shapes were similar to those collected in 1991: straight-sided platters (Guldager-Bilde n.d.: 86.26.51.1.7), deep bowls or buckets (Guldager-Bilde n.d.: 86.26.51.1.6), and large ear lugs (Guldager-Bilde n.d.: 86.26.4.3.5). Decoration on RW sherds included dot borders (Guldager-Bilde n.d.: 86.26.51.1.7) lattice pattern, large rectilinear zones, and some converging bands (Guldager-Bilde, n.d.: 86.26.51.1.6).

Ayios Savvas was probably a relatively long-lived settlement. There appears to be a strong Early Chalcolithic component in the pottery repertoire with high percentages of platters and linear motifs. The site also has a definite Middle Chalcolithic horizon. Although a spatial/chronological relationship could not be recognized within the limits of the survey, three distinct sherd concentrations could be discerned. Two lie approximately 50m. to the South of the Monastery, roughly 20m. apart (11.5-6 + 21.2-4 and 12.8-10 + 99.6) and the third lies approximately 50m. to the West of the Monastery (22.2) (Fig. 5). Whether any functional or chronological difference exists between the three areas will only be ascertained through further field work.

Site 91.4: Only a small quantity of diagnostics sherds were recovered (Table 2) and all were of Late Neolithic/Early Chalcolithic date. Monochrome Red ware sherds had a relatively fine, light orange to orange brown fabric (5YR 6/8-5YR 6/4) and well burnished orange red slip (5YR 5/8-2.5YR 5/8) similar to GBW sherds found in Early Chalcolithic contexts at *Kalavassos "A"/Kokkinoyia* (author's observation; Todd 1991, 3-4), and *Kissonerga-Mylyouthkia* (Peltenburg 1987, 54). Shapes in MR and RW included straight-sided bowls and hemispherical bowls. There were also matt-impressed bases of CW flanged trays. Decorative motifs that could be

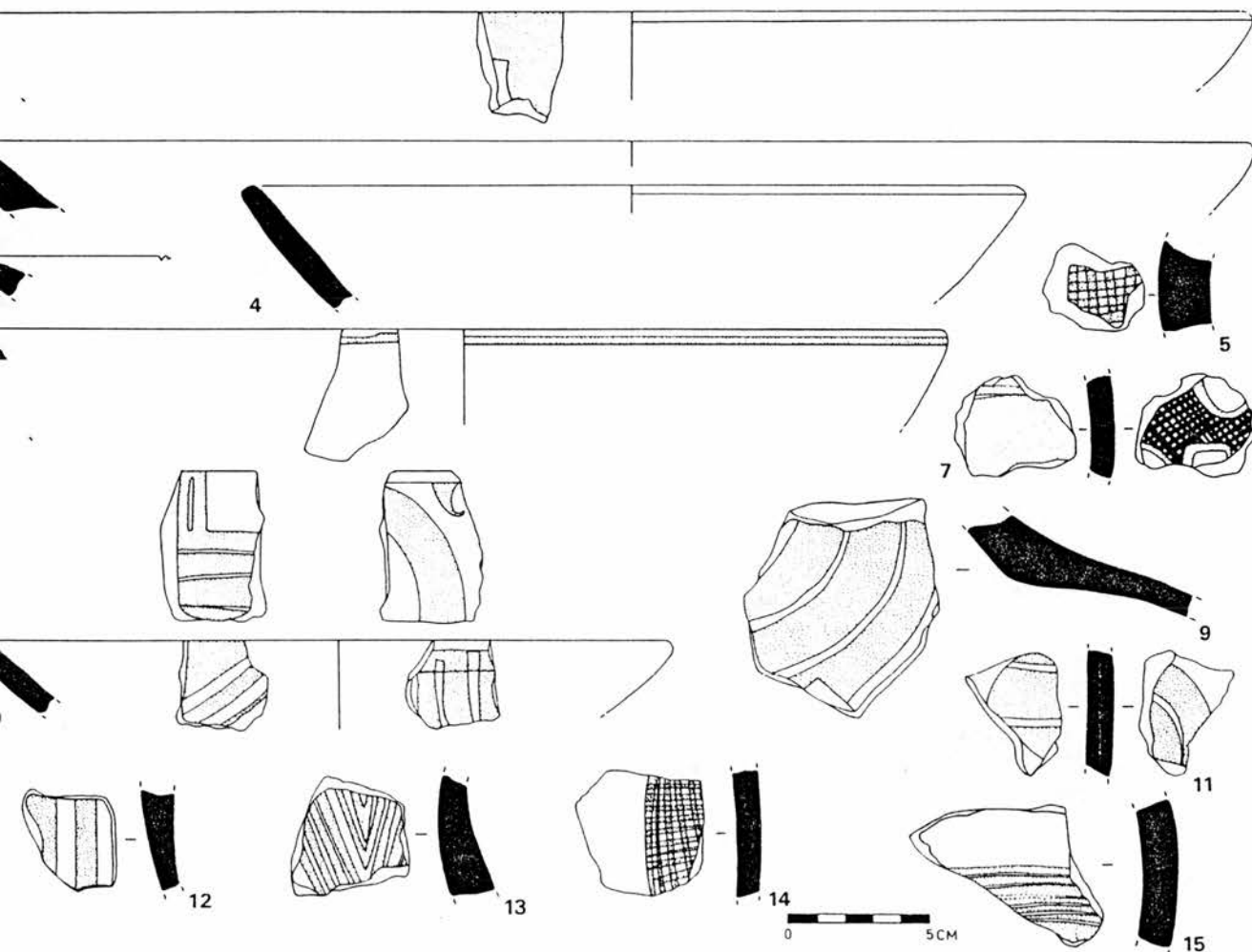


Fig. 12. Ceramic vessel profiles: 1. 91.12.13.67.7.2; 2. 91.12.22.5.7.1; 3. 91.5.23.51.7.2; 4. 91.5.23.51.7.1; 5. 9.12.13.54.7.2; 6. 91.5.11.7.4.7.1; 7. 91.12.13.56.7.5; 8. 91.12.13.56.7.2; 9. 91.12.13.56.7.3; 10. 91.12.13.54.7.1; 11. 91.12.13.56.7.2; 12. 91.5.11.2.7.1; 13. 91.12.13.61.7.1; 14. 91.12.13.53.7.4; 15. 91.12.13.55.7 (drawn by Janie Ravenhurst).

recognized were rare although broad bands occurred frequently and examples of unknown curvilinear motifs were also present in small quantities. The ceramic assemblage from the 1979 and 1983 surveys included pointed bases of flasks, deep straight-sided bowls, Combed ware bowls and open-mouthed jars.

Site 91.5: The few diagnostic sherds collected (Table 2) range from possible Late Neolithic through to Middle Chalcolithic, although the assemblage in general appears to be Early Chalcolithic in character. The high quantity of MR (over two thirds of the Early Prehistoric sample), and the predominance of platters and linear decoration are Early Chalcolithic characteristics (Fig. 2:3, 4, 6, 12). This is slightly at odds with conclusions reached by Guldager-Bilde (n.d.) and

Fox (1987, 25) who date the site to the Late Neolithic period on the basis of the presence of Combed ware. Combed ware appears in small quantities in the 1986 survey collection (Guldager-Bilde n.d.: 86.10.50.1.25) though not at all in the 1991 survey. The site has not produced any RW pottery with curvilinear motifs indicative of the Late Neolithic Broad line I style and present on western Late Neolithic sites such as *Peyia-Elia tou Vatani I* (Baird 1985, 342). This factor alone would support a date slightly later than *Peyia*.

Site 91.6: The Early Prehistoric pottery from the site is very mixed (Table 2). The MR sherds were early, hemispherical bowls with flattened rims and some platters. There are also Early Chalcolithic type CW flanged trays with thick

pinkish white slips (5YR 8/2-5YR 8/3). Alongside the Late Neolithic/Early Chalcolithic wares, there are Late Chalcolithic Red and Black/Burnished body sherds and the rim of a Black Topped ware bowl. The finds from the 1983 survey are also very mixed with both GBW and RB/B appearing in small amounts (Guldager-Bilde n.d.). As the quantity of material found is small it is difficult to make any assumptions about the duration of the site. There seems to be a puzzling lack of Middle Chalcolithic material, which may be the result of differential retrieval. The site was either long-lived with a Middle Chalcolithic horizon which so far has eluded us or we have a primarily Late Neolithic/Early Chalcolithic site with re-occupation at the end of the Chalcolithic period.

Site 91.7: This site produced Middle Cypriot ceramics only, including Drab Polished Blue Core ware, Red and Black Polished and Red Slip wares.

Site 91.9: The sherd sample was extremely worn and abraded. The presence of two Drab Polished Blue Core ware sherds and what may be a Red Slip body sherd suggests a Middle Cypriote date for the site.

Site 91.10: No ceramic material dating to the Early Prehistoric period was collected during the 1991 survey (Table 2), and, therefore, the attribution of the site to the Chalcolithic period can only be made on the lithic evidence and the ceramics from the 1983 survey. Ms. Guldager-Bilde has attributed the site to the Middle and Late Chalcolithic period (Guldager-Bilde n.d.). Based on the writer's own observations of the earlier survey material, *Loukkarka A* is indeed a Late Chalcolithic site. Notable finds from the earlier survey include examples of Red and Black/Burnished ware, MR and Spalled ware.

Site 91.11: The site is primarily Middle Cypriote (Rupp *et al.* 1985). No diagnostics of the Early Prehistoric period were collected during the 1991 survey season (Table 2). The sample from the 1983 survey season was larger and included GBW and MR body sherds plus a rim to an hemispherical bowl. The presence of GBW (a fine light orange fabric and a well-defined grey core), suggests there was at least an early occupation of

the site—certainly the very end of the Late Neolithic into the Early Chalcolithic.

Site 91.12: Like *Ayios Savvas*, this site has produced large quantities of ceramic material dating to the Middle Chalcolithic period (Table 2). It has also turned up sizable amounts of Late Neolithic and Early Chalcolithic ceramics. Monochrome Red ware accounted for over half of the Early Prehistoric ceramics collected. Shapes were varied and included hemispherical bowls, platters (Fig. 12:1,2), large storage vessels, pointed bases to flasks, and holemouth bowls or buckets. Two fabric types could be identified. The most common occurred in both MR and RW sherds. This was a relatively hard, slightly gritty, orange to pink fabric (2.5YR 6/8-5YR 5/8) with a heavy density (>70%) of quartz grits and havara 0.1-1.5mm. diameter. What is particularly interesting about this fabric is that it bears a striking resemblance to fabrics found at *Kissonerga-Mosphilia* that have associated with Early Chalcolithic wares and shapes (author's observation). At *Sirmintirin* this fabric is found associated with shapes and decorative motifs that could be Early Chalcolithic. Unfortunately, it is impossible to say more than this on the basis of such a small sample. One other fabric has been identified at *Sirmintirin*. This is a fine-well fired light orange buff fabric (2.5YR 6/6-7.5YR 7/4) with a sparse amount of small grey and black grits. This fabric is much finer than the first and is often associated with RW sherds of undoubted Late Neolithic date (91.12.13.55.7.2, [Fig. 12:11]; 91.12.13.56.7.3, [Fig. 12:9]). It is interesting to note that the four Cb ware sherds collected were all of the first fabric type. Red-on-White ware can be divided into Late Neolithic/Early Chalcolithic and Middle Chalcolithic on the basis of morphology and decorative motifs. Shapes in RW include hemispherical bowls, platters and large storage vessels or possible Middle Chalcolithic type as evidenced by the presence of very thick sherds (3cm.) (Fig. 12:5). The most common decorative scheme is the broad band or zone accounting for 66% of the RW motifs. Sherds also were collected with curvilinear and semi-curvilinear bands 8% (Fig. 12:8-11), parallel thick and thin multiple lines 8% (Fig. 12:13), converging lines 10% (Fig. 12:13) dots and lat-

8% (Fig. 12:5,7). Unknown from the 1991 collection but appearing in some quantity in the 1983 material is GBW (Fox 1987; Sørensen *et al.* 1987; Guldager-Bilde *in d.*). There is also a greater quantity of CB ware which led Guldager-Bilde and Fox to classify the site as Late Neolithic (Fox 1987, 25; Guldager-Bilde *n.d.*). The presence of Chalcolithic traits, such as thin line lathe (70.6.3.28) pointed bases and large storage vessels in the 1983 and 1991 survey assemblage suggests the site is a multi-phase site similar to *Assonerga-Mosphilia*.

