The Evolution of Social Complexity in the Early Bronze Age East Mediterranean: A Cross-Cultural Analysis of Tomb Groups from the Southern Levant, Cyprus and Crete

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Declaration

Let this be testimony that the contents of this thesis are based upon my own work and where the work of others is used this is duly accredited.

ABSTRACT

The present thesis intends to offer an archaeological approach to the study of sociopolitical complexity in ancient societies through the cross-cultural examination of mortuary variability. The aim is to monitor different trajectories of complexity in the archaeological records of three societies in the East Mediterranean, the southern Levant, Cyprus, and Crete during the Early Bronze Age.

Chapter 1 comprises a literature review of the major anthropological and archaeological perspectives on the evolution of complex societies.

Chapter 2 includes a brief review on the applications of the cross-cultural method in archaeology and anthropology, and a discussion on the wider implications of the approach for archaeological research.

Chapter 3 comprises a literature review on mortuary analysis and social inference in both ethnographically and archaeologically documented societies, and an outline of the methodology developed for the present research.

In Chapters 4, 5, and 6, the results of the analysis of the tombs groups are presented in conjuction with a wider discussion on the evolution of complexity in each area.

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Chronological Chart

Crete
Final Neolithic: pre-4500 - 3500 BC
Early Minoan I: 3500 - 2900 BC
Early Minoan II: 2900 - 2300 BC
Early Minoan III: 2300 - 2150 BC
Middle Minoan I: 2150 - 1800 BC

Cyprus
Early Chalcolithic: 3800 - 3500 BC
Middle Chalcolithic: 3500 - 2800 BC
Late Chalcolithic: 2800 - 2300 BC - Philia Phase
Early Cypriot I: 2300 - 2075 BC
Early Cypriot II: 2075 - 2000 BC
Early Cypriot III: 2000 - 1900 BC
Middle Cypriot I: 1900 - 1800 BC

Southern Levant
Late Chalcolithic: 5000 - 3400 BC
Early Bronze I: 3400 - 3100/3000 BC
Early Bronze II: 3000 - 2750/2700 BC
Early Bronze III: 2700 - 2400/2300 BC
Early Bronze IV: 2350/2300 - 2000/1900 BC

The convention used throughout for quoting ^{14}C dates is the historical convention that refers to calibrated figures in years BC.

List of Abbreviations

EBA: Early Bronze Age
MBA: Middle Bronze Age
LBA: Late Bronze Age
BA: Bronze Age
EB: Early Bronze
FN: Final Neolithic
EM: Early Minoan
MM: Middle Minoan
LM: Late Minoan
LN: Late Neolithic
EChalco: Early Chalcolithic
MChalco: Middle Chalcolithic
LChalco: Late Chalcolithic
EC: Early Cypriot
MC: Middle Cypriot
LC: Late Cypriot
CIM: Complex Interaction Model
CA: Cypro-Archaic
GST: General Systems Theory
HRAF: Human Relations Area Files
SC-CS: Standard Cross-cultural Sample
DQCF: Data Quality Control Factors
SCE: Swedish Cyprus Expedition
SFN: Small Find Number
FW: Fine Ware
PW: Plain Ware
AJA: American Journal of Archaeology
ASOR: American Schools of Oriental Research
BASOR: Bulletin of the American Schools of Oriental Research
JMA: Journal of Mediterranean Archaeology
B.A.R: British Archaeological Reports
PAE: Praktika Archaiologikis Etairias
BP: Black Polished
RP: Red Polished
WP: White Painted
RB/B: Red and Black Stroke Burnished
KM: Kissonerga-*Mosphilia*
LAP: Lemba Archaeological Project
BurNo: Burial Number

List of Figures

Fig.56: Mesara Tombs Grave Equipment frequencies
Fig.57: Mochlos Tombs Grave Equipment frequencies

List of Contents

Title

VOLUME I

VOLUME II

VOLUME I

Introduction

The study of sociopolitical complexity in ancient societies has been the focus of much recent research, particularly in view of a number of small-scale societies which do not exhibit the usual correlates of social stratification and complexity. These societies do not often fit the traditional evolutionary classifications proposed by earlier scholars (see Chapter 1, 1.1). Recently, such sociopolitical configurations have been defined as "middle-range" societies (Upham 1990: 3) in an effort to describe their nature and character.

The results of both ethnographic and archaeological research on the subject indicate that sociopolitical development must now be viewed in a way that acknowledges the existence of differential trajectories to complexity and introduces the notion of scale in its examination. In this respect, the emphasis on alternative sets of correlates for the efficient detection of complexity in the archaeological record comprises one of the aims of this thesis.

Much archaeological research encompasses the study of ancient cemeteries. Studies of mortuary variability have convincingly shown that the burial record exhibits patterns of change that are related to changes in the sociopolitical format of the society that generated them. Constraints in the use of burial data to derive social inferences have been assessed by modern scholars to the extent that the eloquence of the funerary record is now significantly enhanced.

The study of mortuary variability required the detailed and systematic work on burial remains. This, in turn, has triggered a series of positive developments in archaeological fieldwork and research. The recent trend in burial studies is epitomised in the increasing awareness that tomb groups must be interpreted in their social context. In this respect, the manipulation of mortuary symbolism and ritual by the living community,

which comprises the burying group is a focal point in these studies, including the present thesis.

Methods of disposal of the dead and spatial arrangement of the tombs and their contents are increasingly used as additional means to detect patterns of social differentiation and change. The realisation that burial domains are integrated units leads to the analysis of all aspects of mortuary variability with no preferential emphasis on any of them specifically.

What has been absent in most archaeological studies of death and society is a cross-cultural perspective. Research has focused predominantly on those individual cases of societies that exhibit variable levels of complexity. Despite the extensive use of a comparative methodology by archaeologists, attempting to draw parallels between ancient societies, no systematic effort has been made to compile a synthetic study that examines a number of societies on a temporal and regional level.

Yet, the potential of such a research project can easily be realised. With particular regard to small-scale and "middle-range" societies, the examination of the archaeological evidence on a cross-cultural level offers a number of alternative ways to treat the evidence, as well as new vistas for interpretation.

It is within this framework of current research that this thesis is set. The Early Bronze Age East Mediterranean has provided both the temporal and regional setting for a cross-cultural examination of mortuary variability. The aim is to identify and monitor differential paths to complexity in a number of societies in the region.

The Early Bronze Age is widely considered as a formative period for emergent complex societal configurations in the East Mediterranean. Most research has been devoted towards the study of the later Bronze Age, since the archaeological evidence of the later periods constitutes a large set of information. Evidence for the development of complex, stratified societies and the beginnings of international trade is abundant for the late Middle Bronze Age and the Late Bronze Age of the region. In the present study, the

focus is shifted to the 3rd millennium BC as an alternative perspective on such developments.

The selection of three different societies in the region provides a challenging database of archaeological information. Mortuary variability and social change are thus monitored on a wider scale that allows for a fertile interchange between methodology, analysis and interpretation. Crucial to this methodological approach is an adequate assessment of the archaeological record in terms of preservation and site formation processes, and an evaluation of the archaeological publications that provide the raw data. Although the burial record can comprise a sensitive indicator of sociopolitical change, the settlement evidence is regularly considered in this thesis in order to set the cemeteries within their wider social and cultural context. Interpretation is based upon the adequate manifestation of patterns of mortuary and social differentiation, and change.

The thesis is divided into two major parts. In the first part (Chapters 1, 2 and 3) the author's views on social complexity, cross-cultural methodology, and mortuary theory are unfolded in relation to older and current perspectives. In the second part (Chapters 4, 5 and 6) the results of the research on some major Early Bronze Age cemeteries are presented together with an overall discussion on the emergence of complexity in each area (southern Levant, Cyprus, Crete). The final part of the thesis consists of a cross-cultural synthesis (Chapter 7) and the general concluding remarks of the thesis.

Chapter I

Archaeological Perspectives on Social Complexity

"What I am saying in effect, is that archaeologists still do not know what causes complex societies, what brings them into being" (Binford 1983: 301)

Introduction

In studies on the evolution of complexity in ancient societies (see 1.1, 1.2) scholars have mainly focused on the establishment of a set of definitive characteristics for complex societies, rather than a set of its material correlates in the archaeological record. As a consequence, the notion of social complexity has been a vague one and the definition of the term has largely depended upon individual understanding.

In archaeological studies in particular, the reconstruction of extinct societies and the study of sociopolitical development is mainly conducted on the basis of raw archaeological material derived from fieldwork. It follows, then, that any definition of complexity should comply with the realities of the archaeological evidence.

However, complexity encompasses a wide variety of social, cultural and economic developments that are not always archaeologically retrievable. Consequently, any attempt to evolve a specific definition may be proved deficient. This limitation has caused a certain amount of discontent among prehistorians especially (e.g MacGuire 1983) in that they cannot explicitly define what otherwise may be evident in the record.

"Complexity" as a term has been used by scholars of other disciplines, such as social anthropologists and ethnographers (e.g Binford 1971: 6-27). New Archaeology

introduced the term in the archaeological literature in order to help archaeologists differentiate between stratified, advanced societies and other less complicated forms of sociopolitical organisation. A rough division between simple and complex societies was then implied depending on whether a society had developed an identifiable form of sociopolitical organisation, or not (e.g. Bard 1989: 226; Maschner and Fagan 1991: 975).

Some recent studies have rejected this sharp distinction and have even argued in favour of complex hunter-gatherer communities (e.g. Price and Brown 1985). It is still widely held among archaeologists that a society becomes complex only when it acquires a typologically specific socioeconomic and political format, e.g. chiefdom, or state. This view has been largely due to the insufficient testing of social theory on archaeological data from Europe and the Old World, as opposed to the considerable number of such studies in the New World (e.g Peebles and Kus 1977). In addition, confusion has ensued with regard to the kind of complexity scholars have referred to, cultural, social, ritual, etc.

Archaeological research in both the Old and the New World is increasingly dealing with social complexity, that is complexity in the sociopolitical organisation of any given society (e.g. Tainter 1988; Bard 1989; Lambert and Walker 1991; Ames 1991).

To understand how the notion of complexity has developed through years of research in the fields of anthropology and archaeology, it is necessary to review the main theoretical perspectives through which the rise of complexity in both ancient and ethnographically documented societies has been explained. Literature review is based upon two major criteria: a) complexity as the key variable to social evolution, and b) archaeological correlates of social complexity.

Since the number of scholars working on the subject comprises a substantial body of work it is beyond the scope of this thesis to discuss each individual approach separately. Instead, researchers are grouped under four principal schools of thought which are discussed in turn. In every school, the most pertinent works are considered.

The schools of thought are:

1.1 Cultural Evolutionism

1.2 Classical Marxism/Structuralist Marxism

1.3 Systems Theory

1.4 Current approaches: Post-processual archaeology

1.1 Cultural Evolutionism

One of the most seminal approaches to the study of complex societies has been cultural evolutionism. The pioneering studies were those of Fried (1960) and Service (1962) who classified societies in several main types according to their characteristics. Both scholars produced their taxonomies after a thorough examination of an ethnographic sample of societies. The implication of their studies for archaeology can be understood when one considers the extent to which archaeologists use Fried's and Service's categories despite the fact that they have both questioned the archaeological utility of their categorisations (Wenke 1984).

The main types of societies according to Service (1962) are bands, tribes, chiefdoms, states and empires. His evolutionary stages are closely related to his interest in the organisation of social systems. Fried, on the other hand, is mainly interested in the development of hierarchy in a society and the way control is exercised. Therefore, he deviates from Service in that his classificatory scheme categorises societies according to the nature and the degree of their hierarchical mechanisms.

Fried's scheme postulates four types of social structure, egalitarian, ranked, stratified and state societies. The similarities of both taxonomies can easily be drawn, particularly when a distinction is made between ranked and stratified structures. In ranked societies wealth differentiations are not institutionalised, i.e status is achieved and not inherited, whereas in stratified societies access to wealth and power is

institutionalised, i.e status is ascribed, not achieved. By extension, a tribe and a chiefdom are ranked societies, whereas a state, or even a hereditary chiefdom are stratified societies.

Both approaches describe four different levels of sociopolitical complexity, but they do not offer an explanatory model for the emergence of these configurations. The shift from one stage to another is totally dependent upon selective processes. Service asserts that social stratification is an effect of state formation, but in this way he leaves the emergence of the state itself unexplained. Fried, on the other hand, relates stratification to chiefdoms but accounts for the rise of state society in terms of some kind of conflict that initiates state processes. Similarly, social conflict remains unexplained and is rather taken as a prerequisite. Although the two scholars emphasise internal development in social evolution, they fail to offer an explanatory theory that is not heavily dependent upon social, cultural and biological species competition, and natural selection - both difficult to recover archaeologically.

In terms of social organisation, such taxonomies do not suffice to describe the trajectory of complexity in a society, nor do they offer an adequate explanation. The sudden leap from tribes to chiefdoms or from egalitarian to ranked societies cannot be accounted for, unless it becomes accepted that some sort of status distinctions existed even in the most egalitarian systems. Furthermore, the possibility that achieved and inherited status may co-exist cannot be excluded, or that a stratified society may not necessarily proceed to statehood. Apparently, evolutionary typologies impose limits upon the study of sociopolitical development and change in ancient societies.

The vast majority of Evolutionists have pursued an explanation in "prime-movers", i.e principal causal factors for the rise of social complexity. It would be time-consuming to examine each one of them in detail, however, one representative example is the hydraulic theories proposed by Wittfogel (1957) for Mesopotamia, and Butzer (1976)

for Egypt, to account for the emergence of hierarchical decision-making institutions and the state.

Wittfogel (1957) emphasises irrigation systems as the decisive factor for the emergence of hydraulic societies that are governed by a strong state apparatus which, in turn is operated by a large number of full-time civil and military specialists. This process involves a series of stages. The first stage, incorporates the creation of separate irrigation systems in separate communities within a particular region. The manipulation of irrigation requires organised mass labour and cooperation for its maintenance, therefore, a single integrated irrigation system develops in order to efficiently administer that labour (second stage). Decision-making institutions and wealth differentials arise depending on the degree of water availability and administration (third stage). The last stage is termed as the empire and refers to the establishment of a despotic religious system which exercises control beyond its region, over other non-hydraulic societies.

Butzer (1976) considers irrigation as the cause of population density and internal colonisation in certain parts of Egypt. He argues for a complex pattern of economy where the major ecological problems, such as water availability, were handled at a local communal level. Butzer concludes that there is no direct causal relationship between hydraulic agriculture and the emergence of a specific sociopolitical organisation in Egypt. Instead, he maintains that the rise of a full-time bureaucracy and social stratification might have had a different impetus, prompted by the degree of complexity of the functional mechanisms involved, such as technology, land use patterns, development of irrigation, spatial distribution of settlements and demographic ratio between actual population size and carrying capacity. In this sense, Butzer's model for the Egyptian development radically differentiates this particular area from Mesopotamia where the rise of complexity was marked by the large concentrations of rural population in urban settlements. Butzer also examines population pressure and ecological stress as

the causal factors of social evolution, yet he reiterates the role of specific ecological controls over population size and carrying capacity in different areas.

Hydraulic theories, in general, tend to underline the role of specific environmental pressures such as annual rainfall in the rise of complex sociopolitical institutions. Undoubtedly, the development of irrigation systems in areas like Mesopotamia or Egypt more than likely played a significant role in the establishment of a distinct type of socioeconomic structure, yet the two areas followed diverse sociopolitical trajectories. Hydraulic models tend to lump together all societies which had developed irrigation systems under the single description of hydraulic civilisation. However, there are ethnographic parallels of less complex societies which operate advanced irrigation systems with no significant effect on their sociopolitical organisation (Wenke 1981). Finally, hydraulic theories fail to explain the emergence of social complexity in non-farming regions.

Other representative prime-mover theories are those of Carneiro (1970) and Cowgill (1975). Carneiro proposes warfare as the principal causal factor for social change, although he asserts that it cannot be the only one. Subsequently, he develops a conflict theory on the basis of the pressures which affect population growth and environmental circumscription imposed upon societies.

Carneiro's model focuses on hydraulic societies which develop out of small scale autonomous communities residing in fertile areas. Internal conflict over possession of agricultural lands causes this pattern of small dispersed settlements to persist for a considerable time, though conflict may also lead to larger population aggregates. Population growth leads to agricultural intensification which, however, cannot keep pace with rapid population increases. In response to these stressful conditions, communities engage in the ultimate competition, i.e. warfare.

Institutionalised mechanisms and bureaucracy evolve in order to administer taxes and slaves derived from war. Society becomes stratified with the defeated constituting

the lower class and the winners obtaining the high administrative posts. The state is formed when all the previously autonomous communities succumb to the control of a single centralised mechanism.

Carneiro's theory does not account for population growth which is assumed to take place rather rapidly. Furthermore, the manifestations of conflict in the archaeological record are dubious and have led many scholars to postulate conflict on the basis of meagre evidence. Even Wenke (1984: 270) tries to relate population growth and warfare in order to explain the emergence of complexity in SW Asia. He supposes then, that given the ambiguities of the record, the most significant indicator of warfare is the presence of substantial city walls. Such an explanation though does not account for complex societies like Bronze Age Crete (see Chapter 6), where an advanced form of sociopolitical organisation was accompanied by a distinct lack of any fortifications. Moreover, wall enclosures and fortifications have recently been re-interpreted on the basis of the domus-foris principle of inclusion-exclusion (Hodder 1990) and cannot necessarily be considered as evidence for biological conflict.

Cowgill's approach (1975) evokes human population growth as the precondition for the emergence of complex sociopolitical configurations. He also maintains that population increase promotes agricultural intensification and subsequently brings forth the evolution of administrative mechanisms. As in the previous models, a prime factor is linked to the rise of administration and bureaucracy which, in turn, generate social complexity. Administration must be considered as the major attribute of complexity in most evolutionist studies. To elucidate the argument, it is necessary to see where the evolutionist concern lie:

> "archaeologists must come to terms with a fundamental problem: most of the origins and development of ancient societies cannot be explained on the basis of the archaeologically retrievable facts of climate, technology, economy, and demography. Cultural evolution instead must be analyzed at some level above these basic conditions - at the higher level of the social, economic, and political relationships of peoples and social entities." (Wenke 1984: 230)

However, the archaeological evidence for administrative systems varies considerably in ancient societies, from chiefdoms to states, whereby the former demonstrates a certain degree of hierarchically controlled regulatory systems and the latter displays a higher degree of, essentially, the same specialised mechanisms. In fact, ethnographic studies have shown that "the progression from egalitarian societies to states is, in part, the evolution of more and more specialized, hierarchically arranged regulators" (Peebles and Kus 1977: 427). In other words, administration may be evident in the archaeological record of societies which are vastly diverse in their sociopolitical organisation.

To accept administration as the major correlate of social complexity, it must first be sustained that other forms of sociopolitical organisation, apart from states, are complex to a certain extent. Indeed, the major bias that cultural evolutionism has introduced in the study of complex societies is the persistence on a unilineal trajectory of societal development which ultimately leads to statehood. The argument that a state society is a complex society, fails to explain why a complex society does not necessarily become a state.

Evidently, there are two gaps in evolutionist theories. One is the unexplained transition from one type of social organisation to another, prior to state formation. Second is the inadequately explained rise of the state society itself unless necessary pre-state formation conditions already existed. With regard to the first point, it has been mentioned before in this chapter that evolutionist taxonomies fail to interpret the sudden leaps from one type of society to another. This appears to be an automatic process. Each type of society is thoroughly described, yet the process itself, is not. A series of gaps is created between the various stages and evolution does not seem to progress along a continuum. Consequently, archaeologists struggle to fit in their "in-between" , "middle-range" (Upham 1990) societies. The second point relates to the gap created between pre-state configurations and the state itself. It must be stressed that the rise of complex state

societies cannot be accounted for, unless it is agreed that pre-state societal systems were also complex to a certain degree.

The major credo of Evolutionism is that it has regarded complexity it as an adaptive process; complexity rose out of the needs of human communities to cope with the various socio-environmental stresses. It is a process that can be explained on an evolutionary cause-effect basis. The various stages of complexity can be described using the older or new taxonomies. The great impact of Evolutionism in this respect can be seen in the widespread use of these conventional taxonomies in archaeology.

Recent evolutionist research addresses questions related to technology, production and consumption, circulation and exchange in ethnographically documented small-scale societies (e.g. McC Netting 1990). Other studies (e.g. Braun 1990) insist on adaptation as the major prime-mover, however, adaptation is discussed in relation to ideology, ritual and authority and leaves enough room for the "microsocial dynamics" (Braun 1990: 77) of a society that are considered as integral parts of organisational change. Variation in sociopolitical organisation is now considered as the rule, rather than the exception, and adaptation is not perceived as a static process.

Despite the revision of classical Evolutionism by modern scholars, an answer is still being sought with regard to the rise of complex societies. It is still maintained that a certain threshold is being crossed every time a society undergoes structural change and acquires a new sociopolitical format. Archaeologists then, are expected to position this momentum temporally and spatially and describe its trajectory. What constitutes "radical" change in the archaeological record can be highly subjective. Since variation is the norm locating the momentum of change in a society can be a very intricate task. Moreover, since societies evolve along a continuum, the continuity manifested in the archaeological record makes it even more difficult to distinguish between change and variation. Changes must occur on a large scale over a significant amount of time before they become visible to the archaeologist.

Complexity as a threshold phenomenon requires the manifestation of massive changes in the archaeological record to affirm its presence. In this respect, only the emergence of a state society can provide a reasonable candidate in which such a manifestation can be observed. The contribution of any other "microsocial dynamics" to the process itself cannot be fairly assessed. As a consequence, development and change in small-scale societies which do not exhibit threshold phenomena cannot be monitored, at least until they also provide evidence for massive societal re-organisation.

The explanatory trend of Evolutionism has had a great impact on archaeological studies. Modern research has encompassed much of the analytical power of evolutionary perspectives. The perceptive blending of evolutionist analysis and other approaches to the study of social change currently offers a number of insights into the diverse ways societies develop. The impact of modern Evolutionary research is best exemplified in a number of ecological/archaeological studies that have recently been produced (e.g. Held 1990; Broodbank and Strasser 1991). Adaptation as the crucial variable is carefully examined to produce a viable explanation for the early colonisations of the large Mediterranean islands and the impact they had upon the successful formation of early prehistoric island communities. The relevance of these models to the present research is shown in Chapter 5.

1.2 Classical Marxism/Structuralist Marxism

Most Marxist studies have been concerned with the emergence of the state. The works of Engels and Marx motivated a number of scholars who developed a series of models on the evolution of ancient state societies.

A distinguished study on the rise of past states, is that of Claessen and Skalnik (1978). In this they discuss the definition and the origins of the Early State, as well as its structural characteristics. For this purpose, they cross-culturally examine twenty-one

case studies of ancient states from the Old and the New World. The selection of several specific variables for comparison incorporates, on one hand, the common structural features of states such as territory, population, infrastructure, and urbanisation ; on the other hand, the common functional attributes of states such as administration, economy, and ideology are examined.

Claessen and Skalnik define three types of early states, the inchoate, the transitional, and the typical state. The first type is associated with kinship and family ties in political practice and a limited number of full-time specialists. The second, refers to a type of state organisation that allows for the appointment of both kin and non-kin officials in administration. The foundations of class antagonism are to be found in the transitional state. The Aztec state is considered as representative of the type. Finally, the typical state is associated with the appointment of non-kin officials in government administration, and a preponderance of redistribution and reciprocity over social relations. At this stage, the division of the society into at least two social classes, has been accomplished. Old Kingdom Egypt is viewed as a typical state.

Both scholars emphasise that each state emerged under specific conditions and, therefore, the various early state societies differ widely in many respects. Nevertheless, they distinguish the Early State as a distinct category in social evolution. Lower level linkages and relations apart from state structures are considered as essential to make the system operate as a whole; however, these relations are not examined at all.

This predominant interest in the rise of state societies poses a limit in Marxist studies in that it automatically excludes any other type of sociopolitical organisation. The rigidity of the approach is culminated in statements like the following:

> "For me the presence or absence of statehood is still the most important and clearest criterion to distinguish primitive society from all the rest." (Khazanov 1985: 91-92)

The idea is that all non-state societies must be regarded as "primitive" societies. Yet, scholars have challenged the conviction that early centralised societies were states (Cohen 1985). Cohen illustrates the problem:

> "To suggest that some sense of 'collective will' or any degree of political activity and social control signifies statehood is to beg the question...The problem of varying degrees of socio-political complexity is not resolved by using similar terms for significantly different organizational forms." (1985: 32)

However, early Marxist models are not particularly interested in the rise of social complexity as such. In fact, they demonstrate an evolutionary way of thinking in that they assume certain processes to be rather inevitable and automatic. A good example is the rise of wealth and status differentials in human communities.

All societies were classless till a turning point when certain subgroups acquired some kind of status distinctions. Class conflict followed and subsequently the state was formed in order to protect the interests of the ruling class (Diakonov 1969). Such a development from egalitarianism to stratification, though, cannot be explained on the basis of a certain ambition, or any other inevitable process. Tainter points out that:

> "We cannot fully explain the emergence of social institutions by a psychological feature that is itself conditioned by social institutions." (1988: 35)

In a study on the evolution of sociopolitical organisation Claessen and de Velde (1985) both reject complexity as the key variable to social evolution. They cite four main reasons for such a view:

a) Complexity promotes the idea of a unilineal development of societies, i.e. as societies develop they become more complex along a give scale of complexity. This is a gradualistic argument since it does not account for major structural change in sociopolitical organisation, or for threshold phenomena like the emergence of statehood.

b) A number of developments in a society do not lead to a growth in complexity; therefore, it should not be assumed that every society will necessarily become complex. Notions of resistance to complexity, recently introduced by scholars (Trigger 1990) relate to this argument.

c) Complexity cannot account for cyclical developments in various societies.

d) Complexity does not allow for a number of societies which never evolved a more complicated organisational form, yet they were considerably transformed in the course of time.

With regard to the first argument, complexity *per se* is a variable that refers to the whole range of sociopolitical and cultural developments in a society. Therefore, the measurement of its growth requires a flexible research strategy that does not depend on a typological arrangement of societies to become comprehensive. In this respect, a unilineal development of societies from one level of complexity to another is clearly not suggested. The second argument is equally not valid, since the study of complexity can best highlight these abstract "developments" which promote, or block its growth.

Cyclical developments are best monitored through complexity since it is the most sensitive indicator of organisational change in all possible societal configurations. Contrary to the approach of traditional schools of thought which require the formulation of taxonomies, the study of complexity in any given society is a research strategy that can easily accommodate small scale and "middle-range" societies. In relation to the afore-mentioned ideas, the degree of complexity in a society comprises the most satisfactory description of societies which never developed more advanced forms of sociopolitical organisation.

In essence, when Claessen and van de Velde (1985) drop complexity in favour of qualitative change as the key variable to social evolution, they propose the examination of changes in one or more elements or relations in a social system. This is clearly a relationship between variables that can reveal the extent of change in a society. A similar strategy is adopted in order to measure complexity. Apart from the differences in terminology, the two research strategies are closely related. Regardless, in both cases it is difficult to assess how a high or a low correlation between the selected variables can determine the causal relationships between them (Wenke 1981).