Sherd distribution was uneven and does not offer much information about the spatial structure of the settlement. The main bulk of Early Prehistoric material, Late Neolithic to Middle Chalcolithic, was found in a vineyard to the west of the main survey area on a gentle slope down a stream bed.

Site 91.13: Overall the quality of the fabric and the finish of the Early Prehistoric sherds suggest a Chalcolithic date for this site but the small number of diagnostics inhibits closer dating (Table 2). The range of shapes from both the 1983 survey and the 1991 survey were very limited, only platters and CW flanged trays. Guldager-Bilde based, on the presence of GBW in the 1983 survey collection, has dated the site to the Early Chalcolithic period (Guldager-Bilde *n.d.*: 106.5.2.25.1).

Site 91.14: Only a small percentage of sherds were diagnostic. Shapes were few and nearly always open-hemispherical bowls, straight-sided deep bowls, platters. Decoration on RW sherds included parallel lines, converging lines and broad bands. One PCB sherd belonging to a closed vessel was found. Its surface decoration consisted of broad bands combed in wavy parallel lines, common at *Sotira-Teppes* (Dikaios 1961) and *Philia-Drakos A* (Watkins 1970). Combed ware sherds were of classic *Sotira* type with a thick highly burnished slip. Neither these decorative motifs nor the morphology would be out of place in a Late Neolithic assemblage. The 1983 survey season was more successful and a greater range of material was collected. In all, about 40-50% of the material stored in the apothecary from the 1983 season is Late Neolithic in

character. Combed ware sherds (Guldager-Bilde *n.d.*: 106.5.2.35, 106.5.2.278) and MR hemispherical bowl sherds are common (106.5.2.210, 106.5.2.213). Guldager Bilde also notes RW sherds with close line decoration, which she says secures a multi-period dating for the site. The further presence of picrolite cruciform figurine (Fox 1987, 24-25 and 27, Ill. 8-5) confirms this. One sherd (86.26.51.1.1) is an unusual combination of sloppy dot border and linear decoration and may be a late example; however, a dearth of any classic Middle Chalcolithic diagnostic material in the 1991 survey sample prevents the present author from confirming Guldager-Bilde's attribution. Again, even though the ceramics from *Liskiovouno A* seem ultimately Late Neolithic in character, there is an absence of curvilinear motifs in the RW motif repertoire. Whether this phenomenon is due to the limitations of retrieval methods imposed by survey or spatial and chronological facts is hard to gauge on the basis of survey material.

Site 91.15: *Souskiou* is a particularly rich Middle and possible Late Chalcolithic site better known for its cemetery than the settlement (Maier and von Wartburg 1985; Christou 1989). Ceramics, ground stone, and chipped stone are abundant on the surface (Table 2). The ceramic assemblage is unusual. A significant proportion of diagnostic material belongs to open and closed vessels of Red on Red ware (Fig. 13:12, 13). This ware has been noted in small quantities on more easterly Chalcolithic sites such as *Kalavassos "B"/Pamboules* (Dikaios 1962, 111f.; Todd 1991, 3-4) and *Erimi-Pamboula* (Bolger 1988, 38f.). It is characterised by the application of a thin red wash over a cream slip. The pot is then painted in thin parallel or converging lines in the same manner as RW. The technique seems to be a variant of RW, although it is not as long lived, occurring in the lowest levels at *Erimi* and almost completely disappearing by the time RW has hit its zenith during the "main phase" Chalcolithic period. Its presence at *Souskiou* would suggest that the site was occupied as early as the latter stages of the Early Chalcolithic period (Bolger 1985, 25f.). Particularly unusual is the fact that this ware has not been found on any other survey site within the *Dhiarizos Valley*. It is also virtual-

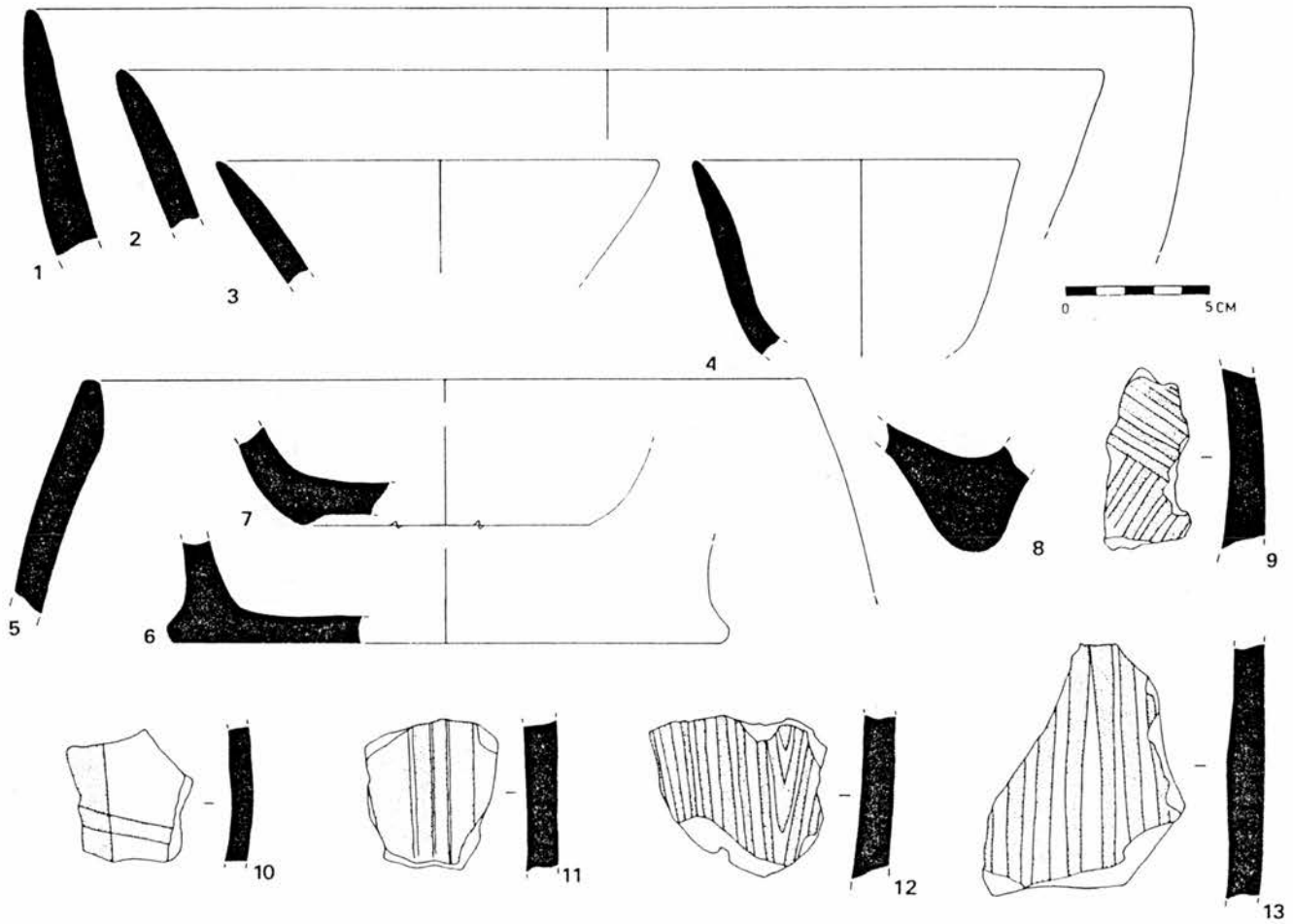


Fig. 13. Ceramic vessel profiles: 1. 91.15.99.6.7.10; 2. 91.15.99.6.7.3; 3. 91.15.99.6.7.4; 4. 91.15.99.6.7.1; 5. 91.15.99.2.7.1; 6. 91.15.99.6.7.5; 7. 91.15.99.6.7.11; 8. 91.15.10.6.7.2; 9. 91.15.99.6.7.9; 10. 91.15.99.6.7.7; 11. 91.15.99.6.7.6; 12. 91.15.99.6.7.15; 13. 91.15.99.6.7.13 (drawn by Janie Ravenhurst).

ly unknown from the "Lemba Cluster" sites (Bolger 1987), and other western Cypriote Chalcolithic sites identified by survey. For this reason it could possibly be concluded that Red on Red ware is not indigenous to the west of Cyprus and may represent evidence for contact with the east. Another unusual sherd is a flanged base of a MR tray, a shape usually reserved for CW (Fig. 13:6). The extremely fine, well levigated reddish brick fabric, the orange, highly burnished surface and the thick even paint resembles GBW but the shape is not indigenous to the West; however, Dikaios has recorded similar Red Slip bowls at Erimi (Dikaios 1962, fig. XXXVIII:3). The Red on White motif repertoire is conservative with close line lattice motif (Fig. 13:9) and large rectilinear motifs dominating. Shapes too are conservative but still fairly indicative of the Middle

Chalcolithic period; pointed bases to flasks (Fig. 13:8), flanged CW trays, platters (Fig. 13:5) and deep holemouth bowls are all represented. The rim of a small, thin-walled, tulip-shaped bowl is the sole representative of a possible Late Chalcolithic horizon (Fig. 13:4). Evidence from the near tombs of Souskiou-Vathyrkakas, however, indicates that Late Chalcolithic occupation existed in the area (Maier and von Wartburg 1985; Christou 1989).

Site 91.16: Again very little ceramic material was collected from this site during the 1991 survey (Table 2) and none that could be said to be Early Prehistoric. The results from the 1986 survey were slightly more promising with a small quantity of MR ware collected. Guldager-Bilde (n.d.) dates the site to the Chalcolithic period but agrees there is not enough evidence to be more

ific.

91.17: The occupation is tentatively called the Chalcolithic here on the basis of earlier survey material (Rupp *et al.* 1984). On preliminary examination of the 1980 survey material by the present writer (Table 2), this conclusion could be substantiated.

91-D-5: This site was found during the course of the 1991 extensive survey and was briefly mentioned at the beginning of this report. The prehistoric closed body sherds were recovered and all can be dated on the basis of fabric and finish to the Late Neolithic period. One CB sherd is particularly well preserved and has a thick, highly burnished, reddish brown paint (5YR 5/8-5YR 3/4) that has been scraped away in wavy parallel bands by a multi-pronged comb-like device. A further collection using intensive sampling methods would no doubt glean more information on the nature of the site, however the sherds already collected are indistinguishable from Late Neolithic ceramics found at other Cyrenaica Culture sites.

Discussion

Eleven sites in the coastal plain and in the Sirizos river valley produced evidence for occupation from the Late Neolithic period through the end of the Chalcolithic and into the Early Bronze Age period. Some sites appeared to have been occupied for more than one phase although from does one find evidence for multi-phase occupation such as *Kissonerga-Mosphilia*. There is strong evidence for substantial occupation in the region at the beginning of the Chalcolithic period continuing on many sites into the Middle Chalcolithic. There is also evidence on at least five sites for Neolithic occupation, proving beyond any doubt that the early inhabitants of Cyrenaica had well and truly colonized the west by the Middle Neolithic phase.

There is a remarkable homogeneity in the ceramic assemblages between sites. Fabrics and shapes were similar for assemblages of roughly the same phase, suggesting that most sites had access to a limited number of clay and pigment sources within the valley and were probably manufacturing much of the pottery themselves.

The similarity in percentages of ware types occurring and the decorative motifs used on RW pottery at many sites also points to close intersite contact within the region. The ceramic assemblages were generally also very conservative and very few sites have more than a basic ware and shape repertoire. Monochrome Red ware is the most prolific ware on all sites except *Ayios Savvas*.

The Late Neolithic period is evidenced by the presence of Cb ware and classic Late Neolithic shapes such as hemispherical bowls. On all sites having a Late Neolithic component, however, there is a surprising lack of curvilinear motifs indicative of the northern Ceramic Neolithic Culture and found on western sites such as *Peyia-Elia tou Vatani I* (Baird 1985). *Sirmintirin* alone has a small percentage of RW sherds with these curvilinear designs. Without further survey and excavation it is difficult to predict whether differences in ceramic assemblages among the sites are the result of diachronic or spatial considerations or both.