To overcome their difficulties, Claessen and van de Velde (1985: 254) develop a rather systemic model of sociopolitical evolution which is termed as the Complex Interaction Model (CIM). Although they maintain that they do not evolve a model along the lines of Systems Theory (e.g Flannery 1968), they admit that CIM is heavily influenced by the systemic approach.

CIM consists of three sets of variables:

a) the societal format

b) the set of economic factors

c) the set of ideological factors.

The above sets are interrelated and interactive. Therefore, classificatory schemes cannot be produced. The study of the relationship between these variables points to two main categories of societies: a) societies that display an increasing growth in complexity, and b) societies that do not demonstrate such a growth.

CIM is a rather unorthodox Marxist model in that it offers a more flexible perspective by allowing for a productive exchange between Marxism and Systems Theory ideas. However, it fails to supply any causative explanations for the rise of complexity.

Classical Marxist views were best articulated in the study of Friedman and Rowlands (1977) on sociopolitical organisation. Their model on social formation attempts to explain advanced societal developments on the basis of the antecedent social structures. This approach requires the study of the ecosystem and the detailed reconstruction of the relations of production on the family-communal and the local-regional level. The latter is considered as principal to the model since it amplifies the relationships between the ruling groups of a region with regard to the manipulation of valuable resources and imported items, in order to enhance their status in the local communities. Thus, the core of Marxist analysis is the generation and consolidation of social inequality through the exploitation of the economic resources.

Relations of production comprise the only key factor in the Friedman and Rowlands model and they dominate the whole process of social development. These relations are important in reconstructing the mechanisms of reproduction of specific social forms, yet they have received criticism by Wenke (1984). Relations of production also exercise dominance on both the superstructure and the productive forces in the various "Asiatic" societies on which the model is applied:

> "[...] relations of production [...] organise and dominate the entire process of social reproduction and determine its course of development within the limits of functional compatibility between levels." (Friedman and Rowlands 1977: 203-204)

There are four main levels of social formation: a) the ecosystem, b) the productive forces, c) the relations of production, and d) the superstructure. Each of them possesses autonomous properties and is structurally independent, yet all are linked together by intersystemic relations. These relations must be understood in terms of a series of dominances and constraints which some levels may exercise or impose upon

others. For instance, relations of production (level c) exercise dominance on the ecosystem (level d), whereas level d imposes constraints upon level c.

The model attempts to offer a causative explanation of social formation and state development and, given the ideological framework of the approach, is successful to a certain extent. This approach accounts for the generation of social inequality, one of the major correlates of complexity, a phenomenon that was *a priori* accepted in other Marxist studies as automatic. However, it is highly doubtful whether the exploitation of economic resources generated social inequality; we can assert that it determined its consolidation, yet it is still disputable whether social inequality was the cause or the effect of sociopolitical development.

Another important point is that a society must be understood in relation to other societies. The view introduces a cross-cultural perspective in the study of past social systems and takes into consideration the idiosyncrasies of each area. However, the model itself is applied on a number of significantly different state societies in a generalised manner.

The levels of social formation proposed by Friedman and Rowlands are difficult to identify in the archaeological record of prehistoric societies. The abstract notions of the superstructure and the productive forces increase confusion when it comes to handling raw data. However, these concepts have offered new insights into the study of ancient communities by introducing alternative questions for the archaeologist to ask. The problems start when such models are used to offer causal explanations:

> "It may well be that the kinds of cultural causality that Friedman and Rowlands are concerned with are not now and will never be accessible through archaeology." (Wenke 1984: 223)

The issue is whether we can formulate an integrated theory of social change that we can match to the results of archaeological fieldwork. I am inclined to believe that the

search for a global theory of sociopolitical evolution and change is beyond the grasp of archaeology and it disregards the individual parameters of societies.

It is evident that although the Classical Marxist approach has contributed to the formulation of general principles on sociopolitical development, it has failed to explain the origins of complex societies on the basis of these principles alone. The main constraints of Classical Marxism are summarised in two observations: a) that the fragmentary nature of the archaeological record cannot sustain the application of rigid models like the ones proposed in early Marxist studies, and b) that the prevailing interest of early Marxists in the emergence of state societies does not allow for a study of small scale societies.

The newly emergent Marxist perspectives (e.g Spriggs 1984; Upham 1990) encompass the theoretical models and the criticism of earlier archaeological thought. Substantial revision of the earlier, dogmatic approaches takes place in an effort to re-define Marxism as a methodology for historical analysis and present a range of Marxist views, sometimes from widely divergent positions.

The considerable development in theory and applications is exemplified in the works of Pearson (1984) and Kus (1984). Pearson discusses social change and ideology using the evidence of early Iron Age Denmark. A reassessment of ideology and class struggle points to the revolutionary character of social change in any given society. Revolution now refers to the rapid transformation of social relations within a relatively short time span. More relevant to the present research (see also Chapter 3) is the definition of the relationship between burial practices and the society. Burials are seen as socially prescribed media through which social and political statements are made. The manipulation of mortuary ritual by early Iron Age Scandinavian society is shown to comprise the medium for the ideological manipulation of power amongst the living.

Both Pearson (1984) and Kus (1984) criticise the traditional notion of ideology as being solely determined by economy and call for a re-evaluation of the dialectic

relationship between matter and idea. The deterministic notion of the relationship between social practice and ideology is now reassessed on the basis of a two-way connection between the two.

Relations of production are also redefined (e.g. Kus 1984: 104-105). Forces of production and relations of production exist in mutual constraint. The mode of production in various societies may entail the possibility that other, non-economic social relations may function as relations of production. Social formation in this respect is observed through a less materialistic-economic angle.

Spriggs (1984: 3) summarises the consensus views of modern Marxist research. The major concern of these studies is epitomised in their dissatisfaction with the rigidity and the dichotomies of the earlier approach. Marxist contribution is best exemplified in the re-orientation of research towards the study of non-state societies. The analytical power of Marxism is focused on the study of complexity in small scale, "middle range" societies in a number of studies (e.g. Upham 1990).

A number of case studies exhibit the abuse of terminology in the study of complexity and its correlates. A re-definition of terms such as "hierarchy", "power", "elite" is sought (Saitta and Keene 1990: 205-211) in order to identify problematic processes of both political and non-political nature in small scale societies. The American Southwest provides the case material for social forms which fall between the extremes of "simple/acephalus" and "complex/chiefly" organisations (Saitta and Keene 1990: 223). Moreover, it is argued that current social theory cannot accommodate such variation in sociopolitical organisation and that further development is still pending.

Lee (1990) moves further when he suggests the theoretical possibility of a complex society without social inequality. In his discussion of ethnographically documented societies he unfolds an argument on the origin of inequality and complexity from a communal baseline, maintaining that both communal and hierarchical mechanisms tend to co-exist in the same society for a considerable time. This radical view

on the evolution of social complexity bears major significance for the study of social change in ancient societies.

Bender (1990) also focuses on the notion of resistance to complex sociopolitical configurations. Embedded egalitarianism protects the social equilibrium and plays a significant role in the formation of "middle range" societies.

The impact of these views on archaeology is illustrated in the attempt to interpret early prehistoric society in Cyprus using these notions (Peltenburg 1992). The introduction of new notions and arguments in the explanation of social change coupled with the explanatory power of Marxism and the flexibility of a new approach offers a wider spectrum in the interpretation of ancient non-state societies. In addition, traditionally held views on hierarchical societies are now challenged by the newly emergent Marxist perspectives.

1.3 Systems Theory

One of the most compelling approaches to the study of social complexity has been systemic analysis based on General Systems Theory (e.g. Flannery 1968; Binford 1972; Munton 1973; Klejn 1973). Much discussion has been devoted to the definition of the system itself in both archaeological and non-archaeological studies. To simplify the argument, Munton's description (1973: 686) that a system must be understood as a conceptual framework constructed by scholars in order to help them conduct their research seems to be the most appropriate. In no case should it acquire real dimensions.

Social systems are examined on the basis of their constituent subsystems, or elements. According to an interpretation of General Systems Theory (GST) by Wenke:

> "[...]there are processes so basic to all living systems that all such systems can be compared on criteria having to do with these processes." (1984:224)

In short, societies as living systems consist of a number of subsystems, economic, religious, social, etc. The detailed study of the interrelationships between these subsystems may significantly enhance our knowledge on the evolution of complex sociopolitical organisations.

With regard to the archaeological applications of systems theory Klejn (1973: 700-704) has isolated five main principles:

a) the principle of integration, between the individual subsystems and the general system in which they are included,

b) the principle of context, i.e. the study of a system within its unique contextual framework,

c) the principle of the multivariate approach, i.e. the examination of all the different parameters that the same system may possess,

d) the principle of the structural organisation of a system,

e) the principle of the immanent development, i.e. the study of a system as a self-organising entity.

The great impact of Systems Theory on archaeology must be understood in terms of its potential for archaeological applications, with particular reference to the study of ancient societies. To illustrate the point, the following observations must be made:

a) Systemic studies clearly abandon the idea of prime-movers in social evolution and instead place emphasis on a number of interacting variables that affect social development.

b) Systems theory followers are the first archaeologists ever to focus explicitly on other forms of sociopolitical organisation apart from states. In that sense, they have considerably enriched our understanding of both pre-state societies and less complex societal aggregations.

c) The manifestation of complexity in the archaeological record of past societies has been of primary concern to the specific approach. Systemic studies (e.g Flannery

1969; Binford 1971) have extensively referred to social complexity as the key variable to sociopolitical development and have pursued a definition of the term and its correlates in the record.

d) Finally, systemic models contemplate material correlates of complexity (McGuire 1983) that are archaeologically retrievable and can be measured in statistical terms.

Another strong point for archaeological systems applications is that complexity is regarded as a continuous variable that may increase or decrease. The fact that societies become more or less complex along a scale, does not mean that we can identify specific structural levels of complexity in the archaeological evidence:

> "The alternative view, which to some degree vitiates a typological approach, is that as societies increase in complexity they do so on a *continuous* scale, so that discrete, stable 'levels' will be difficult to define, and indeed may not exist." (Tainter 1988: 29)

The significance of the point is that complexity can be identified in every sociopolitical organisation even if it has not acquired a typologically recognisable form. On the other hand, Wenke criticises systems theory by pointing out the major weakness of the approach:

> "To the question, why do people have hearts, the answer that some device is needed to circulate blood is an explanation of sorts, but it does not explain why some other kind of life support system did not evolve, nor does it explain the evolutionary history of the heart or the selective pressures that shaped this history." (1984: 227)

In other words, systemic models are criticised as developing functionalist arguments. Indeed, the levels of explanation achieved by archaeologists, regardless of

whether they use systems theory or not, heavily depend upon the nature and the availability of data and, therefore, they may be poor in that they can often be functionalist in character. Nevertheless, Wenke himself realises the potential of matching Systems Theory to Evolutionist ideas when he concludes that the explanation of the archaeological record in the form of systemic theory, remains a strong research strategy (Wenke 1984).

A representative study of that kind is Flannery's application of archaeological systems theory in early Mesoamerica (Flannery 1968; 1972). In that, Flannery links systems analysis to cultural evolutionism. Two variables, centralisation and segregation are considered as crucial in sociopolitical evolution. Centralisation refers to the degree of linkage between the various lower subsystems and the highest systems of control in a society, while segregation refers to the degree of internal segmentation of the subsystems. The implication is that the various subsystems of a society are internally specialised and, therefore, require constant monitoring and control depending on the format of the particular society.

For example, a state society requires more control mechanisms than an agricultural community. A society is complex, therefore, according to its degree of centralisation and segregation. Both variables must be high in correlation to allow for a rise in complexity.

Two major evolutionary mechanisms, promotion and linearisation cause societies to become more centralised and segregated. Promotion is the rise of specific institutions at a position of a higher level; linearisation refers to lower order controls being permanently circumvented by higher order controls. The variables are interconnected as follows:

> "In a multivariate model, we might see the state evolving through a long process of centralization and segregation, brought about by countless promotions and linearizations, in response not only to stressful socio-

environmental conditions but also to stress brought on by internal pathologies." (Flannery 1972: 414).

Several critical ideas are forwarded in Flannery's model:

a) Societal change and development may be due to external factors outside the system as well as to internal conditions.

b) Segregation is the main stimulus to social development due to its ability to foster more complex forms of social organisation.

c) Centralisation and segregation can be measured and correlated in order to provide the degree of complexity that a certain society has achieved. It is necessary, however, to derive the archaeological correlates of these variables in order to understand how complexity can be established.

d) Under specific conditions, a society profits by investing more of its resources in administrative and control systems (Wenke 1984). Thus, social complexity is regarded as a strategy developed by human communities in order to face the ever-increasing problems of a society in operation.

The argument, although "functionalistic", bears a new perspective that previous scholars had completely disregarded. Complexity is not merely viewed as the "loss of innocence and independence" (Wenke 1984: 198) to which societies were driven by some major force, but as an adaptive process developed by the members of the society itself.

Flannery's systemic model poses two main difficulties. The first is that it does not examine societies which demonstrate a negative relationship between the two variables of centralisation and segregation, i.e cases where centralisation is high and segregation is low, or vice versa. The second, is the identification of centralisation in the archaeological record of non-state societies. Similar to early Marxist arguments, the introduction of a highly abstract terminology in the study of social change renders archaeological analysis into a painstaking venture. Wenke maintains that:

> "The concept of *centralization*...is more relevant to people living in states and empires than to the hunters, gatherers, and primitive agriculturalists of our example." (1984: 225)

Nevertheless, Flannery's approach is generally acknowledged as a pioneering study in archaeology in that it views society as a functional system that undergoes evolutionary change. McC Adams (1984) examines Mesopotamian evolution under a similar perspective. He also considers Systems Theory as the most effective explanatory approach in social archaeology, though he criticises "its tendency to regard societal evolution as subsumed by the evolution of centralised hierarchical coordination and control" (1984: 88). McC Adams's view is a rather synthetic one in that it incorporates both systemic ideas and evolutionary thought. Two main strategies are proposed in his study:

a) that a comparative study of societies is required in every evolutionary model, and

b) that what is of importance is the variability of the subsystems in a general systems model whereby the subsystems are loosely "intersecting", "computing", "co-existing", "semi-autonomous", and "long-enduring" (1984: 21).