Most sites exhibit a strong linearity in their RW motif repertoire—broad bands, parallel and converging bands and rectilinear zones accounted for well over half of the recognisable motifs. In many cases this popularity could be attributed to the presence of an Early Chalcolithic horizon. For sites that are primarily Middle Chalcolithic however, we can only assume this phenomenon is due partly to a conservatism of the potters. The absence at many sites of more elaborate or intricate motifs which are often found in the RW repertoires of sites with a Middle Chalcolithic phase is reminiscent of *Lemba-Lakkous* where architectural motifs such as boxes around spouts and handles, rim and base bands, etc., are more common than at *Kissonerga-Mosphilia* and *Erimi-Pamboula* where more dynamic and elaborate motif repertoires are favoured (Bolger 1991). Vessel shapes are also limited with open shapes being the most common. Straight sided bowls and platters dominated the assemblages of most sites, although holemouth jars, pointed based flasks and flanged CW trays do occur in some quantity.

Separate mention should be made of the Mid-

dle Chalcolithic site, Souskiou-*Laona A*. The material collected from this site is startling for its complete dissimilarity from the ceramic assemblages of other sites in the region investigated. While motifs are still primarily linear, the ware types are much more varied, the vessels are better made, the shapes are not diverse and the fabrics of most of the wares bear little resemblance to what we find at other Middle Chalcolithic sites such as *Ayios Savvas* or *Sirmintirin*. Such a strong difference among sites, no more than 20km. apart, would normally suggest a chronological disparity. In this instance, however, it would seem that another explanation must be sought.¹⁷

6. LITHIC ANALYSES (by Cesare D'Annibale)

6.1 Introduction

The systematic surface collection of seventeen Chalcolithic sites in the CPSP research zone produced a controlled sample of artifacts for comparative analysis. The sampling procedure used during the 1991 field season was not only effective in identifying activity loci on an intra-site level, but also formed the basis for an inter-site comparison of artifact assemblages on a regional scale. Geographical setting of the sites was also considered to identify functional variabilities between coastal lowland and interior upland assemblages.

Stone artifact recovery ratios for sites ranged anywhere from 2 to 17 artifacts per 2m. collection unit. The amount of stone artifacts, however, cannot be taken as a true indicator of on-site utilization. Sites 91-4 and 91-5 illustrate this point (Table 3). Each site had roughly the same number of collection units; however, the artifact return from site 91-5 was substantially higher. Is the discrepancy between the two sites a result of mere bad luck in the location of the collection units for site 91-4 or are the values for site 91-5 indicative of a higher level of lithic utilization? Recovery rates of lithic material are affected potentially by a number of variables:

i. The random nature of the archaeological survey procedure. While chipping stations were often identified during the initial survey, the collection units did not always land on them.

- ii. Recent agricultural activity and its frequency. Ploughing depth/disturbance from ploughing is inconsistent as it sometimes touches bedrock on a hilltop or barely scrapes the cultural horizon lower down a slope near terrace walls.
- iii. Diversity in agricultural techniques employed on fields within the boundaries of a particular site. The inherent differences among recently ploughed vineyards versus an abandoned vineyard, fallow or an irrigated field, etc., will no doubt upset the balance for empirical valuations.
- iv. The removal of larger artifacts from the surface (i.e. querns, axes, etc.) during recent agricultural activity. Larger groundstone artifacts will invariably be recovered from field or boundary walls, or found embedded in terrace walls.
- v. Smaller artifacts tend to filter down through the ploughzone. A true representation of certain artifact classes within the lithic reduction sequence, such as retouch flakes, therefore, will be harder to ascertain.

The preliminary analysis of lithic material from six of the seventeen sites was completed during the field season.¹⁸ This involved a basic grouping of the chipped and ground stone artifacts according to their raw material, reduction stage, and function (due to time restrictions, a complete technological study was not attempted). A total of 1,856 stone artifacts (Table 3) were categorized using these attributes (see Tables 4-7). From the analysis of the material, it is apparent that although most sites exhibit a number of activities requiring stone tools some sites show an obvious trend towards specialization. These trends may be dependent on locational criteria.

17. The fall, 1991 excavations at the Souskiou-*Vathyrkakas* cemetery by Dr Demos Christou of the Department of Antiquities and Dr Edgar J. Peltenburg of the University of Edinburgh should shed more light on this and other problems.

18. Due to time restrictions, priority for the initial analysis was given to the material from sites where site integrity combined with the ceramic evidence suggested a high potential for excavation.

ΕΠΙΣΤΗΜΟΝΙΚΗ ΕΠΕΤΗΡΙΣ
ΤΟΥ ΤΜΗΜΑΤΟΣ ΑΡΧΑΙΟΤΗΤΩΝ
ΚΥΠΡΟΥ, 1993

REPORT OF THE
DEPARTMENT OF ANTIQUITIES
CYPRUS, 1993

ΕΚΔΟΘΗΚΕ ΑΠΟ ΤΟ ΤΜΗΜΑ ΑΡΧΑΙΟΤΗΤΩΝ ΚΥΠΡΟΥ
ΤΥΠΩΘΗΚΕ ΣΤΑ ΤΥΠΟΓΡΑΦΕΙΑ ΖΑΒΑΛΛΙΣ LITHO LTD., ΛΕΥΚΩΣΙΑ

1993

THE FIELD SURVEY OF KALAVASOS-PAMBOULES

(PLATE I)

Joanne Clarke and Ian A. Todd¹

INTRODUCTION

The site of Kalavassos-*Pamboules* lies on the side of the Vasilikos valley, c.3km. SE of the site of Kalavassos, immediately south of the junction of the Kalavassos-Zyyi and the old Nicosia-Limassol roads (Fig. 1 and Pl. I: 1).² It comprises a low plateau overlooking the valley, c.1km. north of the excavated Neolithic site of Kalavassos and 600m. south of the excavated site of Kalavassos-Ayious. The site was initially reported by the archaeologist Dikaios who undertook trial excavations there in 1939 and 1947. He subsequently dated the site to his "Chalcolithic I" period (Dikaios 1954: 204). Following the inception of the Vasilikos Valley Project in 1976, a surface examination and collection of the area of the site has been carried out at intervals. Since the final publication of the material collected during the field survey of the Vasilikos valley as a whole is not anticipated in the immediate future, the writers considered that publication of preliminary notes on the pottery collection at *Pamboules* might be of assistance to those undertaking research on the Chalcolithic period in other parts of the Island. The recent research carried out in the Lemba-Kissonerga area of the Paphos District has greatly contributed to the recognition of the phases of Chalcolithic occupation which had not previously been identified in the Vasilikos valley,³ and it is hoped that a fuller picture of the Chalcolithic period in the valley may be forthcoming from future fieldwork.

THE SITE

The locality *Pamboules*⁴ (named *Pamboulaes* on the Cadastral Plan LV. 20 and *Pamboulos* by Dikaios in his 1962 publication) lies at an elevation of c.100m. at the north end of an extensive plateau (oriented NNW-SSE) which is bordered by the Vasilikos river valley on the west and by another, less well defined broader valley on the east. Immediately to the north of *Pamboules* is a small, terraced area occupied by the old Limassol-Nicosia road as

it ascends toward the east from the Vasilikos valley floor. To the north of the gully lies the site of *Ayious* which represents a northward continuation of the *Pamboules* plateau (Pl. I: 1). The terrain then gradually rises northwards to the hills around Kalavassos village and the foothills of the Troodos mountains beyond. To the south of the *Pamboules* locality the plateau gradually loses height until it descends to the coastal strip just north of the British East Mediterranean Relay Station. Although the exact limits of the plateau as a whole are somewhat imprecise in places, the area of high ground measures c.2km. (NNW-SSE)x700m. (NE-SW at the north end).

The north end of the plateau represents a strategic position overlooking the valley with a fine view northwards to Kalavassos village and the Troodos mountains (Pl. I: 2). The top of the plateau is elevated c.40m. above the river which meanders 100-500m. to the west. The west side of the plateau sloping down to the Vasilikos river is very steep, but there is only a gentle slope to the north down to the area of the road junction, and to the east down to the Zyyi road and beyond. Much of the plateau, including the whole of the *Pamboules* area, is nowadays under cultivation, and scattered carob trees occur throughout the area. Until recently cereals were widely grown, but the construction of an irrigation system in 1986 has made possible the growing of water melons and other irrigated crops.

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1. Sections 1 through 5 of this report were written by Ian A. Todd, in some cases using ceramic information supplied by Joanne Clarke, and Section 6 by Joanne Clarke.
 2. 1:5,000 Topographical map reference on sheet 55/XII: WD286453; the locality is named.
 3. The writer is most grateful to Drs E. J. Peltenburg and D. Bolger who have both examined sherds from the Vasilikos valley at various times.
 4. Hereafter the localities named all lie within the village lands of Kalavassos unless otherwise stated, e.g. *Mari-Mesovouni*.

The area has also been subjected to Land Consolidation, resulting in further disturbance of the site with the construction of a network of small access roads.

Ancient settlement is well attested in various different parts of the plateau. No conclusive evidence has been found for Aceramic Neolithic occupation, although fragments of a stone bowl and a few other stone artifacts recently found at *Sokopra*, a predominantly Roman site on the west side of the plateau 1.5km. south of *Pamboules*, are suggestive of the use of the plateau in this early phase.⁵ Ceramic Neolithic utilization is indicated by the remains excavated by Dikaios at the *Kokkinoyia* locality (his Kalavassos Site A⁶), c.450m. SE of the NW edge of the plateau at *Pamboules*, in addition to the earliest evidence from *Pamboules* itself. Following the Chalcolithic occupation at *Pamboules* there may be a gap in occupation in the Early Bronze Age, but the nature of the Early Bronze Age in the valley as a whole remains to be clarified.⁷ A scatter of Middle and Late Bronze Age sherds at *Pamboules* indicates continued/resumed interest in the area, and Late Bronze Age material has also been found in eroded sections on the coast at *Tokhni-Lakkia* to the south of the south end of the plateau (in the area of the Relay Station). The major excavated Late Bronze Age site of *Ayios Dhimitrios* lies c.900m. WNW of *Pamboules*. In post-prehistoric phases Cypro-Achaic material is widespread, and an Achaic building was exposed by terracing at *Krommidhia* on the west side of the plateau c.900m. south of *Pamboules*. The Late Roman site of *Sokopra* is the second most important site of this period in the valley after *Kopetra*.⁸ More recent use of the plateau is shown by a spread of sgraffito sherds around the formerly ruined and now rebuilt small chapel of *Ayios Yeoryios Kephala*.

3. HISTORY OF ARCHAEOLOGICAL RESEARCH AT THE SITE

The date of the initial discovery of the site of *Pamboules* is unclear. It is possible that six painted Red-on-White sherds registered in the British Museum in 1898⁹ (Frankel in Cook ed. 1979, fig. 2; Johnson 1980, 35 cat. no. 258), the provenance of which is known only as Kalavassos, were derived from the site, but this is merely a guess. The ex-

istence of the site was first reported in print by Dikaios (1936, 78) in his summary of early prehistoric sites known at the time of the Erimi excavations. Following an initial sounding in 1939 (Dikaios 1953, 319), further excavation was undertaken by Dikaios in 1947 (Dikaios 1962, 133-40: Site B). Excavations were also undertaken at the same time at the nearby site of *Kokkinoyia* (Site A). Neither excavation was very extensive, and there was no further publication following the 1962 report summarizing all of the earlier prehistoric research. A radiocarbon date for the site was published in 1960 (Östlund and Engstrand 1960, 194). The site was visited by N.P. Stanley Price in 1972 (Stanley Price 1979, 126 site La.8). The exact location of Dikaios' excavation area is unknown, but Stanley Price kindly informed the writer that he had noted a depression in Plot 437 which might have been the remains of the excavation.¹⁰ Subsequent ploughing has erased all traces of this depression.

The staff of the Vasilikos Valley Project commenced fieldwork in the Kalavassos area in 1976. An intensive surface collection of the *Pamboules* area was undertaken by the writer in conjunction with A.K. South, G. Burkholder and V.V.P. staff members and workboys at various dates during the summers of 1976-1978; the survey was undertaken by plots (as shown on the Cadastral Plan LV. 20), many being subdivided. Plots 376, 381, 383/1-2, 437, 438/1-4, 439-442 and 556-558 were covered,

5. The Aceramic Neolithic phase is, however, well represented nearby at the excavated site of *Kalavassos-Tenta* (Todd 1987) and the unexcavated site of *Mari-Mesovouni* (Todd 1979, 285), both sites lying on the west side of the valley.

6. Dikaios 1962, 106-12.

7. Cf. Todd 1988, 133.

8. For the excavations at *Kopetra* see McClellan and Rautman 1991. An extensive surface survey of *Sokopra* was undertaken in 1989 by the staff and students of the *Kalavassos-Kopetra* Project.

9. Accession number: 1898.12-1.313-318. BM A 75. According to documents kept in the British Museum and published by Johnson (1980, 11), "A little work was done on Mon. 29th at Kalavassos, where fragments of primitive pottery with patterns painted in red-brown on coarse thick ware, were found" (by H.B. Walters in 1897). No more precise provenance is available.

10. The writer is most grateful to Dr N.P. Stanley-Price for information pertaining to Dikaios' excavations in the Kalavassos area. With the aid of notes supplied by Stanley-Price he was able to locate the Site A excavation area, but no trace of the Site B area could be found.

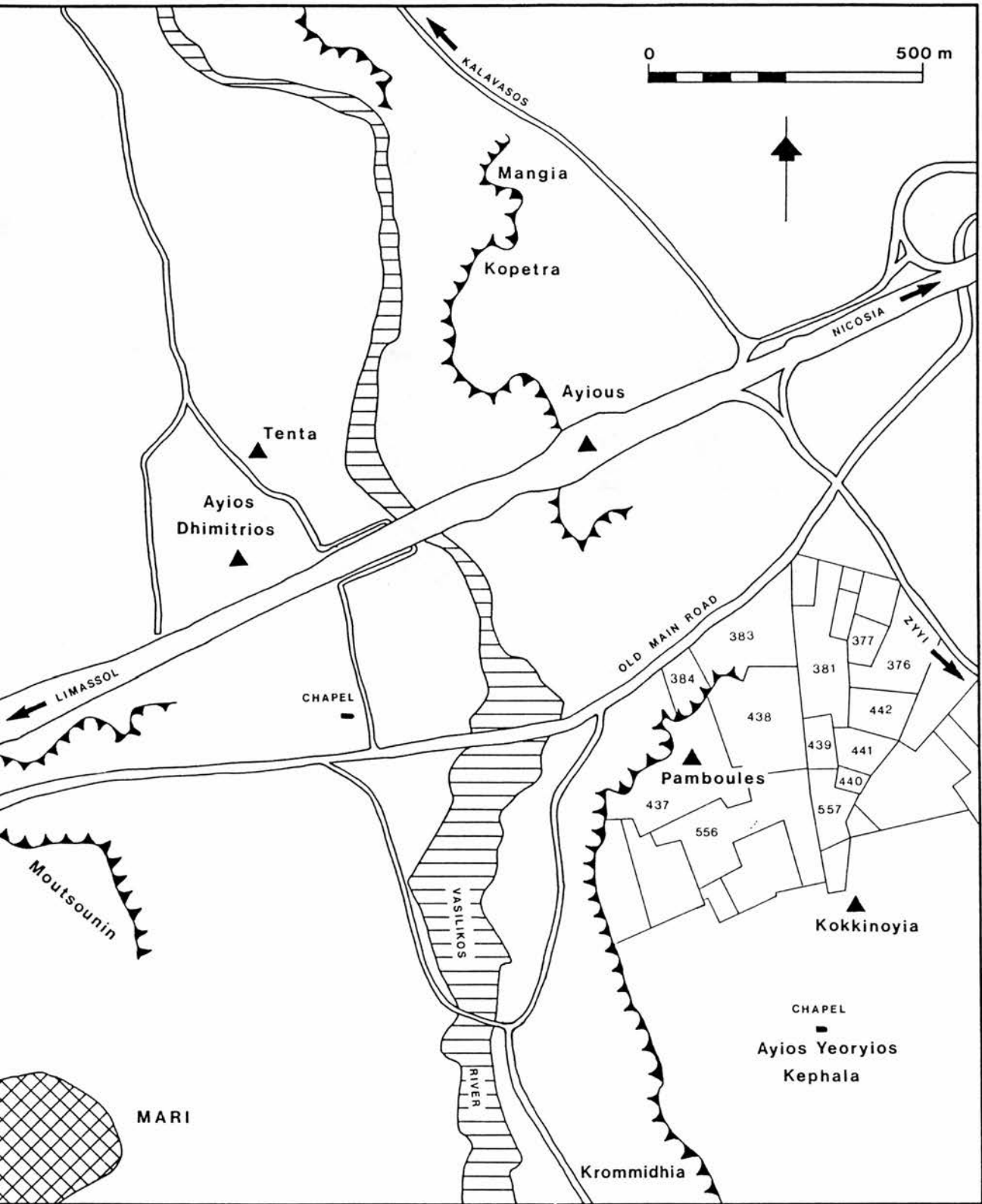


Fig. 1. Sketch map of the *Pamboules* region showing plots in the area of the site. Some plot subdivisions are omitted. The more important excavated prehistoric sites are indicated by black triangles. After the Cadastral Plans LV. 20 and LV. 28 of the Department of Lands and Surveys with the sanction of the Government of the Republic of Cyprus. State copyright reserved.

and an extensive surface collection of artifacts was made. In addition to large quantities of ceramics, numerous chipped stone tools and examples of waste material were collected, together with a surprisingly large quantity of ground stone artifacts, the latter designed mainly for cutting, grinding and pounding. It was not possible to complete the survey in the earlier years of the project, and this was finally accomplished by the writer in 1988.¹¹ The fieldwork indicated that the *Pamboules* site covered plots 376-377, 381, 383/1-2, 384/2, 437, 438/1-4, 439-442, 556-557 on Cadastral Plan LV. 20, and plot 557 continued on LV. 28, an area measuring c. 500m. (east-west)x400m. (north-south) (20 hectares) (Fig. 1). It also clearly showed that the *Pamboules* concentration of ceramics and other artifacts was separate from the much more limited scatter of ceramics at the *Kokkinoyia* locality, and that these two areas represent separate sites. This differentiation is further borne out by the difference in the types of ceramics resulting from the predominantly different dates of the two sites.

During the spring of 1986 trenches for irrigation pipes were dug across and along the edges of several plots, and pits of varying types were visible in the sections. Sherds were also found on the dumps resulting from these trenches. The evidence exposed by the cutting of the trenches indicated that the largest pit and the greatest quantity of artifactual material occurred at the SE corner of LV. 20, plot 381. Further north and east the number of pits and the amount of artifacts decreased, suggesting that the main concentration of features was to be found on the top of the plateau and not down the slopes. The pits generally resembled the features excavated at *Ayious*.¹² A full description of the pits at *Pamboules* will be provided in the final field survey report. Irrigation pipes were also laid on the west side of the plateau, but it is not clear whether any archaeological features were encountered.

During the autumn of 1988 the writer briefly examined all the ceramics collected from the site during the earlier years of the project. A very marked difference was noted in the proportion of painted Early and Middle Chalcolithic wares and Monochrome Late Chalcolithic sherds from one plot to another. In one part of the site sherds with painted decoration occurred almost to the exclusion of the monochrome burnished wares; else-

where the position was reversed with a much higher proportion of monochrome burnished wares than slipped/painted wares. In order to check the proportional differences in the ceramics, parts of plots 381, 438/1, 439 442 and 443 were reexamined in December 1988, and the results generally confirmed those obtained previously.

Early and Middle Chalcolithic painted wares are concentrated in the SW part of plot 381, the NE part of 438/2, the NW part of 439 and to a lesser extent the south side of 438/4. Late Chalcolithic monochrome ceramics occur in greatest numbers in the north part of the site area in plots 383/2, 384/2, the SW part of 376, the NW part of 438/3, the north part of 437 and the east part of 442. The ceramics in plots 556-558 are mainly post-prehistoric and these plots clearly mark the south side of the earlier prehistoric site. Middle Bronze Age sherds, predominantly of Red Polished Mottled type (with one Drab Polished Blue Core sherd), occur in a thin scatter over the whole site area, with a small concentration in plot 556. Late Bronze Age sherds of White Slip and Base-Ring wares are also quite common throughout the site area with no particular concentration in any plot. Occasional ribbed pithos sherds may also be of Late Bronze Age date. Post-prehistoric wares occur quite widely across the site, but they are not particularly common.

Artifacts from the site of *Pamboules* are presently housed in the Cyprus Museum, Nicosia,¹³ the Nicholson Museum of the University of Sydney and the Vasilikos Valley Project survey collection. Uncertainty regarding the provenance of the sherds in the British Museum was mentioned at the beginning of this section. The ceramics collected during the survey are discussed by Joanne Clarke in the final section of this report. The chipped stone

11. Brief notes on the survey of the site were published in several V.V.P. reports, e.g. Todd 1979(2), 33 and Todd 1989, 48. Notes on the chipped stone industry were published by Hordynsky and Ritt in Todd 1978, 190-1 and on the ceramics by Kromholz (1981, 24-6 and *passim*). The site is no. 60 in the V.V.P. survey records.

12. The excavations at *Ayious* have yet to be published in final form although most of the report is now complete. For preliminary reports on the excavations and the chronology of the site see Todd 1979(1), 278, 281-3; Todd 1981; Kingsnorth and Todd 1982(1), 50-7; Todd 1982(2). For recent comments on the site and the Chalcolithic period in the valley in general see Todd 1991.

13. Accession number 1941/VII-13/1 (R.R. 1335).

material is presently being examined by Carol McCartney and the ground stone tools remain to be studied. Both of the latter categories of artifacts will be published in the V.V.P. field survey volume.

4. DIKAIOS' EXCAVATIONS AT PAMBOULES

According to Dikaios' publications (mainly Dikaios 1962), together with information culled from his Field Notebook by N.P. Stanley Price and kindly supplied to the writer, an initial trial excavation was carried out at *Pamboules* on 30th May, 1939. More extensive excavations were subsequently undertaken in 1947. An area of 54 sq.m. was excavated, and remains of 11 or so pits were encountered. These were interpreted as remains of domestic architecture, indicating the presence of houses of curvilinear outline, the lower parts of which were dug down into bedrock and the upper parts being of a slight form of construction. Multiple hard earth floors occurred within the pits, together with quantities of ceramics, chipped and ground stone tools and other artifacts. Evidence was also found for a circular house type built entirely of posts, and this was regarded as post-dating the pit dwellings. A single burial was encountered in a circular pit cut in bedrock, probably to be dated to the phase of the pit dwellings.

The ceramic types reported by Dikaios from his excavations at *Pamboules* comprise (to use his terminology) Red Lustrous, Red Slip, Plain White, Red-on-White, Combed, Red and Black Lustrous and Coarse. Differences were noted in the percentages of ceramic types occurring on the various floors of "the half-sunk dwelling VIII" which was considered to be one of the most representative from the ceramic point of view. On the excavated evidence the site was dated to the Chalcolithic I period. However, as noted by Peltenburg (1978, 68) and Watkins (1981, 15), the published sherds from Pit VIII should be assigned to the Ceramic Neolithic Sotira culture rather than to the Chalcolithic on the evidence of their painted designs, and the radiocarbon date, which was obtained from a sample from near bedrock in Pit VIII, may also refer to that earlier period. Without further excavation it can only be stated that the surface collected ceramics from *Pamboules* indicate a predominantly Early-Late Chalcolithic utilization of the site, whereas

Dikaios' Pit VIII may indicate the existence of earlier features of the Ceramic Neolithic phase. The sherds collected by surface survey at the *Kokkinoyia* locality are noticeably different from the majority of those found at *Pamboules*; they are generally similar to Sotira group material, and they may be taken to provide general support for Dikaios' attribution of his Site A material to the Ceramic Neolithic period. *Kokkinoyia* and *Pamboules* should clearly not be considered as all one site. The utilization of the two localities seems to cover a long span of time from the Ceramic Neolithic through the Late Chalcolithic, and the two sites cannot be lumped together as chronologically only transitional between the occupations of Sotira and Erimi (cf. Watkins 1981, 15).