Social evolution is not considered as a holistic process. Therefore, the variation that societies demonstrate in response to various exosomatic factors must be expected as a characteristic of complex societies of all degrees. Based on the assumption that advances in archaeological fieldwork do not necessarily promote our understanding of the linkage between material culture and the symbolism behind it, McC Adams rejects constructionist hypotheses and maintains that sociocultural development "must first be understood in its own terms" (1984: 119)

His approach radically alters the long-held views on the emergence of state society in Mesopotamia. Instead of describing the evolutionary history of the state or emphasising alternative causative factors to account for its rise, he embarks on the

examination of both the philological and archaeological evidence in an effort to identify other social sectors in the record. He writes:

> "Apart from the personnel closely identified with the 'great organizations' of state and temple, there appears to have been a significant group of individuals, perhaps to be thought of as constituting a class, who conducted essentially private ventures for profit. As such, they were engaged in the accumulation of alienable forms of wealth that were capable of abstraction and could be large, and they self-consciously deployed their resources toward diverse ends." (McC Adams 1984: 93)

In other words, Mesopotamian society is thus described as centralised and segregated using Flannery's terms. The degree of that segregation is underlined:

> "[we must not underestimate] the importance of lateral, lower-level linkages of voluntary associations and interest groups, as well as the socially constitutive role of entrepreneurship." (McC Adams 1984: 88)

Although Mc Adams's approach is influenced by systemic analysis, the introduction of subsystems in his research is never translated into a real systemic model. The properties of his subsystems are described but not examined. In short, he believes that evolutionism seen under a more flexible, rather systemic, perspective continues to be a fruitful explanatory proposition.

McGuire (1983: 98) also claims that an explanation of social evolution requires the integration of causal and systemic models. His approach, further elaborated by Tainter (1988), comprises the most representative example of archaeological systems applications. His model is developed on the basis of the study of social complexity in various societies.

Cultural Evolutionism is heavily criticised by McGuire as inadequate to explain the variability of the archaeological record, and biased in that it forces us to interpret the

sequences of cultural evolution in terms of typologically distinct stages. Moreover, he answers to Wenke's strong criticism of systems theory by stating that:

> "Before we can specify how cultural complexity changes, we must be able to specify the systemic relationships within a society that make it complex and the consequences of change in these interrelationships." (McGuire 1983: 95)

The main credo is that complexity is a compound term that incorporates a wide variety of socioeconomic and sociocultural developments and tends to lump together all aspects of societal change under a single term. Clearly, the discontent expressed by McGuire (1983: 92) is further indicated in the weakness of most scholars to define social complexity sufficiently.

McGuire maintains that complexity can be understood in terms of its two constituent variables, inequality and heterogeneity. Both McGuire and Tainter agree that by measuring each of the two variables and establishing their correlation we can specify the degree of complexity in a society and thus interpret the variation that societies demonstrate in their sociopolitical format:

> "These two variables specify the vertical and the horizontal axes of social structure, and their interaction defines the form of any given society." (McGuire 1983: 93)

Inequality, refers to the degree of unequal access to material and social resources, whereas heterogeneity refers to the extent of distribution of the population among distinctive social parts (McGuire 1983: 93; Tainter 1988: 23). Both terms have been used in archaeological literature to signify vertical differentiation in a society. Nonetheless, it is of importance to clarify that whereas inequality always implies the

verticalisation of a society, heterogeneity does not evince such a development, i.e the number of distinct social personae in a societal system does not imply that these personae *are* vertically differentiated.

In archaeological terms, inequality is detected in the record through the evidence of sharp wealth and status distinctions. Heterogeneity is far more difficult to identify and tends to be highly obscured by inequality in the record. McGuire elucidates the difference:

> "Whereas heterogeneity indicates how many individuals have comparable access to resources, inequality measures how much difference there is between comparable levels of access." (1983: 102)

The interaction of the two variables and their potential overlap affect their climax in a society. In many cases, a negative relationship between the two may exist (McGuire 1983; Tainter 1988). Furthermore, it is proposed that in less complex societies an increase in inequality may lead to an increase in heterogeneity (positive relationship). The implication is that in more complex sociopolitical forms, growth of heterogeneity, i.e. higher frequency of access to resources, may lead to declining inequality, i.e lower differentiation in access, since numerically, more people are in a position to exploit resources.

Consequently, it may be postulated that a correlation of low inequality - high heterogeneity leads to an increase in social complexity, however, the same is not necessarily valid when the correlation is taken vice versa. In fact, Tainter invokes that heterogeneity is the key variable, and therefore:

> "A society with a great deal of heterogeneity, then, is one that is complex." (1988: 23)

An archaeological example is provided by McGuire (1983) in line with the above. He hypothesizes that massive investment in monumental funerary architecture in Egypt occurs with a combination of low heterogeneity and high inequality. Subsequently, he tests his hypothesis against data from the Old and Middle Kingdom pyramids of Egypt. His conclusions point to a rise in heterogeneity once multiple independent hierarchies begin to emerge, and a relative decline in inequality. Indeed, both McGuire and Tainter assert that increased inequality may block structural change in sociopolitical organisation.

This systemic approach, as briefly outlined, offers an explanatory model for the rise of complexity. According to this, complexity refers to the interlinked growth of the several subsystems that constitute society. This growth is sustained by energy costs, technology, information flows and primarily, human labour. Hence, investment in complexity may prove to be a highly beneficial economic strategy that can yield "high marginal returns" (Tainter 1988: 127) to its investors through the efficient manipulation of the various socio-environmental resources. When continued investment in complexity reaches a point of low marginal returns, societies become prone to "collapse", i.e they abandon complexity as a productive economic scheme.

In retrospect, similar views were conveyed by Flannery (1972) who claimed that adaptation to various socio-environmental pressures was achieved through segregation processes which maximised environmental control and energy output. Apparently, human communities self-consciously invested in segregation in order to increase their adaptive efficiency and ability to compete with their neighbours.

It is also evident that the concepts of centralisation and segregation as defined by Flannery almost identically correspond to the notions of inequality and heterogeneity as developed by McGuire. In both models these elements are regarded as the material correlates of social complexity. The difference lies in that the variables proposed by

McGuire are more efficiently detected in the archaeological record, than those suggested by Flannery.

In summary, the archaeological systems approach seems to place emphasis on the operational aspect of complexity rather than its cause. Yet, the systemic studies discussed above attempt to provide causative explanations for both the rise and the decline of complexity in certain societies through the integration of systems methodology and evolutionary perspectives. It is highly unlikely given the nature of archaeological data, that a wholly satisfactory explanation of the emergence of complexity will be produced. Still, the study of the structural relationships between the various subsystems of a society appears to be a more realistic and promising research strategy.

1.4 Current perspectives: Post-processual archaeology

The most recent theoretical approach to the study of past societies is currently being formulated by Hodder (1982; 1990; 1991; 1992). The approach is termed "post-processual" as opposed to the traditional "processual" archaeology of the seventies. The core of the theory is that archaeology must interpret the behaviour of past societies in a historical, contextual perspective that joins the study of ecological, economic, and social processes to the *meaning* of that behaviour.

Two main "processual" approaches are discussed by Hodder (1991): systems theory-middle range theory and the marxist-structuralist ideas. He cites several reasons for which systems analysis cannot take us "very much further along the road" (Hodder 1991: 34) although he admits that it comprises the most credible way of linking the material culture with the less visible aspects of life.

Instead, he maintains that the innovative elements incorporated in Marxist theory comprise the first step towards the creation of a new phase in archaeological theory and

practice. As such, Hodder invokes the Marxist perception of social development as a series of social practices which are in a *dialectic* relationship with each other.

Four main research aims are set by Hodder (1991: 158-166):

a) the relationship between the individual and the norm, i.e. the study of change through the detailed examination of the relationships between the norms and the active individual. That is to say that under the term "process" we must include:

> "[...]an adequate consideration of the ways in which individuals act within societies." (Hodder 1991: 158)

b) the relationship between structure and process, i.e the notion that structures lie behind any historical and adaptive processes. Historical processes involve diffusion, migration, etc, whereas adaptive processes include population increase and social complexity (1991: 161),

c) the relationship between the ideal and the material , i.e. "the rigorous reconstruction of subjective meanings" (1991: 163), beyond the study of the function of symbols,

d) the relationship between the subject and the object, that is, the rejection of the dichotomy that is created between the theory and the fact.

It is already obvious from this brief outline that the Post-processual approach is a tantalising phase in archaeology that is still confined to its theoretical boundaries. Most of its proposed research strategies seem to be beyond the grasp of archaeological fieldwork. The reason for this is the use of abstract terminology in Post-processual language; it leaves room for misuse of the approach and increases the confusion already inherent in archaeological studies of social change. Most prehistorians for instance will find it difficult to "read" the meaning behind the manufacture of an individual pot, or assess the role of the active individual within a wholly prehistoric circumstance.

To interpret meaning content and "read" the "con-text" of an archaeological object through the careful analysis of its relation to other archaeological objects implies that we can overcome the difficulties of post-depositional disturbances that formed the "con-text" to a large extent. Hodder himself admits that "our readings may be incorrect", yet "misreading of the language does not imply that the objects must remain mute" (1991: 153). In other words, the focus is on the conscious or unconscious intended symbolic meaning of the material record, as opposed to the formation processes that patterned that record (*contra* processual archaeology).

The major concern with historical meaning content as the key for the interrelationships between structures and processes comprises a break with traditional archaeology insofar as archaeologists accept that they necessarily impose meaning content in their analyses. This acceptance implies that anyone's interpretation of past societies has equal chance to be valid, regardless of the data, particularly since there is no positive, "scientific" truth in our understanding and interpretation of the past. However, the validity of Post-processsual theories is also subject to justification and objectivity; Hodder summarises the components of Post-processual methodology by advocating "a guarded objectivity of the data", a set of "hermeneutic procedures for inferring internal meanings", and "reflexivity" (1991b: 7). In this respect both processual and Post-processual archaeology demand "observational evidence" to justify their claims, and "informative observation requires theories that describe the formation of the evidence" (Kosso 1991).

Due to the fact that the theoretical infrastructure of this approach is, as yet, largely unformulated, specific archaeological questions have not yet been addressed using Post-processual analysis. The potential of Post-processual perspectives is best exemplified in studies like those of Hodder (1990) on Neolithic Europe, Boyd (1991) on Natufian mortuary practices in the Levant and Last (1991) on social change in prehistoric Cyprus. However, a gap between the theoretical perspective and the archaeological

analysis employed is apparent; conventional, processual methods of analysis are used in the examination of the afore-mentioned data sets.

At present, it is difficult for archaeologists to see how Post-processual analysis can be used in the field. The use of processual methods of analysis by the Post-processualists themselves does not illustrate the innovative features of the approach and leaves an unpleasant gap between theory and data.

The riddles of Post-processualism are epitomised by Hodder himself:

> "Unlike processual archaeology [post-processual archaeology] does not espouse one approach or argue that archaeology should develop an agreed methodology. This is why post-processual archaeology is simply 'post-'. It develops from a criticism of that which went before, building on yet diverging from that path. It involves diversity and lack of consensus. It is characterized by debate and uncertainty about fundamental issues that may have been rarely questioned before in archaeology. It is more an asking of questions than a provision of answers." (1991: 181)

The most important contribution of the new approach is that it calls for a demise of the dichotomies inherent in archaeological terminology and analysis; these long held divisions between subject and object, theory and practice have constrained archaeological interpretation; however, a realistic account shows that this gap still exists and archaeologists are not yet prepared to overcome the limitations of the record.

Increase of awareness with regard to the use of traditionally held "scientific" methods of statistical and quantitative analysis is another major requirement of Post-processual analysis. This is especially relevant to the study of the archaeological record which is predominantly fragmentary and incomplete; again, this is not the case in most Post-processual applications which do not seem to go beyond these heavily-criticised methods of analysis.

To reiterate, a review of the most influential perspectives in archaeological thought has demonstrated a wide variety of views on social complexity and change. This

review points to the similarities and the differences among competing schools of archaeological theory and the common constraint of all, the archaeological record itself. In the following section, the outlooks of this research are presented in a concise form in order to help establish its methodological boundaries.

1.5 The archaeological correlates of social complexity

It has already been stressed that the archaeological record of prehistoric societies poses a number of difficulties with regard to its interpretation. For the researcher whose interest lies in the rise of complexity in such societies, there is a danger that his/her analysis may turn out to be highly speculative.

To avoid this development researchers need to refine their methodology on the basis of their data availability and reliability. Although this may be considered as a biased strategy, it is inevitable in archaeological analysis considering the problems imposed by the record itself. To illustrate the argument the following considerations are made:

a) that the archaeological record is, and always will be, a fragmentary picture of any past society,

b) that social theory though significantly contributing to archaeological research cannot be thoroughly tested on prehistoric data,

c) that archaeological fieldwork and publication methods already introduce a bias in archaeological analysis,

d) that, given the limitations of the record, the most realistic approach is a meaningful, non-abstract interpretation of the patterns produced by the analysis of the data.