5. THE NEOLITHIC/CHALCOLITHIC SETTLEMENT OF THE PAMBOULES AREA (Fig. 2)

The nature and extent of early prehistoric settlement in the *Pamboules* area have become much clearer in the last few years owing to information from a number of sources in addition to Dikaios' excavations and the analysis of surface ceramics from the site. Excavation of predominantly Chalcolithic sites in the Paphos area (e.g. Peltenburg 1985 and 1992) has established the ceramic typology and phases for virtually the whole period in that region, and at least some of the Paphos area typology and seriation are applicable to the Vasilikos valley. The V.V.P. excavations at *Ayiouss* (and to a lesser extent *Tenta*) have provided much information on the earliest Chalcolithic in the Kalavassos area, and the recent field survey work carried out by the writer has led to the identification of a number of previously unknown sites. While it may be premature to attempt too detailed a reconstruction of the pattern of settlement in the *Pamboules* area, the significance of this strategic part of the valley has been considerably emphasized by recent research.

In the first attested phase of occupation of the area, Aceramic Neolithic settlement is well illustrated at *Tenta* [71]¹⁴, a small village settlement

14. In this section numbers within square brackets after site names refer to the map Fig. 2. The numbers are the V.V.P. field survey site numbers which will be used in the final publication.

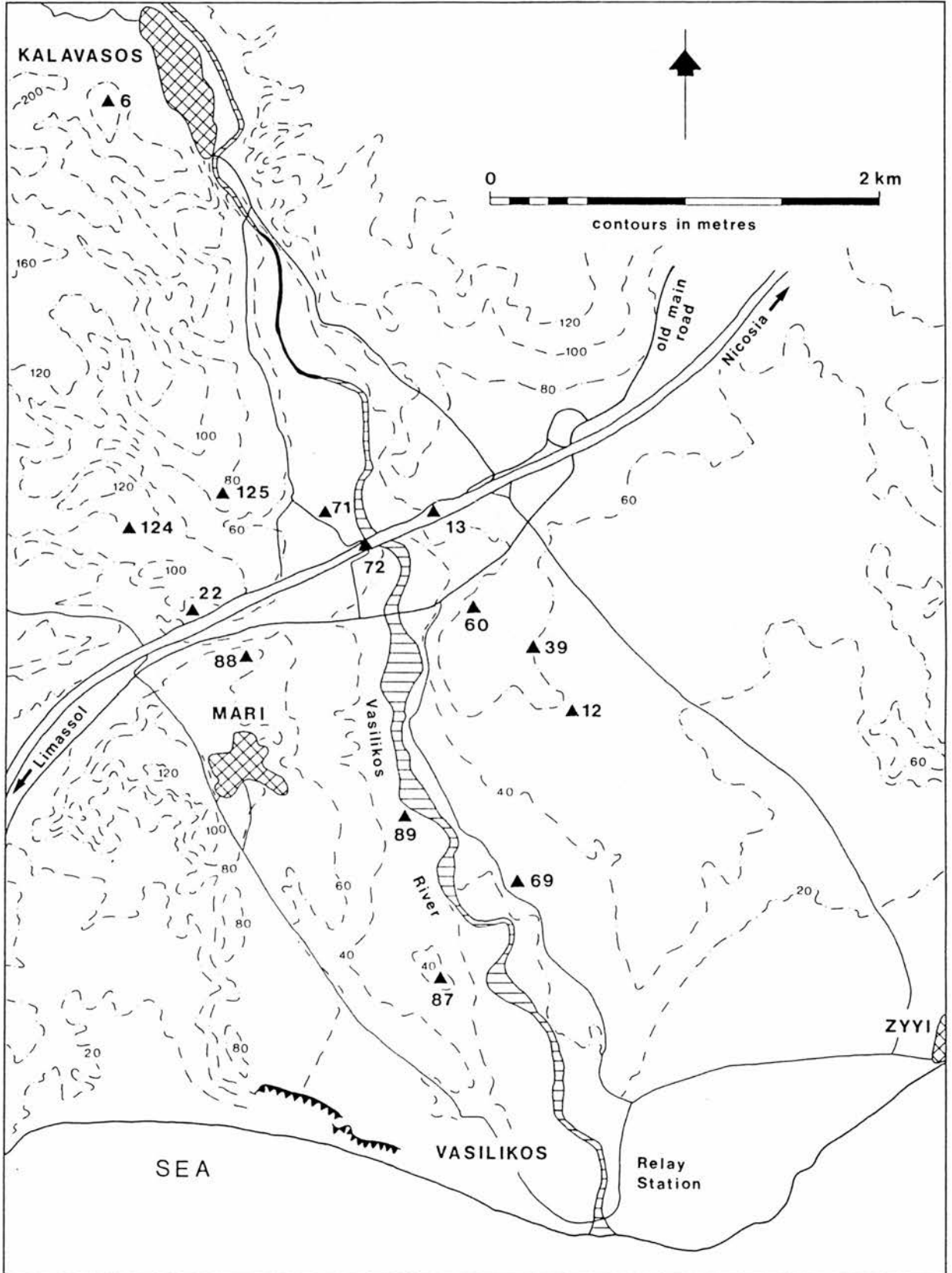


Fig. 2. Sketch map showing the location of Neolithic and Chalcolithic sites in the southern part of the Vasilikos valley. Sites are in the village lands of Kalavasos unless otherwise indicated. Key to sites: 6. *Angstromeni*; 13. *Ayious*; 22. *Kafkalia I-II*; 39. *Kokkinoyia*; 60. *Pamboules*; 69. *Sokopra*; 71. *Tenta*; 72. *Vasilikos River Bridge Site*; 87. *Mari-Mesovouni*; 88. *Mari-Moutsounini/Mandra tou Rirou*; 89. *Mari-Paliambela*; 124. *Kafkalia VI*; 125. *Argakia East*.

1 km. NW of *Pamboules* [60], situated on a natural hill overlooking the valley from its west side. In the evidence of surface survey, the site of *Mari-Mesovouni* [87] (now completely bulldozed out of existence) constituted a second settlement of this period nearby. The stone bowl fragment and several other tools mentioned earlier from *Sokopra* [69], almost opposite *Mari-Mesovouni* on the other side of the valley, may suggest further settlement of this period on the *Pamboules* plateau itself. Additional evidence for the Aceramic Neolithic was encountered during the construction of the new Nicosia-Limassol highway in the form of a temporary camp site beside the Vasilikos river [72] (Todd 1989, 49 note 14). Settlement of this date in the valley is now known to be more extensive than was originally thought, and it extends well to the north of Kalavasos.¹⁵ The following phase, however, remains an obstinate blank in the Vasilikos valley, as does in most (if not all) parts of Cyprus, and no evidence whatsoever has been found for continuity of occupation between the Aceramic and the Ceramic phases of the Neolithic.

Later Neolithic occupation is represented at a number of sites throughout the area of the Vasilikos valley surveyed to date. In the southern sector, on the east side of the valley, in addition to the remains at *Kokkinoyia* [39] (and probably Pit VIII at *Pamboules*), the Ceramic Neolithic is represented by an isolated bowl rim found a short distance east of the *Ayios Yeoryios* Kephala chapel [2] on the *Pamboules* plateau and scattered Combed Ware sherds found further north at *Ayious* [3]. On the west side of the valley Ceramic Neolithic remains are more extensive: a large pit of uncertain purpose and origin on the east side of *Tenta* [1] (O 16 B; Todd 1987, 171-2) dates to this phase. Scattered Neolithic sherds occur at sites in the *Kafkalia* group (I-II and VI) [22, 124] SW of *Tenta* but still north of the new Nicosia-Limassol highway, and a small amount of Neolithic material was also found at *Argakia East* [125] WNW of *Tenta*. To the north of this there are no known Neolithic sites until the site of *Angastromeni* [6] is reached overlooking Kalavasos from its west side. To the south of the Nicosia-Limassol highway Neolithic pottery was clearly in evidence at *Marioutsounin/Mandra tou Rirou* [88], located north of the Mari village in a commanding position overlooking the valley from its west side. Quantities of sherds, and probably some of the pits, at *Mari-*

Paliambela [89], c.750m. north of *Mari-Mesovouni*, are of Neolithic date. The period may also be represented at *Mari-Mesovouni* [87] itself although the bulk of the ceramic material from there is in very poor, eroded condition and probably dates to a later phase.

Early Chalcolithic settlement in the southern part of the Vasilikos valley seems to be on a reduced scale compared with that of the Ceramic Neolithic. Sherds of Early Chalcolithic type have been found on the east side of the valley at *Pamboules* [60] and *Ayious* [13], and on the west side at *Tenta* [71]¹⁶ and *Kafkalia VI* [124]. Only a small percentage of the total sherd count at *Pamboules* dates to this early phase of the Chalcolithic, and the major settlements of this date seem to be at *Ayious* (if indeed *Ayious* is to be considered a settlement) and perhaps *Tenta*. *Kafkalia VI* is only a small site. According to the unpublished ceramic reports by Douglas Baird on the ceramics from the excavations at *Tenta* and *Ayious*, two Early Chalcolithic phases are represented at *Ayious*, while the bulk of the *Tenta* material is likely to date later than *Ayious* 1 and earlier than *Ayious* 2. A relatively complex settlement pattern may be suggested, possibly involving the use of the *Ayious* locality followed by its abandonment in favour of *Tenta* across the river followed by reversion of settlement to *Ayious* (Baird n.d. (1-2)).

The Middle Chalcolithic period is represented in the *Pamboules* area only by a considerable quantity of sherds from *Pamboules* itself; similar sherds have not been recognized on any of the adjacent sites. While this may represent a further diminution of settlement, it could also be taken to indicate the continuation of the situation in the Early Chalcolithic with only one significant settlement in this area. The same may be said for the Late Chal-

15. See Todd 1989, 47 for notes on the Aceramic site of *Ora-Klitari* on the east side of the valley, close to the Kalavasos Dam.

16. Much of the ceramic material found by excavation on the lower flanks of *Tenta* and termed Neolithic by the writer (e.g. in K/L 6/7; Todd 1987, 169-171) has been redated to the Early Chalcolithic by Douglas Baird in his unpublished ceramic analysis. Only the ceramics from the lower deposits in O 16 B can be assigned to the Ceramic Neolithic phase.

colithic where sherds of this date have only been found at *Pamboules*.¹⁷

In the foregoing analysis of the pattern of earlier prehistoric settlement in the *Pamboules* area, insufficient stress has been laid on the topography of the area. In considering the locations of the various sites it should be clearly understood that the part of the valley below (immediately west of) *Pamboules* provides an easy point for the crossing of the Vasilikos river, following the line of the old Nicosia-Limassol road, and that this east-west route along the southern coastal region of the island must always have been an important route of communications. The gap between the plateaux of *Ayious* and *Pamboules* provides the only easy route from the valley floor up onto the higher ground to the east in this whole stretch of the valley. To the north and south of the gap steep slopes or sheer cliffs impede movement. In periods when the mines in the northern part of the Vasilikos valley were significant, this area gained increased importance since it lay at the junction of the east-west and north-south routes as well as the crossing of the river. This convergence of routes at the river crossing is overlooked by plateaux suitable for settlement on all four sides: the *Kafkalia* area on the NW side, *Ayious* to the NE, *Pamboules* to the SE and *Mari-Moutsounin/Mandra tou Rirou* to the SW. The small isolated hill on which the *Tenta* settlement is situated provides an additional vantage point adjacent to this strategic location. It cannot be a coincidence that Ceramic Neolithic remains have been found on all five of the vantage points in this area, and that evidence of all phases of the Chalcolithic is also represented on one or more of these sites. The significance of this area continues in the Late Bronze Age with the occupation of the important site of *Ayios Dhimitrios* [10] between the west side of the river and the high ground at the *Kafkalia* locality further to the west.

6. THE CERAMICS (by Joanne Clarke)

Introduction¹⁸

In August and September 1992 the writer undertook a study of over 9,000 sherds collected during the field survey of the two sites of Kalavassos-*Kokkinoyia* and *Pamboules* (Todd 1979(2), 33; 1989, 48). The purposes of the study were as follows: 1) to establish whether the sites of *Kok-*

kinoyia and *Pamboules* are two unique sites that existed in tandem during the Late Neolithic period, or separate artifact spreads belonging to a single, spatially shifting site that survived until the end of the Late Chalcolithic period; 2) to delineate the chronological limits of *Kokkinoyia* and *Pamboules*, and to establish the extent of contemporaneity that existed between them; 3) to delineate the spatial boundaries of *Kokkinoyia* and *Pamboules*; 4) to establish whether any intra-site spatial/functional or spatial/chronological divisions exist; 5) to fit *Kokkinoyia* and *Pamboules* into the broader framework of the Neolithic and Chalcolithic periods in Cyprus.

Kalavassos-*Pamboules*

Pamboules is the north-westerly artifact spread of the two that were, until recently, collectively called *Kokkinoyia-Pamboules* (Kromholz 1981, 24). The site was surveyed intermittently by the V.V.P. between 1978 and 1988. It was the intention of the earlier surveys to carry out a total collection of the area (Todd, unpublished survey report). The procedure was to walk the extent of the plots marked on the cadastral plan, some of the larger plots having been subdivided in advance. More than 80 large burlap bags of pottery were retrieved from *Pamboules* alone; of these 65 bags of the more poorly preserved material were discarded after the initial sorting and study. The remaining 15 bags were retained for further examination. This sample, which is the subject of this report, comprises about one fifth of the total ceramics collected. Statistical figures and quantitative data given here will, therefore, show trends only.

The ceramic material from *Pamboules* dates in general terms from the Ceramic Neolithic through to the Late Chalcolithic period. The largest percentage of sherds appears to be of Late Chalcolithic

17. Mention should also be made of several earlier prehistoric sherds of uncertain date found in the section of the trench dug for the new road bridge (site no. 72), stratified above the level of the Aceraemic Neolithic pit. These can only be classified generally as Neolithic/Chalcolithic.

18. The following abbreviations are sometimes used in this section:
1) Ceramics: Cb Combed, GBW Glossy Burnished ware, PCh Painted and Combed, RB/B Red and Black Stroke Burnished, RMP Red Monochrome Painted, RW Red-on-White.
2) Periods: LN Late Neolithic, EC Early Chalcolithic, MC Middle Chalcolithic, LC Late Chalcolithic.

late, although due to the difficulty in distinguishing Middle Chalcolithic Red Monochrome Painted ware from many of the Late Chalcolithic monochrome wares, the Middle Chalcolithic phase may be better represented than the data suggest. Where possible, however, the writer has tried to separate ambiguous monochrome wares into a unique group MC/LC (Fig. 3).

Ceramic concentration was highest in the middle of the *Pamboules* spread in the NW part of plot 39 (LV. 20). Another area of dense concentration was in the NW corner of the spread close to the the old Nicosia-Limassol road in 384/2A and 383/2I.¹⁹ Ceramic distribution across the rest of the site appears relatively uniform on the basis of the remaining sample.

As mentioned earlier in this report, the site displays notable diachronic/spatial divisions. Late Neolithic and Early Chalcolithic wares are concentrated in a small elongated area extending NE-SW centred around plots 381 and 439. A small amount of material of the same date was also found in a smaller area centred around 383/2I. The site expanded significantly during the Middle Chalcolithic period, but by the Late Chalcolithic ceramics of this phase are found to cover almost the whole extent of the site.

Late Neolithic Ceramics

Less than 1% of the ceramics saved belong to the Late Neolithic period which is poorly represented at the site. The highest concentration of Neolithic sherds was found in plots 376A and C, 381A and D-G, 438/2NE and 383/2I (Fig. 3b). The excavations carried out by P. Dikaios in 1939 and 1947 at *Pamboules* (Site B) encountered Ceramic Neolithic sherds *in situ* in the lowest levels of "Pit V/III" (see Section 4 above) including Cb and PCb sherds (Dikaios 1962, 139 and pl. XLII), but the quantity was small. Although exact statistics are lacking, Dikaios mentions that the very small quantities of Combed ware present at *Pamboules* provide "a sharp contrast with the conditions in site A where the Combed ware was an important feature" (1962, 140). The fact that Late Neolithic wares occur at all, however, does suggest that the earliest occupation dates back to the Late Neolithic period.

Red-on-White (broad line) ware, Painted and

Combed ware, and Combed ware are the most commonly occurring Late Neolithic wares at *Pamboules* (Fig. 4). Shapes are limited; large hemispherical milk bowls with the characteristic Late Neolithic flattened rim and bottles with long slender necks are the only two recognizable morphological types. Decorative motifs are also limited. Rim bands, broad and thin parallel bands and concentric targets are the most common schemes in RW. The PCb motifs are almost exclusively broad bands with wavy Cb lines.

The fabric of the Late Neolithic ceramics at *Pamboules* is distinct; it appears to be a local fabric that occurs on most of the Kalavassos Late Neolithic survey sites, and is used to a greater or lesser extent for all ware types at *Pamboules*. Late Neolithic Fabric A is a relatively dense, hard, slightly gritty fabric with a jagged break that fires a strong red-brown or yellow-red (7.5YR 7/6-5/6, 2.5YR 4/8)²⁰ with a grey core. It may either have a self slip or a thin red wash under the paint which varies in colour from light red to red (2.5YR 4/4-3/4). The dark red through red-brown (5YR 4/3, 2.5YR 3/6) paint is applied thickly. The fabric is grittier and harder fired than many Late Neolithic fabrics, most of which have a propensity to be rather fine, lightish buff fabrics with low to medium densities of chaff and grit temper.²¹ As at *Ayious* the Late Neolithic ceramics of *Pamboules* are slab built, and as many as three or four layers are often visible in the section (Kromholz 1981, 24; Baird n.d. (2)).

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19. In the listings provided in Fig. 3 the official plot number as shown on the cadastral plan (e.g. 376 or 438/1) is often followed by letters or compass designations. These indicate the subdivision of the plot by the V.V.P. in accordance with which the surface collection was undertaken. Details of the subdivision will be provided in the final survey report. Some plots have also been officially subdivided into smaller units; plot 438, for instance, is shown on the plan divided into 438/1, 438/2, 438/3, and 438/4. Only the general boundary of 438 is shown in Fig. 1. The tabulation in Fig. 3 shows that plot 438 was collected as 17 separate units.
 20. Colour values are quoted in accordance with the *Munsell Soil Color Charts*, Baltimore.
 21. Based on personal observation of *Sotira-Teppes*, *Khrokittia-Vounoi* and *Philia-Drakos* A fabrics. I wish to thank the Director of the Department of Antiquities for allowing me access to the *Sotira* and *Khrokittia* assemblages stored in the Cyprus Museum, Nicosia.

cadastral reference	LN	LN-EC	EC	EC-MC	MC	MC LC	LC	X	TOTAL
376A	10	11	8	2	312	3	73	14	433
376B		1			2	33	33	10	79
376C	2			5	11	13	21	4	56
376D	1					8	5	9	23
376E						1		1	2
376F									
376G		1					1		2
376H									
376I								4	4
376J					1	9	2	3	15
376K					16		7	3	26
376L							23	9	32
381A	11	1	101	147	20		10	48	338
381B		15	2	49	15		25	24	130
381C		2					43	40	85
381D	3		1	10	11		17	7	49
381E	5	5	8		30		29	39	116
381F	3			49	38	29	26	67	213
381G	1	2			45	17	11	3	79
383/1				1		4	17	11	33
383/2A				17	14		7		38
383/2B	1	3		2	10	33	39		88
383/2C							15	17	32
383/2D						21	13	25	59
383/2E							2	9	11
383/2F		1		23	23	50	22	2	121
383/2G									
383/2H	1				7	33	15	18	74
383/2I	39				10	522	179		750
383/2J				7	36	793	90	6	932
383/2K				1		32	16	74	123
384/2A	5	5		2	72	277	241	37	639
384/2B						17	7	10	34
437A					4	1	102		107
437B							43		43
437C					1		13	2	16
437F							2		2
438/1NE					41	19	56	12	128
438/1SW				5	32	25	24		86
438/1SE	1			5	97	93	36		232
438/1NW					10		32	5	47
438/2NE	5				13		49	15	82
438/2SW									
438/2SE						29	33		62
438/2NW									
438/2S							15		15
438/3NE					1	2	112	2	117
438/3SW						1	15		16
438/3SE						2	39		41
438/3NW					10	2	142	14	168
438/4NW									
438/4NE					1	2	113	2	118
438/4SW				1		38	65	28	132
438/4SE	1			5	97	93	36		232
439NE	2	1	8	174	88	32	44	18	367
439SW						18	28	51	97
439SE			15	51	13	4	8		91
439NW	4	10	246	383	319	1	115	401	1479
441SW					4	1	84	5	94
441SE							31		31
441SW					4	1	84	5	94
441NW				16	4	5	51	28	104
442A						38	74	20	132
442B	1	5	1	2	16	46	77	16	164
442C				2	1	78	32	16	129
442D					2	3	14	4	23
442E		12		17	80	60	155	15	339
442F	1			1	6	27	34	14	83

Fig. 3a. *Pamboules* ceramics: sherd counts by period.

cadastral reference	LN	LN-EC	EC	EC-MC	MC	MC LC	LC	X
376A	2%	3%	2%	0.5%	72%	1%	17%	2.5%
376B		1%			2%	42%	42%	13%
376C	4%			9%	20%	23%	38%	7%
376D						35%	22%	39%
376E						50%		50%
376F								
376G		50%					50%	
376H								
376I								100%
376J					6%	60%	13%	20%
376K					62%		27%	12%
376L							72%	28%
381A	3%	1%	30%	43%	6%		3%	14%
381B		11%	2%	38%	12%		19%	18%
381C		2%					51%	47%
381D	6%		2%	20%	22%		35%	14%
381E	4%	4%	7%		26%		25%	34%
381F	1%			23%	18%	14%	12%	31%
381G	1%	2%			57%	22%	14%	3%
383/1				3%		3%	50%	44%
383/2A				45%	37%		18%	
383/2B	1%	3%		2%	11%	38%	45%	
383/2C							49%	51%
383/2D						36%	22%	42%
383/2E							18%	82%
383/2F		1%		19%	19%	41%	18%	2%
383/2G								
383/2H	1%				10%	44%	20%	25%
383/2I	5%				2%	70%	23%	
383/2J				1%	4%	85%	9%	1%
383/2K								
384/2A	1%	1%		1%	11%	43%	37%	6%
384/2B						50%	19%	31%
437A					3%	1%	96%	100%
437B							100%	
437C					6%		81%	13%
437F							100%	
438/1NE					32%	15%	44%	9%
438/1SW				6%	37%	29%	28%	
438/1SE	1%		1%	43%	9%	31%	15%	
438/1NW					21%		68%	11%
438/2NE	6%				16%		60%	18%
438/2SW								
438/2SE						47%	53%	
438/2NW								
438/2S						51%		
438/3NE					1%	1%	97%	2%
438/3SW						6%	94%	
438/3SE						5%	95%	
438/3NW					6%	1%	85%	8%
438/4NW								
438/4NE					1%	2%	95%	2%
438/4SW				1%		29%	49%	21%
438/4SE	1%			1%	42%	40%	16%	
439NE	1%	1%	2%	47%	24%	8%	12%	5%
439SW						19%	29%	53%
439SE			16%	56%	14%	4%	9%	
439NW	1%	1%	17%	25%	22%		8%	27%
441SW					4%	1%	89%	5%
441SE							100%	
441NE					1%	1%	28%	71%
441NW				16%	3%	4%	50%	27%
442A						29%	56%	15%
442B	1%	3%	1%	1%	9%	28%	47%	10%
442C				2%	1%	60%	25%	12%
442D					9%	13%	61%	17%
442E		4%		4%	24%	18%	46%	4%
442F	1%		1%		7%	33%	41%	17%

Fig. 3b. *Pamboules* ceramics: percentage breakdown by period.

Early Chalcolithic Ceramics

There is a solid Early Chalcolithic component at *Pamboules* confined more or less to the same plots as the Late Neolithic material (381A, 439NW and 439SE) running in a NE-SW line through the middle of the site. The quantity of ceramics appears to increase during the Early Chalcolithic with EC wares accounting for about 5% of the total saved sample.