To summarise how the concept of complexity is regarded by this author, the following must be noted:

a) Complexity is considered as a variable developed by scholars to monitor social change. It is a methodological tool designed to cope with social variation in all types of sociopolitical configurations.

b) A division between simple and complex societies is not valid. Complexity is a variable and, therefore, societies can only be characterised as more or less complex along a continuous scale.

d) In the present data set (burial record) visible patterns of mortuary differentiation are used to monitor the trajectory of complexity in society through the manifestation of structural and organisational change.

The manipulation of the existing evidence offers a number of insights into the way societies were organised and widens our perspectives with regard to the evolution of more complex sociopolitical forms.

To the question "why are societies complex" no definite answer can be given simply because all societies are complex to a greater or lesser degree for variable reasons. The aim of this research is to demonstrate how societies of different scale and nature evolve towards social and political complexity through different paths.

Chapter 2

The Cross-cultural Approach

"In fact, many of the objectives of modern cross-cultural analysis could fruitfully be explored upon the archaeological samples, since only archaeological data possesses suitable time depth to test many of the underlying mechanisms of cultural change and social process" (Thomas 1876: 454-455)

Introduction

The use of the cross-cultural method for archaeological purposes has been rather limited despite the fact that most archaeologists use comparative methodology in order to draw parallels for their site components either spatially or temporally. The actual application of the method on archaeological data presents a number of difficulties which will be discussed further on in the present chapter. Due to this, archaeologists have been discouraged in developing principles and applications relating to a cross-cultural archaeology.

The cross-cultural method was first applied in anthropology by Edward B. Tylor in 1889, in a study of a world-wide sample of cultures in order to examine adhesion of traits in marriage and descent (McNett 1978: 41). Despite the criticism that Tylor encountered, he was the first to compare a number of cultures in a more systematic manner than early Evolutionists who compared cultures in an arbitrary way. Much later in the 1930s, Alfred Kroeber and his student, Harold Driver, both anthropologists, tried to measure intercultural relationships among a number of cultures in a region in order to define clusters of closely related cultures (McNett 1978: 42). Their approach is known as

the *California School* and comprises one of the three major applications of the cross-cultural method. The other two will be discussed below.

In the 1940s anthropological research developed an interest in the functional relationships of the components of specific cultures. The history of those cultures was not of primary concern as such. George Peter Murdock (1940) founded the *Cross-Cultural Survey* and, later, the *Human Relations Area Files (HRAF)* where he coded ethnographic data on a large corpus of material. This second approach was named the *Yale School* and the research orientation was thought to be more scientific (McNett 1978: 43-44). In practice, Murdock tried to predict relationships between variables of social structure in a world-wide sample of cultures and tested these associations using various statistical measures. Criticism ensued over Murdock's proposed *causal* sequences and problems in the use of mathematical assumptions. Murdock continued his work on cross-cultural anthropology by developing the *World Ethnographic Sample* in 1957 (McNett 1978) and, together with White, the *Standard Cross-Cultural Sample (SC-CS)* in which data were collected o a number of variables, such as complexity, subsistence and settlement patterns (Murdock and White 1969).

Meanwhile, Driver (1956) continued his research at Indiana University where he published data on cross-cultural methodology and the application of factor analysis (Driver and Schuessler 1957). Throughout the research Driver emphasised the importance of diffusion in the transmission of cultural traits along with the significance of functional associations between traits. This latter approach has been termed the *Indiana School* (McNett 1978: 45-46).

This brief survey of the main cross-cultural schools in anthropological research demonstrates the long history of the method in anthropology and the similarities in the questions asked by both anthropologists and archaeologists with regard to social evolution and culture change. Furthermore, the validity of early cross-cultural research is

best exemplified in the continuation of use of its codified data in modern anthropological and ethnographic research (Upham 1990).

2.1 Cross-cultural method and Archaeology.

The history of cross-cultural, archaeologically oriented research can be summarised in a number of studies dealing with regional data which could provide some assurance with regard to the hypothesis being tested. McNett has provided a comprehensive review of the use of the cross-cultural method for archaeological purposes, (McNett 1970, in McNett 1978).

The majority of the researchers in the field drew samples from *HRAF* (Ember 1972) or the *SC-CS* (Divale 1977) in an effort to develop proxy measures[1] for archaeological case studies. Others (Chang 1958) used a world-wide cross-cultural sample in order to gain insights regarding community and settlement patterns. Naroll (1956) in his *Index of Social Development* used the three main proxy measures of urbanisation, craft specialisation and organisational ramification to measure social complexity. His *Index Theory* is in fact based on the use of proxy measures as defined by Fritz (1972).

Binford (1971) studied the relationship between the complexity of mortuary ritual and status systems within specific societies and produced a positive correlation. His hypothesis was that in less complex societies differential burial treatment is based on age and sex distinctions, whereas in more complex societies this differentiation is based on social status and position. Binford's main comparative variable was complexity of mortuary ritual and his proxy measure was subsistence form. He did not use Naroll's Index (1956) which would have provided him with alternative proxy measures. Like

[1]A proxy measure is a verbal instrument constructed by the analyst in order to provide an indicator of a specific past phenomenon (see Fritz 1972).

previous researchers, Binford also used the ethnographic sample of *HRAF* in order to test his hypotheses.

The obvious observation is that all archaeological applications of the cross-cultural method up-to-date have taken the form of *ethnoarchaeological* studies, at least in practice. McNett (1978: 66) summarises the potential uses of the method in archaeological research: a) gaining insights, b) developing proxy measures and, c) testing archaeological propositions. All three approaches have been used in the afore-mentioned studies, yet no holoarchaeological[2] studies have so far been produced. In the discussion that follows the problems relating to the application of the cross-cultural method in archaeology may shed some light on the difficulties that holoarchaeological studies may encounter.

2.2 Cross-cultural analysis versus application.

Before discussing the main problems inherent in cross-cultural archaeological research, it would be worth assessing the importance of cross-cultural research in the field. The main advantage of cross-cultural analysis is that it offers the possibility of hypothesis testing through the examination of the relationships between sets of variables. Underlying is the assumption that the variables are related either in a cause-effect relationship, or are both effects of an unidentified process (Divale 1975). This idea is the focal point of cross-cultural research and the most feasible way of conducting it. It has, however, given rise to the so-called "functionalist argument" (McNett 1978: 46-50) and has created a misconception with regard to the application of the method.

Criticism is expressed on the basis of the comparative nature of the method. Some scholars still believe that the cross-cultural method tries to compare "apples and

[2]Holoarchaeological studies are the cross-cultural studies using only archaeologically known cultures. In practice such applications have also used ethnographic material (see McNett 1978), however, in the present thesis the original definition is adopted.

oranges". Ember (1964) has effectively answered the question by pointing out that cross-cultural research is interested in the relationships between specific, functionally integrated variables, and not in the similarities or differences of specific culture traits. He notes:

> "To put the issue simply, if our intent is to examine the relationship between volume and weight in 'fruit', it does not matter one whit that we are dealing with 'apples' and 'pears' or even 'watermelons'" (1964:296)

Accordingly, cross-cultural scholars have examined relationships, such as settlement size and occupational specialisation (Naroll 1956), house types and settlement patterns (Robbins 1966), floor space and population size (Cook and Heizer, in McNett 1978), floor area and type of society, either matrilocal or patrilocal (Divale 1977), complexity of mortuary ritual and status systems (Binford 1971) and inequality and heterogeneity in a society (McQuire 1983), to cite but a few.

The above studies have clearly demonstrated the potential of cross-cultural research in testing propositions and gaining insights into the nature and the structure of specific societies. Producing a positive correlation between two or more variables does not, however, necessarily offer a causative explanation to the evolution of specific social organisations. It comprises though a feasible way of reconstructing an extinct society.

Any other use of the cross-cultural approach (e.g. the old comparative methodology) is doomed to failure, particularly since it is difficult to assess how many traits in a culture are independent and how many are due to diffusion in archaeologically documented societies. This is the generic problem of the approach with particular regard to its archaeological applications; the fragmentary and incomplete character of the archaeological record does not allow for rigid methodological applications.

With regard to the evolution of complex societies, cross-cultural analysis provides a valuable research technique in monitoring social change in a number of temporally and regionally related cultures. However, there are a number of problems for archaeological cross-cultural studies, posed both by the record and the lack of consistent documentation in archaeological publications.

The first and most important issue is the problem of statistical requirements for sampling. Archaeological data does not comprise a complete record from which researchers could easily draw samples for undertaking cross-cultural analysis. According to standard sampling procedures (see Otterbein 1976), the comparativist draws a new sample from a large sampling universe which already exists. Such a universe is the *HRAF* for instance, or the other standard ethnographic samples. In these samples, data over a large number of societies have been coded in a consistent and standardised manner. Unfortunately, such a sampling universe could never be produced for ancient cultures; the selection of a small scale sample of ancient societies for cross-cultural analysis depends upon the individual archaeologist and the purpose of the research. The archaeological sample is not *random*, i.e. all societies in an arbitrary sampling universe (e.g. the East Mediterranean region) do not have an equal probability of being included in the new sample. The choice is determined by a variety of reasons, of which data availability and aim of research comprise the most compelling.

Related to the lack of a standard archaeological sample is the indirect observation of the past by archaeologists as opposed to the direct observation of the cultures under study on behalf of ethnologists. There is a major difference between the archaeological and the ethnographic record that has determined the application of cross-cultural analysis on archaeological data.

Sampling strategies in archaeological studies are arbitrary, depending principally on data availability. Certain propositions or hypotheses cannot simply be tested against the record since no samples relating to them can be drawn. Yet, standard sampling

procedures (Otterbein 1976) allow the comparativist to set his/her own criteria for adequacy of data for the societies in the sampling universe; this principle can help overcome difficulties related to archaeological data availability.

Two more requirements for sampling are random sampling and the focusing in space and time of the variables measured in the study. With regard to the first point, an archaeological sample cannot be random. Drawing such a sample from a universe of cultures does not preclude the possibility that two or more variants of the same culture may be included in the sample. Data availability plays a vital role in that it determines to a certain extent the selection of the cultures for study. A look at the standard ethnographic records indicates that the *SC-CS* (Murdock and White 1969) for instance, is not a random sample, but its aim is to assure that each major culture is adequately represented in the sample.

In other words, sampling strategies are subject to the difficulties that the particular records pose to the researchers. These strategies can be restructured in order to meet the individual research requirements. Alternatively, scholars during sampling emphasise good documentation, adequate coding of data, sufficient representation of cultures and other criteria. So far, no sample meets the strictly statistical requirements of equal probability, yet suitable samples for cross-cultural analysis have been produced (McNett 1978). This a soothing conclusion for archaeologists whose samples could never be as rigorous as those of social anthropologists and ethnologists.

The second issue, temporal and spatial focusing of the variables involved in cross-cultural analysis does not present a problem anymore as Divale has convincingly argued (1975: 20-21). In response to the argument put forward by Murdock and White (1969: 329-330) that we cannot assume functional relationships between variables which are not focused in space and time to a single local community, Divale proved that lack of focus tends to lower correlations, yet the actual associations found remain significant.

This implies that when a significant correlation is found in an unfocused study, the actual level of association is probably even higher.

In archaeologically documented societies, temporal and spatial focus cannot be strictly applied since on one hand, the temporal dimension of cultures relies either on relative chronology or on absolute dates which have a plus or minus of some years, and on the other the investigation of the spatial dimension of cultures depends very much on the degree of archaeological activity in the area. Furthermore, cultural variability and regionalism may prevent archaeologists from realising the actual space that a culture may occupy. Archaeology can only provide conventional temporal and spatial distributions of cultures and consequently, relative focusing. Still, according to Divale (1975), functional relationships between two or more variables of a culture can be adequately examined in an archaeological study without the fear of systematic error.

Error comprises an almost inevitable process in cross-cultural analysis. Systematic error (bias) is considered as an extremely destructive process that seriously affects the results of a study. Random error may cause some degree of imprecision, but it is not destructive and consequently any significant levels of association found in the study may be confidently considered as real.

McNett (1978: 51-52) proposes two ways to avoid systematic error along with Naroll's *Data Quality Control* (1962). The first is to define the variables operationally by using data in an ordinal form (ranked data). In some cases, e.g. age, nominal data may be used in the study, however McNett (1978) maintains that some manipulation can produce an ordinal scale. The second way is to pretest and revise, if necessary, the variables developed. McNett (1978: 52) cites as an example the fact that presence of status differentiation and presence of social classes measure the same variable (e.g. social inequality). Therefore, one is dropped from further analysis.

Before a discussion is made on Data Quality Control (Naroll 1962), it is worth assessing the potential and applicability of the Cross-cultural method in archaeology. At

present, problems regarding statistical requirements for rigorous cross-cultural research discourage archaeologists from conducting this kind of analysis. Mainstream archaeology has chosen to ignore cross-cultural methodology and its applications. As a result, only archaeologically oriented cross-cultural studies have been conducted. There is a general agreement among the majority of archaeologists that a cautious attitude is needed regarding the use of statistical methodology for cross-cultural analysis. However, archaeologists cannot ignore the fact that cross-cultural research comprises an insightful approach to current archaeological problems and demonstrates an alternative and somewhat synthetic way of manipulating archaeological data.

Through the systematic comparison of individual culture traits, archaeologists are able to reconstruct the relationships between the various subsystems that make a society operate and the mechanisms that trigger social change. The associations obtained through this comparison may even offer causative explanatory models, although this does not constitute a primary research goal in cross-cultural studies. In short, the focus of cross-cultural analysis is on the understanding of the mechanisms of social process and not in the results produced by this process.

The application of the cross-cultural method in archaeology has not, as yet, been done and the reasons for the distinct lack of holoarchaeological studies have been discussed in the previous pages. It is premature to speak of "cross-cultural archaeology" at this stage; cross-cultural applications using archaeologically known cultures only are not possible. It is proposed that the term "cross-cultural analysis" be used for any holoarchaeological study.

In this study, the EBA East Mediterranean is arbitrarily defined by this author as the cross-cultural universe of regionally and temporally related cultures. The sample drawn from this universe comprises the three areas under examination, Crete, Cyprus and the southern Levant. The establishment of the methodological parameters includes

some more practical aspects. The following discussion explores the ways archaeologists can maintain control over the quality of their data in a cross-cultural study.

2.3 Data Quality Control

The concept of Data Quality Control in cross-cultural research was first introduced by Naroll (1962). In that study he initiated a number of quality control factors for the data in order to eliminate systematic error.

The factors are not standardised, but they are developed by the researcher in accordance to the nature of the data and the propositions being tested in the research. The aim of the technique is to provide a better control over the data collected and help the researcher avoid the possibility of biased information.

For the purposes of the present thesis, two sets of Data Quality Control Factors (*henceforth* DQCF) were developed; one with regard to general data collection strategy, and one with particular reference to each cemetery site. The latter was necessary due to different excavation procedures, publication methods and data preservation; every cemetery complex presents its own problems which have to be dealt with individually. In the following analysis of cemeteries, the relevant set of Data Quality Control Factors are thoroughly described.

With reference to the general set of Quality Control Factors, the selection of specific mortuary sites in every area in the sample (Crete, Cyprus, southern Levant) was made on the basis of the following criteria:

a) Mortuary sites which constitute formal burial grounds have been included as opposed to isolated burials and tombs. Consistency in the sample was thus achieved for all three areas.

b) Major cemeteries from each area were included in order to assure that the sample is sufficiently representative. Sampling of cemeteries in this case was based on the extent of the excavated site and the number of graves and burials.

c) Regional criteria were introduced to assure that there was adequate treatment of the sample in terms of regional variation in each area. Despite this effort, the task proved difficult in both Crete and Cyprus due to the distinct lack of excavated cemeteries in specific areas of both islands: the west part of Crete and the south of Cyprus. Thus, as can be seen in Figs. 1 and 2 respectively, the Cretan sample consists of tomb groups in the northeast and the south, whereas the Cypriot horizon is far more restricted with only one burial site in the south. In the Levant (Fig. 3) the sample is more evenly distributed.

d) Cemeteries have been also chosen on the basis of the chronological framework they provide. Subsequently, only the tomb groups of the 3rd millenium BC (ca. 3500/2800 - 2000/1800 BC) have been examined since the research focuses on the earlier part of the Bronze Age. All later or earlier tombs in the cemeteries have not been treated. In addition, an effort was made to avoid any extensively re-used tombs in subsequent periods since they could only provide a confusing picture of the grave contents. Wherever a certain re-use of the tombs took place, only the tombs for which the deposits have been isolated and treated in the publication have been included.

e) Cemeteries which have been investigated to a large extent have been included in the sample, as opposed to sites which have only been sampled on a small scale, in order to provide a more integral picture of the burial customs represented in each site.

f) Priority was given to mortuary sites for which there is adequate documentation and publication. An effort was made to incorporate cemeteries for which relatively recent publications exist, however, this proved difficult in many cases, particularly in Crete. Wherever two neighbouring candidate sites were found, one was dropped in favour of the one that was either more fully, or more recently published.

On the basis of the afore-mentioned criteria, the thesis sample consists of the following sites in each area:

Table I

CRETE: Mesara Plain, Mallia, Mochlos

CYPRUS: Vounous-*Bellapais*, Lapithos-*Vrysi tou Barba*, Aghia Paraskevi-*Nicosia*, Kissonerga-*Mosphilia*

SOUTH LEVANT: Beth-Shan, Jericho, Bab-edh-Dhra, Tell Ajjul.

2.4 Crete, Cyprus and the southern Levant as the cross-cultural sample.

The criteria by which a sample of societies for cross-cultural analysis is obtained depend foremost on the purpose and the orientation of each research, both outlined in the introduction of the present thesis. It is possible to follow basic sampling procedures as they have been outlined in relevant articles (e.g. Otterbein 1976) and demonstrated in other archaeologically oriented studies (see McNett 1978). Given the fact that, for the purpose of the present thesis, the East Mediterranean region has been considered as a well documented, large sampling universe, drawing a new smaller sample can be possible though major publication and chronological or cultural differences may provide a disproportionate sample of prehistoric societies from the region.

The main objective has been to demonstrate adequacy of data and relative spatial and temporal focus. The sampling universe of the East Mediterranean includes a number of archaeologically documented societies in the Aegean, Crete, Anatolia, Cyprus, Syria, the Levant and Egypt. All these societies are well within a specific geographical framework (spatial focus) and bear evidence for compatible chronological periods (time focus). Therefore, drawing a new sample from this sampling universe may be considered as representative of the whole. However, this is a wrong assumption for human cultures.

The correlations obtained must be considered as regional and not universal. There is a fair degree of confidence that the new sample is representative, to a certain extent, since it derives from the sampling universe.

To achieve sufficient representation, the selection of the specific societies was made on the basis of the differential trajectories they followed towards complexity. As evident in the archaeological record, all three societies developed different forms of sociopolitical organisation. Crete developed into a palatial society from the Middle Bronze Age onwards, the Levant became urbanised as early as the Early Bronze Age, whereas Cyprus did not evolve any highly complex forms of organisation until the end of the Middle Bronze Age.

Cyprus may be considered as a *deviant* case (McNett 1978). The inclusion of this deviant case in the sample, apart from comprising the main research aim, was considered as necessary for the understanding of the mechanisms of complexity in small scale societies. Degree of success in reading the prehistoric record of Cyprus may determine the way similar records of "middle range" societies (Upham 1990) in the region must be read. The other two, Crete and the Levant, provide evidence for both small and large scale complexity and underline the importance of cross-cultural analysis in the investigation of social phenomena.

To summarise the potential of cross-cultural analysis in the study of ancient societies the following points must be made:

a) Cross-cultural analysis provides an extended set of questions for the archaeological record as opposed to isolated research in one site or area.

b) A greater number of insights into the organisational and structural mode of societies are gained through the manifestation of similar social and political phenomena in different ways.

c) The use of cross-cultural analysis promotes the production of more synthetic archaeological studies that attempt to study social process on a larger scale.

d) Variation is introduced as the norm in the explanation of culture change and global reasoning is dismissed.

e) Weaknesses in archaeological documentation and publication are recognised and tackled in an attempt to promote improved publication methods.

f) Most important, cross-cultural analysis fosters consensus in archaeological perspectives and promotes the formulation of an integrated archaeological theory.

Chapter 3

Mortuary Analysis: Perspectives and Methodology

"I am confident that as such research continues and as both stratified and nonstratified cases become available, mortuary analysis will be able to play an even greater role in our understanding of past societies." (O'Shea 1984: 303)

Introduction

For the last two decades, ethnoarchaeological studies of mortuary behaviour have provided the impetus for a renewed interest in funerary analysis and the use of burial evidence as a means of reconstructing the nature and organisation of past societies (O'Shea 1984). Much of this research trend has been devoted to the study of ethnographically documented societies for which there is adequate information regarding programs of mortuary ritual and deposition. Archaeological data has been used to a lesser extent mainly due to its fragmentary nature and the effect that archaeological site formation processes have on the record of prehistoric societies. In effect, only one study (O'Shea 1984) has addressed the problem of site formation processes in the archaeological record and the impact they have on the observation and explanation of funerary contexts.

Ethnoarchaeological studies of mortuary behaviour have followed two main trajectories, single site applications and studies on a group of sites (O'Shea 1984: 2). A representative sample of this research includes the pioneering work of Saxe (1970), Binford (1971), Brown (1971), Tainter (1978), Pader (1982), Ucko (1969) and O'Shea

(1984). Mortuary analysis was further elaborated in the works of Peebles (1971), Chapman, Kinnes and Randsborg (1981), Pearson (1982), Rothchild (1979), Goodenough (1965), Goldstein (1976), Bloch (1971), Goody (1962), Huntington and Metcalf (1979) and Bendann (1969). More archaeologically oriented studies include the work of Chapman (1977), Randsborg (1973), Shennan (1975), Akins and Schelberg (1984), Palumbo (1987), Shay (1984), Toumazou (1987), Keswani (1989) and Bard (1989). In this corpus of studies it is maintained that mortuary evidence comprises a viable unit for research since a range of non-random social and symbolic behaviour is culminated in it and its physical remains are fossilised in a closed context (also Goring 1989).

Furthermore, it is argued that the social dimensions of mortuary practices can enhance our knowledge on the structure and organisation of past societies as long as research is focused on understanding what aspects of social information can be extracted (Pader 1982). Despite minor disagreements as to the nature of the variables used in mortuary analysis, there is a general trend toward the formation of a coherent, integrated theory of mortuary differentiation following the seminal work of O'Shea. The discontent expressed by O'Shea (1984: 21) regarding the absence of a well established mortuary theory is probably shared by many archaeologists who recognise the difficulties of such an implementation within the context of archaeological research. To understand the argument, it is necessary to view some of the major theoretical issues related to the use of funerary evidence to monitor social development and change in ancient societies.

3.1 Burial and Society

One of the major difficulties of burial archaeology is the establishment of a widely accepted link between mortuary practices and living society. Although the majority of scholars maintain that aspects of social organisation are reflected in the way people treat their dead, the nature of this relationship is still under debate.

Views range from the assumption that the individual status and social persona[3] are reflected in burial treatment (e.g Binford 1972), to the manipulation of mortuary ritual by the living society in a complex interplay of status and wealth display (e.g Chapman 1989). In other words, the relationship between burial practices and living society must be understood in terms of the nature and degree of involvement that the living have in conducting a burial ceremony.

Binford (1971) attempted to establish a relationship between differentiated mortuary treatment and level of organisational complexity in the society. In order to specify the character of this correlation, he proposed that in any given burial programme there are two components symbolised; the first is the social persona of the deceased and the second is the composition and size of the living unit recognising status duties to the deceased. A link is then provided based on the proposition that the degree of corporate participation and the social persona symbolised through mortuary ritual are directly correlated.

This approach to the interpretation of mortuary differentiation is based on the individual's status and/or rank in a social system thus emphasising the vertical level of differentiation between individuals and the dichotomy between "simple" and "complex" societal systems. A refinement of his theory specified:

> "The form and structure which characterizes the mortuary practices of any society are conditioned by the form and complexity of the organizational characteristics of the society itself" (Binford 1971: 235)

As such, Binford's analysis provides the necessary link between funerary practices and social organisation whereby the former is conditioned by the latter to a certain extent. Other scholars such as Brown (1971) and Saxe (1970) employed formal

[3]For a definition of the term see Goodenough (1965), Saxe (1970) and Brown (1971).

analysis in their treatment of burial data and enhanced the use of Role Theory[4] in interpreting mortuary evidence. Their approach proved to be a useful tool when analysing burial data in that it emphasised the relation between the social identities of individuals.

Social identities are considered to be normative in that they are prescribed by the social conventions of the community. The identity of one individual exists and implies a relation to the other. The weaknesses of Role Theory are carefully assessed by Pader (1982); these refer to "role-expectation" (Pader 1982: 15) being the determinant factor of human behaviour, an assumption that completely disregards the operation of the personal element and idiosyncratic behaviour. Pader specifies the function of roles in a society by asserting that roles constrain behaviour as much as they enable it (1982: 16) and that Role Theory is a tool for identifying inequality in the sense of non-isomorphic behaviour. The research design will specify how social identities are differentiated from each other in a mortuary domain, what symbolic aspects are emphasised and why, and how this relates to the structuring principles of the living society.

Personal identity is an intervening variable that might obscure mortuary differentiation patterning, a possibility that both Saxe (1970) and Binford (1972) did not address. Also, despite the fact that the relationship between mortuary variability and structural organisation of the society is now widely accepted by archaeologists, some of their hypotheses cannot be adequately tested on archaeological data since the degree of post-depositional disturbance may have caused increased bias in burial patterning. In fact, this comprises the main problem in the application of ethnographic mortuary analysis in archaeological contexts, an issue raised by both Brown (1971) and O'Shea (1984).

More archaeologically oriented studies like that of Peebles and Kus (1977) tackled the problem of personal identity by focusing on the range and frequency of

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[4]For Role Theory see Goodenough (1965).

different disposal treatments and attempting to infer the rules dictating that differentiation. In other words, it was shown that it takes an understanding of the archaeological manifestation of mortuary variability to interpret concomitant social phenomena. Furthermore, temporal variation and diachronic change are introduced in funerary analysis of archaeological data, an aspect that most ethnographic studies did not have to consider.

Peebles (1971) used Binford's division (1972: 235) between "technomic" and "sociotechnic[5]" items and Shay (1984) made use of the same classification in her study of EB IV burials from Jericho. This classification, appealing as it may seem, tends to obscure artefact usage since the attribution of objects to one or the other category is highly subjective. An example of this is the attribution of EB IV metal weapons to the "technomic" category by Shay (1984: 31) while other studies have convincingly demonstrated that weapons were deposited in burial domains in their "sociotechnic" nature (Philip 1988; 1989). It is, therefore, highly doubtful whether burial inclusions can be classified on this basis.

Another instance of such a categorisation to detect mortuary differentiation is provided by Peebles and Kus (1977) in their study of Mississippian and North American burials. In it they discern between an individual's "superordinate" and "subordinate"[6] social dimensions; however, the variables used to detect each dimension in the archaeological record are essentially the same, only ordered on a different axis. This categorisation tends to emphasise vertical versus horizontal social differentiation and, therefore, additional criteria had to be introduced in order to distinguish between the two levels of social dimensions.