The fabric and finish of the EC wares is identical with Fabric A found at *Ayious* and *Tenta* (Kromholz 1981, 24; Baird n.d. (1)), a fine, very pale brown (10YR 8/2-8/3, 10YR 7/3-7/4) ware with medium to high quantities of black/grey igneous and chert grits. Also, as at *Ayious* and *Tenta*, EC Fabric A at *Pamboules* is not slipped, and the paint is applied directly to the surface of the vessel. Baird reports that Fabric A, although being indicative of the Early Chalcolithic period in the Vasilikos valley, appears to have been used in small quantities in the Late Neolithic as some of the Cb and PCb sherds from *Tenta* display Fabric A properties (Baird n.d. (1)). Although there were no examples of *Ayious* type Fabric A amongst the Late Neolithic survey material, it still may be that this fabric type was used during the LN period at *Pamboules* as well. A small percentage of Cb and RMP sherds collected during Dikaios' excavations at *Zokkinoyia* (Site A) is certainly made of *Ayious* type Fabric A.²²

There is a surprising number of closed vessel sherds in the Early Chalcolithic sample. As much as 75% of the identified EC ceramics belong to large bottles, and very few of the diagnostic platter shapes were noted within the sample. This may be due to bias in the remaining sample, or it may also have a spatial/functional significance that will not become evident without excavation. This is even more surprising as the propensity for closed shapes does not manifest itself in any significant proportions in any other period, nor is it the rule for other Early Chalcolithic sites in the Kalavassos area (Baird n.d. (2) gives a good morphological breakdown for *Ayious*).

Decorative motifs found on the *Pamboules* EC ceramics are identical with *Tenta* and *Ayious* examples (Kromholz 1981, 41 and 49); reserved slip motifs are extremely common, as are thin vertical, diagonal and converging bands and lines (Fig. 4).

Middle Chalcolithic Ceramics

The proportion of ceramic material dating to the Middle Chalcolithic period is much greater than that from either the Late Neolithic or the Early Chalcolithic, although identifiable Middle Chalcolithic sherds represent less than 20% of the total sherd count. As mentioned above this figure could easily reach 30% if the unidentifiable monochrome wares are included.

The spatial extent of the *Pamboules* area noticeably increases during the Middle Chalcolithic period. The primary area of concentration, centred around plots 381A-G and 439, now extends east and west to include large areas of plots 438/1, 438/2 and 438/4. The secondary area situated to the north around plot 383/2 joins up with the primary scatter during this period. Small quantities of Middle Chalcolithic pottery can also be found covering most of the area of the *Pamboules* spread.

The Middle Chalcolithic is best represented by Red-on-White (thin line) ware of Erimi type. Decorative motifs are numerous and varied including the lattice pattern executed in a number of different styles, dot borders, lattice ladders, chequer-boards and thin parallel lines (Fig. 5). Shapes are identical with main-phase Erimi, comprising deep, straight-sided bowls and buckets, straight-sided holemouth vessels, flasks with pointed bases, ear lugs etc. Coarse ware shapes are often slipped and have flanged bases and ear lugs of Erimi type (Fig. 5)

There are a number of MC fabric types at *Pamboules*. Most are variations of one major type (MC Fabric A), and occur in very small quantities. Many have been described by Kromholz (1981, 24) and will, therefore, not be mentioned again here. Unlike the MC fabrics of Erimi and *Kissonerga-Mosphilia* there is no mica present in any of the MC fabrics. The major fabric type is medium coarse and gritty with varying quantities of large, poorly aligned chopped straw temper and grey, igneous grits (2mm.-3mm. diam.) It is essentially very heterogeneous and, depending on vessel size and firing, may look completely different from sherd to sherd. In the broadest terms the fabric colour is reddish-yellow (5YR 5/6-5/8-6/6). The slip is always

22. I also wish to thank the Department of Antiquities who very kindly allowed me access to the Site A material from Dikaios' excavation stored in the Cyprus Museum, Nicosia.

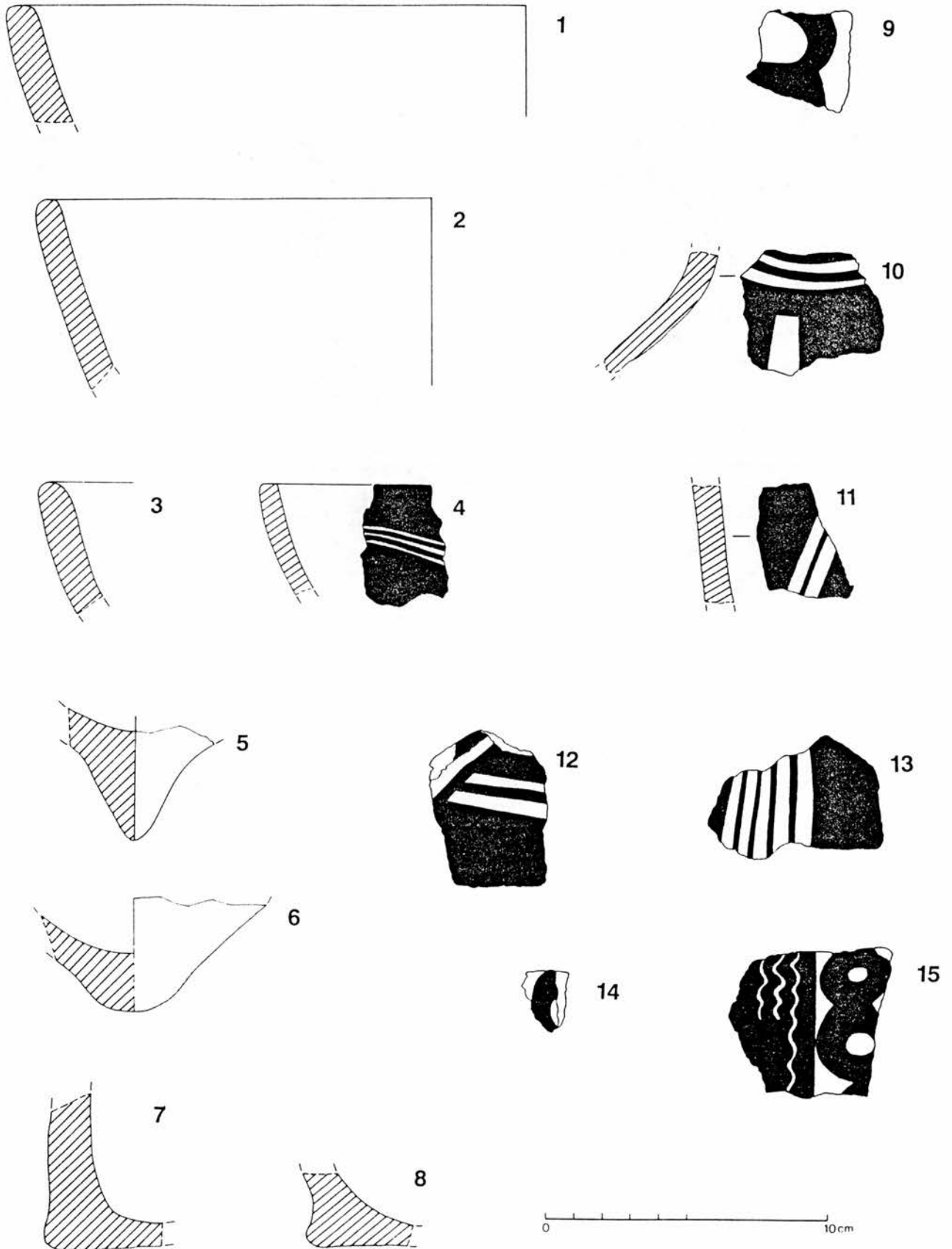


Fig. 4. 1-3: *Kokkinovia* Late Neolithic rims; 4,9,14-15: *Pamboules* Late Neolithic Combed and Painted and Combed; 5-6, 10-13: *Pamboules* Early Chalcolithic; 7-8: Late Neolithic-Early Chalcolithic Coarse ware. (Drawn by Alan Braby).

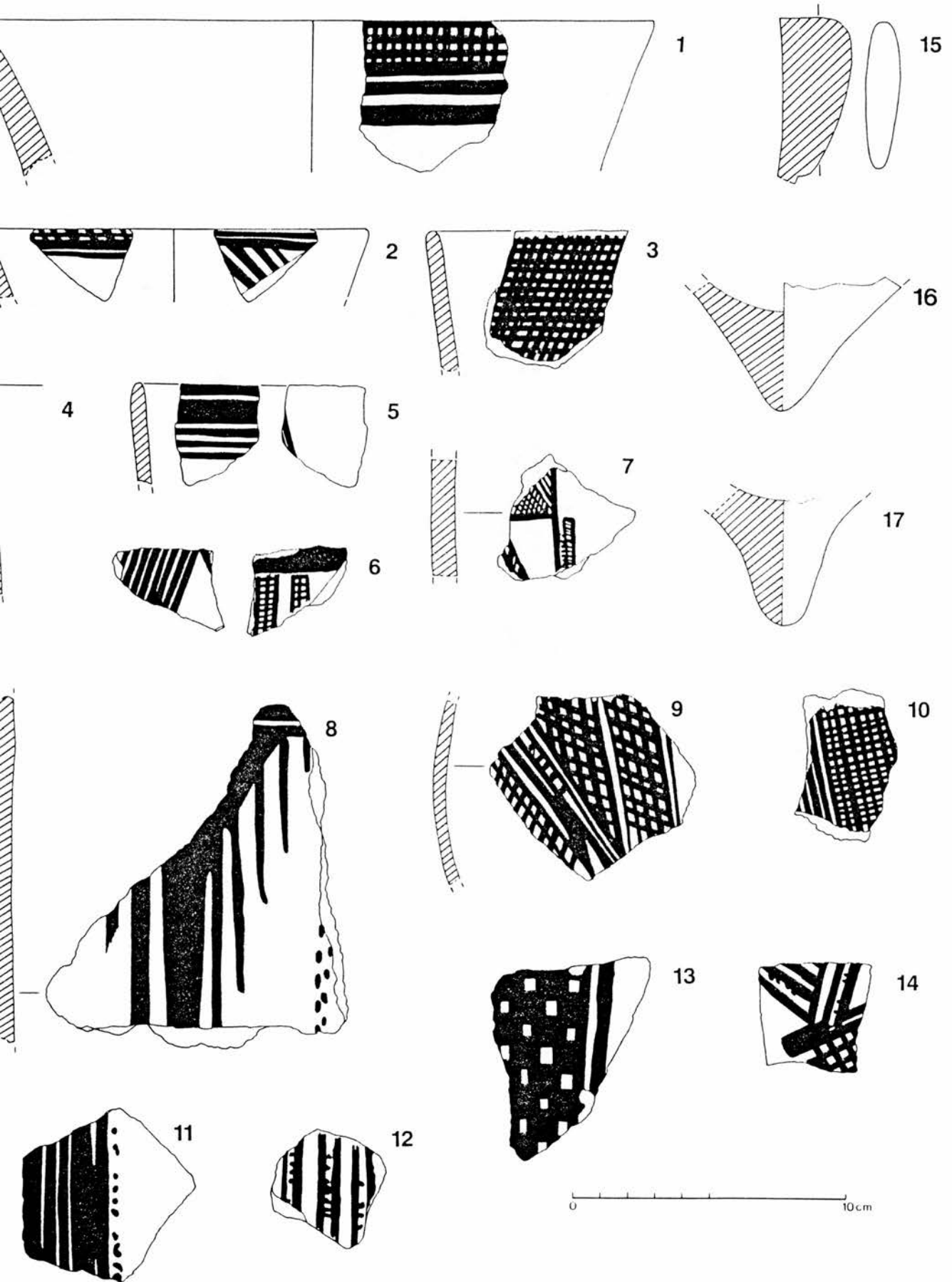


Fig. 5. Middle Chalcolithic ceramics from *Pamboules*. (Drawn by Alan Braby).

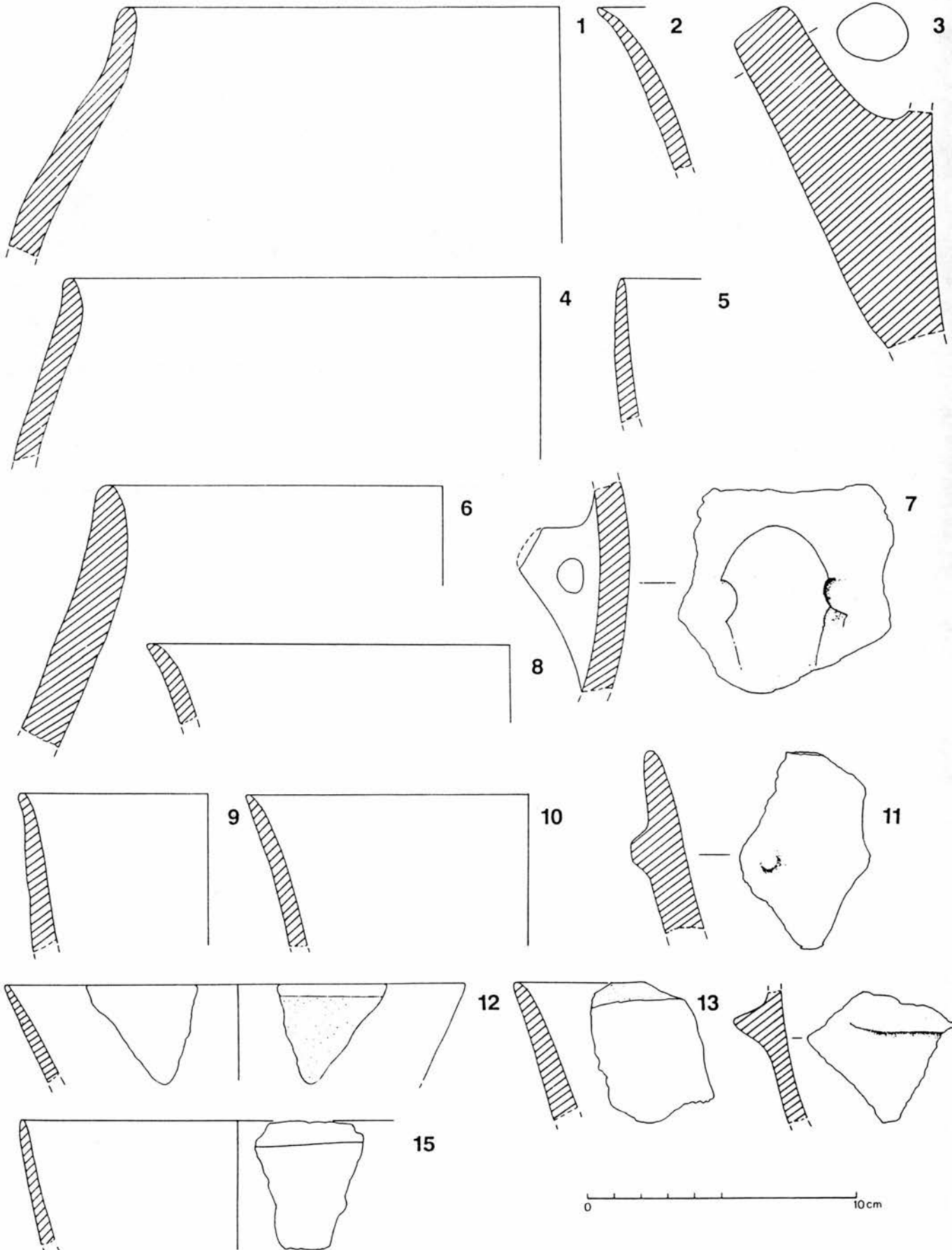


Fig. 6. Late Chalcolithic ceramics from *Pamboules*. (Drawn by Alan Braby).

very thick and chalky, and usually yellow-white (10YR 8/6-8/8) in colour. The paint is dark reddish-brown to yellowish-red (5YR 3/3, 2.5YR 3/6-4/6), and applied thickly with a brush-like instrument. Most sherds in section are completely fired throughout; there is, however, a small percentage of open sherds that may have a grey core. The most characteristic feature of the Middle Chalcolithic fabrics is the very high proportion of large chopped straw temper, not present in the Late Neolithic or Early Chalcolithic fabric types.

A distinct development is visible in the fabric types found at *Pamboules*, and each chronological period has a primary type. There is undoubtedly overlap, but on the whole fabrics differ markedly between each period, enabling some assignation of monochrome wares to periods based solely on fabric type and surface finish.

Late Chalcolithic Ceramics

Very many of the ceramics from *Pamboules* are morphologically identical to Late Chalcolithic ceramics found at *Kissonerga-Mosphilia*, *Lemba-Lakkous* (Peltenburg 1991) and at *Ambelikou-Ayios Georghios* (Dikaios 1962, fig. 68; Peltenburg 1991, 17). Of the *Pamboules* ceramics 40% can be identified as belonging to the Late Chalcolithic tradition.

Almost all of the LC material consists of monochrome red wares and red and black wares (called Red Lustrous and Black Lustrous by Dikaios: 1962, 139). The most common fabric/ware²³, here called Type 1, is very hard fired, red in colour, with a highly burnished, crazed slip. Although distinctive, this fabric/ware cannot be physically separated from most of the monochrome repertoire which consists almost entirely of variants in surface treatment and firing producing a number of different finishes. The variants include Type 2, a less well fired example with a grey, crumbly fabric and a thick light red to orange slip; Type 3, a variant with the diagnostic hard fired, crazed red surface of Type 1 on the outer face of the vessel and a monochrome black crazed inner surface; Type 4, a variant which has the poorly fired characteristics of Type 2, but with the black interior of Type 3. There also exist combinations of all of these types, including examples with a reduced (black) outer surface and inner rim and an oxidized (red) inner surface.

An exception to the usual fabric/ware is provided by a very fine fabric (Late Chalcolithic Fabric A) used exclusively for small tulip bowls and fine walled bowls. It is a fine, dense fabric with a smooth break and low concentrations of very small grits. Firing is controlled to produce the reduced outer and inner surfaces and rims. Paint colour can vary with firing from light red to red to brown and black (2.5YR 4/6-6/6, 7.5YR 4/2-4/4).

The reduced black interior/exterior found on much of the Late Chalcolithic pottery has been purposefully added for decorative effect and appears to be almost identical to the black interior Late Chalcolithic vessels found at *Kissonerga-Mosphilia* and *Ambelikou* (Dikaios 1962, 143). At *Mosphilia* however, the vessels with black interiors appear to be directly related to Red and Black Stroke Burnished ware (Bolger, personal communication). At *Pamboules*, however, almost no recognizable RB/B sherds have been found, and it would seem more felicitous to use the term Decorative Reduced ware (as suggested by D. Baird in a personal communication). This term effectively explains the technique used to produce this ware, and helps to distinguish the existing differences between the Late Chalcolithic monochrome wares of the Vasilikos valley region and western Cyprus while still noting the cultural similarity in morphology and technique observable in the two regions.

Few recognizable shapes were encountered. Large storage jars with horn-shaped lugs or vertically or horizontally pierced lugs (handles) are common (Fig. 6). These bear a striking resemblance to those of *Mosphilia* phase 4 and *Ambelikou* (Peltenburg 1991, fig. 1:1; Dikaios 1962, fig. 68). Small shapes are always open, either bowls with thin straight sides ending in a plain, flared rim or, as mentioned above, small tulip-shaped bowls with out-flaring rims. Some examples have also been found with small "nipple-shaped" protrusions or with band decoration in low relief (Fig. 6). Plastic decoration is also known from *Ambelikou* (Dikaios 1962, 143). All of these shapes can be found in all of the fabric/ware variants described above, and with either reduced in-

23. The term fabric/ware has been used here in an attempt to stress that the LC ceramics of *Pamboules* are inherently similar to each other, and classification into wares is impossible.

ner surfaces and outer rim or reduced outer surfaces and inner rim.

The unusually high percentages of Late Chalcolithic ceramics suggest that the site of *Pamboules* may have reached its zenith during this period. Certainly, Late Chalcolithic pottery is found over the whole of the site area with very few exceptions.

Kalavassos-Kokkinoyia

The site of Kalavassos-Kokkinoyia, measuring c.200m. (NNW-SSE)x50m. (E-W), lies SE of *Pamboules* along the eastern edge of the plateau. There is a distinct gap between the southern end of *Pamboules* and the northern end of *Kokkinoyia* where there is no evidence for Early Prehistoric occupation. If we consider the significance of the distinct chronological/spatial organization in evidence at *Pamboules* it may be that the Late Neolithic occupation at *Kokkinoyia* and *Pamboules* does in fact represent the shifting spatial organisation of one site. However, as intimated earlier, the two areas/sites cannot realistically be considered one entity without further excavation. Although the Late Neolithic pottery is the same for both sites, that does not necessarily support the theory of one large site.

The ceramic assemblage from *Kokkinoyia* is almost entirely Late Neolithic except for a small percentage of later prehistoric wares. 205 sherds were examined. As with any survey site there was a high proportion of abraded material, some 50% of the sample, which could not be identified other than to say that it is Neolithic. The most common identifiable sherds are RMP (25% of the sample) and Cb ware (30%). Small numbers of PCb and RW ware were also noted in some plots. The sample is very uniform; shapes are identical with *Pamboules* Late Neolithic shapes, large hemispherical milk bowls with thick rounded or flattened rims. There were also some examples of trough spouts and broad flat bases on open and closed vessels (Fig. 4).

Recognizable Red-on-White motifs were rare due to the abraded condition of many sherds and the paucity in the sample of RW examples. Some sherds clearly originally had rim bands; broad straight and curvilinear bands were the most easily recognized motifs, and one example of a ladder

pattern of Late Neolithic type was noted.

Greater variety existed in the decorative schemes of the Combed and Painted and Combed sherds. Parallel wavy and straight combed lines are used both for Cb and PCb decoration (Fig. 4). The combing can be thick or thin, and is usually executed with a 4-8 pronged instrument. Both inner and outer surfaces of bowls were combed and no order could be discerned concerning the angle at which a bowl was combed. Some vessels have combed lines running almost parallel with the rim while on others the combing is almost vertical. This phenomenon also occurs with PCb sherds. Two types of decorative PCb styles are found: the first has one surface of the bowl decorated with combed lines on a monochrome red background while the other surface is Red-on-White. The second has thick horizontal, vertical or diagonal bands painted on the vessel, these bands subsequently being combed. Both styles are present at *Kokkinoyia*.

The fabric and finish of the *Kokkinoyia* ceramics is identical to the Late Neolithic ware found at *Pamboules*, that is Late Neolithic Fabric A. This fabric was used for Cb, PCb and RMP wares.

The survey ceramics collected from *Kokkinoyia* lack much of the variety that can be observed in the assemblage from Dikaios' excavations at Site A. One of the more notable wares absent from the survey material is Glossy Burnished ware, a ware that has been associated with the Early Chalcolithic period in the west of the island (Bolger 1987). This ware occurs in medium concentrations in the upper levels of Pit XI, although not at all amongst the material found in the other pits and huts recorded by Dikaios and still stored in the Cyprus Museum. GBW fabric is also used to a lesser extent in the Site A assemblage for Cb, PCb and RMP, and Baird's Early Chalcolithic Fabric A has been recorded in some Cb sherds. This may suggest that, as at *Pamboules*, certain areas of *Kokkinoyia* were occupied later than others. The survey material does not reflect this, but it remains a possibility.

Summary Conclusions

Without further excavation Kalavassos-Kokkinoyia and *Pamboules* must be considered separate sites. *Kokkinoyia* is typical of Late Neolithic sites in the southern part of Cyprus; the ceramic assemblage is dominated by Combed ware

Painted and Combed ware is also popular, while Red-on-White ware accounts for only 10 of the 205 sherds. Although the fabric is unique to the Kalavassos area, shapes and decorative techniques are identical with those found at Sotira-*Teppes* and Khirokitia-*Voumtoi*. The presence of some later wares in the Site A assemblage may suggest that the utilization of the site extended into the beginning of the Early Chalcolithic period; the major use of the site must, however, have been during the height of the Late Neolithic.

In ceramic terms Kalavassos-*Pamboules* is one of the most important Early Prehistoric survey sites in Cyprus. It is multi-period, and the ceramics indicate continuous occupation from the Late Neolithic until the Late Chalcolithic. The site was large, particularly during the Late Chalcolithic when the ceramics are numerous and varied. The lack of any Red and Black Stroke Burnished pottery is of interest; although fabrics differ from area to area, it would seem reasonable to expect that the RB/B technique would have been in use at *Pamboules*. This seems not to have been the case.