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[5]"Technomic" are the items whose primary function is to cope with the physical environment, while "sociotechnic" are the items that are used as symbols to facilitate social interrelationships.

[6]The "superordinate" dimension of individuals is manifested in symbols, energy expenditure and other variables of burial ritual which are not ordered on the basis of age/gender. The "subordinate" dimension is manifested in the same variables, but ordered on the basis of age and gender distinctions.

Tainter (1978) made use of energy expenditure measures to assess social stratification. By measuring the levels of labour expenditure he attempted to infer distinctive levels of hierarchical organisation in a society. The degree of hierarchical differentiation and organisation of a community was then measured in order to assess the level of complexity that the specific society had achieved.

Tainter's model makes extensive use of statistics and assumes that clear-cut levels of expenditure can be postulated. However, it is impossible to conduct such a fine grained analysis in archaeological contexts since the amount of mortuary ritual that took place before the actual interment of the deceased is almost impossible to reconstruct. It has been demonstrated in many ethnographic cases (Pader 1982: 42) that pre-interment ritual is far more complex and greater amounts of energy spent towards the performance of the ceremony than the burial itself. In archaeological terms, this kind of information is not recoverable and, in fact, many diagnostic elements may have been removed after interment.

Levels of energy expenditure can be used as indicators of the minimum rank differentiation in a society (O'Shea 1984: 18). Tainter (1978) uses these measures to detect mortuary differentiation, however, his measures are designed to detect vertical social ranking and not horizontal distinctions such as age, sex, group affiliation etc.

Closely related to this is the study on mortuary symbolism undertaken by Pader (1982). Examining mortuary practices from a different angle, Pader's focal point is that ideology, society, and material culture are all structurally related and that the highly symbolic nature of burial practices calls for a multidirectional approach to the study of funerary remains. Artefact meaning and usage, distribution and presence/absence rates, quality and quantity of grave goods and methods of disposal must all be examined very carefully, particularly in archaeological contexts, since any part of the mortuary ritual comprises a unique action within its specific social context. Dichotomies such as poor/rich should be avoided and grave good distribution and methods of disposal should

be examined by alternative criteria which do not obscure horizontal differentiation. Pader calls for an examination of the cemeteries within "their larger social context" (Pader 1982: 201), a point generally agreed by other archaeologists, too (e.g Goring 1989).

The most exhaustive study conducted on mortuary variability is that of O'Shea (1984). He uses a set of cemetery sites for which there is ethnographic documentation and he employs archaeological analysis in order to extract social information. His major aim is to develop a coherent theory of mortuary differentiation. Crucial to his working framework is the study of archaeological site formation processes and the limitations they impose upon the efficient detection and recognition of funerary patterns. O'Shea's work acknowledges the effect of post-depositional disturbances and temporal change that may affect patterns of recognition and the contribution of mortuary symbolism in funerary behaviour. The result is that:

> "...the archaeological record will manifest less organization than the cultural behavior that generated it, but also that less of this organization that is present will actually come to be detected and recognized" (O'Shea 1984: 31)

Since O'Shea's work has been the most coherent study of mortuary variability, it is noteworthy to examine some of his propositions in more detail. His proposed principles through which mortuary variability can be monitored in archaeological contexts are now widely accepted by scholars (e.g. Keswani 1989; Bard 1989). These principles comprise the basic norms that the mortuary record of a society is expected to exhibit.

> "Principle 1: All societies employ some regular procedure or set of procedures for the disposal of the dead" (O'Shea 1984: 33)

This proposition provides the necessary link between mortuary practices and human cultural behaviour. The variety in methods of disposal has been amply demonstrated by most funerary studies as well as the correlation between any changes or shifts in burial habits and concomitant changes in human behavioral patterns. Consequently, by monitoring such phenomena in death practices archaeologists can efficiently monitor cultural development and change. The fact that any set of procedures for the disposal of the dead is seriously affected by, or subject to, the symbolic and ideological system of the society, as well as the predominance of specific ideological value systems over others, does not alter the significance of this principle since symbolic action is social action.

However, the distinct lack of information regarding pre-interment procedures limits our range of knowledge to a very large extent. As a principle it comprises the starting point for any study of burial customs.

> "Principle 2: A mortuary population will exhibit demographic and physiological characteristics reflecting those of the living population" (O'Shea 1984: 34)

This principle is well established in the field of demography (O'Shea 1984), however, it cannot be archaeologically tested. It rests on the assumption that funerary contexts are completely preserved and recovered, and information on the age and sex of skeletons can be derived. Any demographic study of a mortuary population, though, is heavily distorted both by poor preservation, recovery techniques, post-depositional disturbances, and cultural factors. The mortuary population sample is also deficient in that it cannot be tested in extinct societies. General population estimates can be produced when the burial evidence is compared/tested against the settlement evidence of a society. In some cases, it may even be possible to detect the cultural anomalies affecting

the skeletal population. This principle cannot be considered to be of prevalent value to archaeologists.

> "Principle 3: Within a mortuary occurrence, each interment represents the systematic application of a series of prescriptive and proscriptive directives relevant to that individual" (O'Shea 1984: 35)

The principle asserts the regular and normative character of burial practices and the cumulative nature of any mortuary occurrence. It also underlines the effect that the ideological system of a society has on the formation of mortuary behaviour. Once more, the interdependence between mortuary remains and organisational aspects of the society is emphasised, as in Principle 1. It is also relevant to Role Theory and to the personal identity of the deceased individual as well as to the role of ideology over the manifestation of funerary remains.

The degree of corporate involvement may be detected in the archaeological record through energy expenditure measures, but the directives regulating burial ceremonies are less easily identified. However, the principle refers to the intentional character of every burial and the understanding of burials as socially prescribed occurrences.

> "Principle 4: Elements combined within a burial context will have been contemporary in the living society at the time of interment" (O'Shea 1984: 37)

Although O'Shea characterises this statement as a "truism" the principle serves to demonstrate the difficulties archaeologists have to confront when they work with multistage disposal units where fine chronological control cannot be applied. It may be

possible to ascertain the time span of these elements or artefacts in archaeological contexts, however, the estimate can only be relative. Symbolic, cultural and economic factors affect patterns of circulation and deposition of objects as much as chronological factors and state of preservation do. The way to test this principle is through the use of contemporary settlement evidence.

Contemporary elements of the living society may not be included in the deposit or they may be removed from the mortuary facility shortly after interment thus causing confusion in the identification of the chronology of the mortuary occurrence.

Nevertheless, it is generally accepted that unless extreme cases of disposal methods exist, burial contexts are expected to exhibit diagnostic elements of the time of interment. Multistage disposal programmes are expected to provide us with a wider time span.

All four principles serve to establish the basic constraints operating in mortuary variation and they are subject to further modification or refinement. The variables through which mortuary differentiation can be monitored refer to the various classes of evidence that archaeologists can obtain. Specifically, biological, and environmental data, methods of disposal, description of the mortuary facilities, grave inclusions and spatial data on the internal arrangement of the tomb, its location, and the location of the cemetery.

All these correlates of mortuary differentiation have been sufficiently appreciated and employed by burial archaeologists. Some researchers place more emphasis on different aspects of mortuary variability and particularly on the spatial element (e.g. Pader 1982; Keswani 1989) depending on the nature of the evidence at hand and developments on the theoretical framework and methodology adopted.

The examination of mortuary variability in its full extent and potential asserts that data is sufficiently collected and published. Recording methods in the field play a major role in the final publication of the material and they should amply provide for all

aspects of variability so that the maximum information is obtained. Before the presentation of an integrated theory of mortuary variability by O'Shea, much useful information was simply not collected.

The kind of mortuary analysis that O'Shea proposes is conducted on four ordered stages which allow for an efficient recognition of both vertical and horizontal social differentiation in a mortuary population sample, as well as an adequate treatment of the use of symbols to designate social distinctions. These stages (O'Shea 1984: 49) comprise:

1. The identification of any culturally generated constraint in the distribution of mortuary attributes.
2. The study of the distribution of the differentiated sets of mortuary population with reference to age, sex, frequency and spatial distribution.
3. The attribution of each set of the mortuary population into categories of social differentiation, i.e vertical, horizontal, special status, using the referents of age, sex, frequency and spatial distribution and behavioural correlates.
4. The interpretation of each set of the mortuary population using behavioural correlates and models of social differentiation.

It is considered *a priori* that there is a direct correlation between mortuary and social differentiation as in previous studies. The degree to which any funerary analysis following this methodology can offer insightful explanations of variability depends on a number of factors which include the extent of idiosyncratic behaviour and the role of mortuary symbolism (O'Shea 1984), the nature of the archaeological record, state of preservation and publication standards. Archaeological studies of mortuary variability on a cross-cultural level have not as yet appeared and it is hoped that the present study fulfils this aim. The formulation of a working framework for funerary and social analysis of prehistoric cemeteries in the East Mediterranean will be ultimately determined by its contribution to the archaeological research in the region.

3.2 Social Complexity and the Mortuary Record

Having examined the views that some scholars have expressed regarding the relationship between mortuary practices and society, it is now necessary to examine more specifically what ideas have been expressed with regard to the relationship between burials and complexity. This discussion brings back Binford's hypothesis (1971) relating the degree of mortuary differentiation in a society to the degree of its organisational complexity. In fact, most researchers have attempted to establish the nature of this relationship and test its validity in archaeological contexts. However, Binford has been severely criticised for his views (e.g. Morris 1987) mainly because of his cross-cultural generalisations.

Morris summarises the differing views on the subject of the archaeology of death and his insightful discussion results to the following conclusion:

> "If we are to interrogate burial evidence about ancient society, we must ask questions concerning *social structure*" (Morris 1987: 39)

By this statement Morris makes a distinction between the structure and the organisation of a society in order to facilitate the understanding of conflicting arguments on mortuary practices and also specify what aspects of society can be highlighted by mortuary analysis. The basic difference between structure and organisation is that organisation comprises the fluid distribution of relationships on the empirical basis of daily life, whereas structure constitutes the ideal distribution of these relationships. Morris maintains that this classic anthropological distinction is of major importance in the understanding of the social dimensions of burial practices. The reason is that only the ideal relationships are symbolised in the highly ritualistic process of burial and, therefore, only aspects of the social structure are fossilised in mortuary contexts.

Pader (1982) is also in agreement with that view, i.e that the structure of a society as manifested in the ritual context of a burial domain may not necessarily be determined by the same parameters as those affecting the social organisation. It follows then that social organisation and complexity cannot be efficiently illuminated by burials (Morris 1987: 40). The argument is complemented when the role of symbolism and ideology is assessed. There are a number of conflicting views on the role of ideology and its relation to material culture (see Morris 1987: 41). However, it is maintained that a structural relationship between the two exists (Pader 1982) and, therefore, archaeologists are able to gain some insights into the ideological system of a society through the study of mortuary remains.

It is expected that any changes in the use of the funerary symbols by the society are related to changes in the structure of the society itself, thus providing the link between mortuary practices and society from an alternative point of view. The extent to which society manipulates ritual enactment to legitimise inequalities or for display of wealth and prestige is a subject open to discussion (Keswani 1989; Philip 1988; 1989), as much as the view that ideal social structures may constrain mortuary practices and not determine them (Pader 1982). For O'Shea (1984: 30), change in mortuary behaviour is manifested either as change in the attributes of differentiation, or as change in the symbolic designation of those attributes which may remain the same. In practice, archaeologists may be able to identify stages of "structural revolution" (Morris 1987: 43) depending on the forms of mortuary symbolism employed and their patterns of manifestation.

Binford's hypothesis (1971: 6-27) is still valid when social complexity is adequately defined (see Chapter 1). Patterns of mortuary differentiation reflect changes in social structure and, therefore, organisation. It is impossible to perceive structural change in the society without concomitant organisational change. It is important to

establish this link between structure and organisation in order to understand the ensuing link between mortuary practices and social complexity.

Recent work on the social dimensions of mortuary practices epitomises both the link between social structure and organisation, and the use of integrated methodology (e.g Akins and Schelberg 1984; Keswani 1989a, b; Bard 1989). Keswani's work on later Bronze Age burials from Cyprus and Toumazou's thesis (1987) on Cypriot burial customs, marks a renewed interest in the burial archaeology of the island. Keswani's research in particular offered some stimulating insights into the sociopolitical organisation of Cypriot society during that era. Similarly, small scale publications on Levantine material like those of Shay (1983), Palumbo (1987), Bard (1989) on the Naqada cemeteries in Egypt, as well as Bentley (1987) on EB IA burials from Bab Edh Dhra, mark the beginning of a reborn interest in Near Eastern death archaeology[7]. Unfortunately, the same is not valid for Crete, where no such work has been produced and long term research on burial practices from the island has not been undertaken.

It is also noteworthy that almost all archaeological studies of this nature have concentrated either on single sites, or on groups of sites from one area. No cross-cultural study of mortuary practices has been produced; however, the potential of such work coupled with cross-cultural analysis offers a range of new vistas (see Chapter 2). An outline of the methodology employed for the purposes of this thesis is presented in the following section along with a general assessment of the burial evidence from Early Bronze Age cemeteries in the East Mediterranean.

3.3 The Mortuary Record of the East Mediterranean in the 3rd millennium BC

Tomb groups in the earlier part of the Bronze Age comprise extended formal cemetery areas often associated with settlements. The distribution of these cemeteries

[7]A Conference on the Archaeology of Death in the Ancient Near East took place at Manchester in December 1992. The Conference was organised by Dr S. Campbell (University of Edinburgh). The proceedings of the Conference are *forthcoming* (1994).

(Figs 1, 2, 3) shows that there is a prolific record of burial sites, often distorted by cultural, geographical, or fieldwork factors, such as limited investigation. In general, there is a correspondence between the distribution of settlement and burial sites as indeed would be expected if notions of territoriality (Goldstein 1976; Bentley 1987) are taken into account.

The main bulk of evidence consists of information relevant to disposal programs, descriptions of the tomb facilities, catalogues of the furnishings and location of cemeteries and tombs. Each of the afore-mentioned categories is heavily biased either by the effect of post-depositional disturbances or by individual styles of publication. In addition, cultural factors which are not archaeologically visible may have played a significant role in obscuring mortuary variability patterns.

For each of the three areas under examination and for each cemetery separately, there are a number of constraints in operation which are dealt with in the respective chapters (4, 5, 6). A discussion on the selection of the specific cemetery sites considered in this research has already been provided elsewhere (Chapter 2); it is, however, necessary to discuss the idiosyncracies of each area separately.

3.4 Southern Levant

The Levantine record has been extensively investigated by scholars. The distribution of early Bronze Age cemeteries is in close correspondence with the settlements of the area, mainly because of the urban character of EB and MB occupations and the extensive investigation of tells by archaeologists (Fig. 3). Cemetery distribution is, therefore, quite isomorphic geographically and facilitates sampling strategies.

Most cemeteries are extensive and have been used as formal disposal areas throughout the Bronze Age. Some have been re-used at much later periods.

SOUTHERN LEVANT

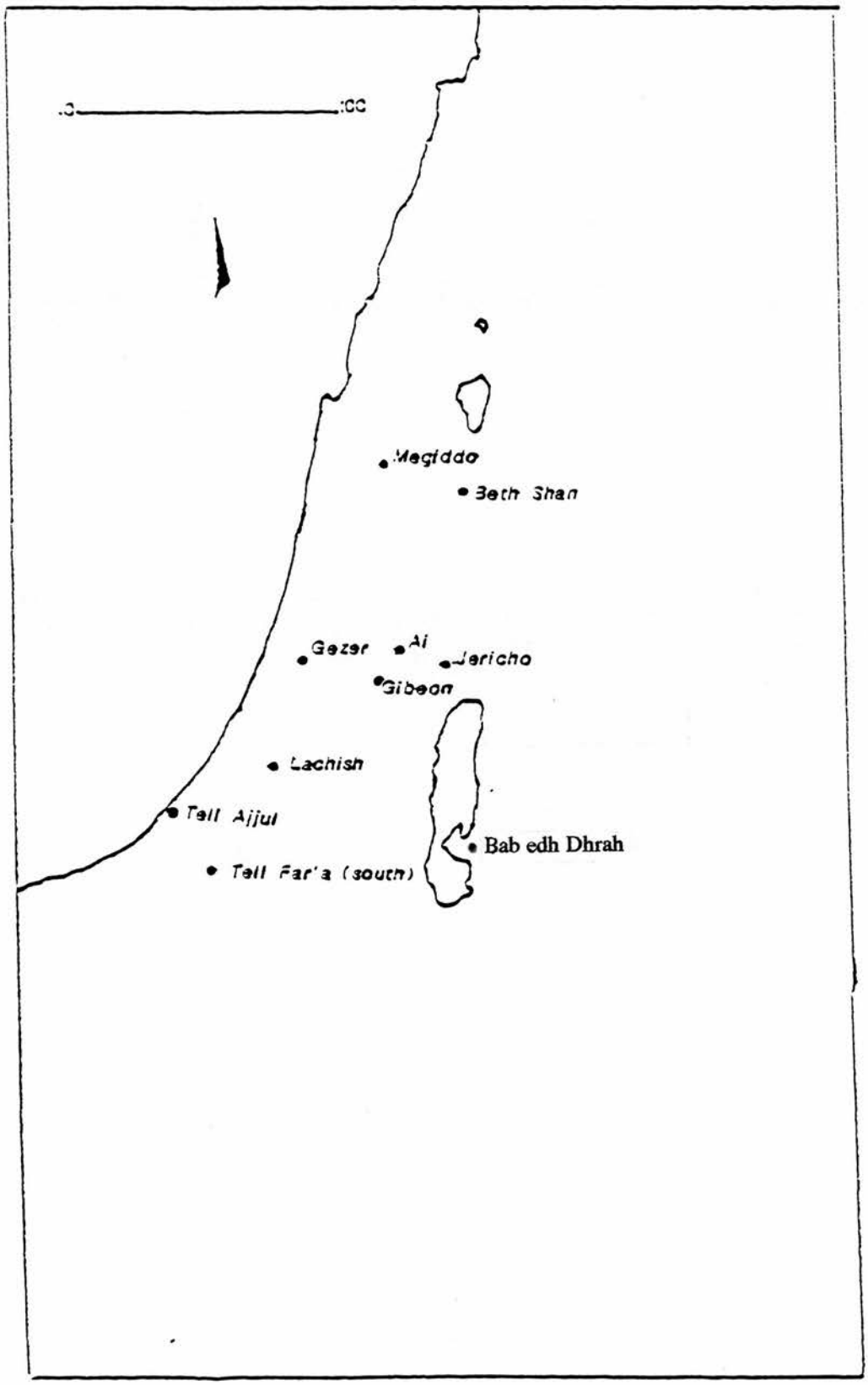

Fig. 3 Map of major EBA burial sites in southern Levant.

The time span they cover is quite extensive. In some cases though, burial sites were used exclusively during one period.

The most usual post-depositional disturbances affecting Levantine tomb groups are: a) multistage disposal programmes, b) natural disturbance mainly by water activity, and c) looting of tombs. It is of note that, despite the plundering activity in the area, the problem is not as heavily emphasised as in Cyprus. Natural disturbance mainly comprises the flooding of the tombs with water and subsequent rearrangement of tomb contents. In the internal stratigraphy of the tomb, this process is indicated by the formation of silt deposits between the burial groups. Rearrangement of contents depends on the intensity of water activity.

Preservation of the skeletal material and grave objects is also subject to other corrosive agents. The most important seems to be the cultural factor culminated in the intentional rearrangement of goods and the disarticulation of the skeletal population. This is a very important element in the death archaeology of the region and indeed recent studies have focused on that aspect (e.g. Bentley 1987).

The preservation of the tomb structures is usually fairly good, but often the shafts are destroyed or there has been considerable roof collapse in the burial chambers causing a great degree of disturbance in the contents. In the case of built tombs, roofs are almost entirely collapsed and the walls of the structures are preserved only to a certain height.

The vast majority of tombs in Levantine cemeteries are chamber tombs, either single or multichambered. There is, though, evidence for built tombs as well at certain sites (e.g Bab edh Dhra in Transjordan). The burial chambers are used to accommodate either single or multiple burials. In the case of multiple successive interments in the same tomb, it is virtually impossible to estimate the number of inhumations or make any associations between skeletal population and grave inclusions, or even derive a safe assessment of tomb use. The numbers provided by the excavators are only relative and

arbitrary, mainly based on the number of identified skulls in the tomb. Contemporary multiple burials of few individuals, or burials made within a short time span from each other are easier to analyse. However, these burials are also subject to post-depositional disturbances which often alter the picture.

Single inhumations provide the safest contexts. They may be in articulated or disarticulated form. Undisturbed contexts are only a few, but judging as a whole, the Levantine record seems to be the most well preserved of all three. Problems related to the publication of cemeteries in the southern Levant refer to insufficient publication as the main constraint. On the basis of this criterion, many sites were excluded from the present research and indeed it proved difficult to completely eliminate that factor. Thus, the site of Tell Ajjul (Petrie 1934) was included despite the numerous problems that the Gaza publication presented.

By far the best publication and the most recent one is that of Bab edh Dhra in Jordan (Schaub and Rast 1989) followed by the excavations at Jericho (Kenyon 1960). The publication standard of the Levantine material stands quite high as opposed to the Cretan and the Cypriot one. Minor discrepancies are dealt with in detail in the following chapter (Chapter 4).

3.5 Cyprus

Cypriot burials comprise almost the only horizon of archaeological evidence for the earlier part of the Bronze Age. The distinct lack of excavated settlement sites from that era magnifies burial archaeology on the island and points to one of the major biases of archaeological fieldwork.

Surveys have been published (e.g. Catling 1963), but no recent extensive project toward the recovery of Early-Middle Bronze Age settlement sites has been undertaken.

Most cemeteries have been excavated in the northern part of the island (three out of four in the present sample), thus providing a biased distribution map (Fig. 2).

The distribution of mortuary sites on the island was tested against the possible distribution of settlements as they are known from survey data. Some indication of settlement occupation is provided by projects currently working in the southern part of Cyprus (e.g. Swiny 1989), but no extensive publication has been produced. This idiosyncrasy in Cyprus dictated to some extent the use of the burial evidence as the cross-culturally examined sample unit (see Chapter 2). Contrary to the situation in the Levant, studies of Bronze Age burial customs from Cyprus have recently appeared (Toumazou 1987; Keswani 1989a; b). In addition, other non-mortuary Cypriot studies had to consider tomb assemblages since their information derived mainly from mortuary contexts (e.g Maguire 1990).

Similar to the southern Levant, Cypriot cemeteries are quite extensive and have been used as formal disposal areas for a considerable time. Individual tombs of the earlier Bronze Age have been re-used in the later part of the period. There are instances where sites were used as cemeteries for a single period (e.g. Bellapais-Vounous). This provided a closer chronological and stratigraphic control over the specific contexts coupled with an effort to avoid any extensively re-used tombs in the analysis.

The most common post-depositional disturbances were: a) multiple disposal programmes, b) natural disturbances and c) extensive plundering activity. Looting comprises a major problem in Cypriot tombs and an attempt has been made not to include any extensively looted tombs. Some looted tombs which escaped destruction were used in the analysis with a certain degree of caution and bearing in mind that the presence/absence ratios of grave artefacts may be heavily biased. In some instances, attempts for looting a particular tomb were not successful and resulted in the eventual destruction of parts of the tomb structure, usually the entryway.

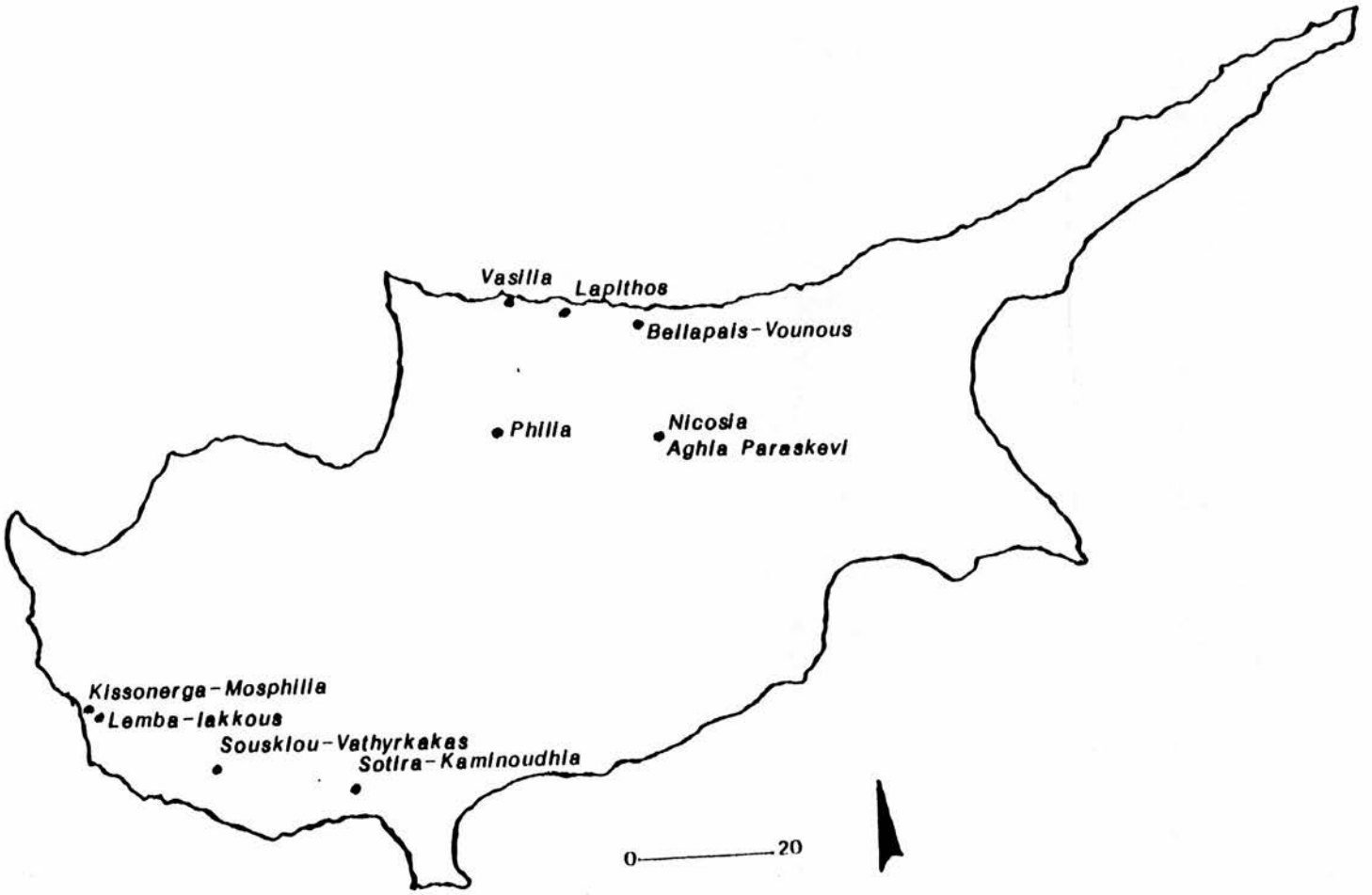

Fig. 2 Map of major EBA burial sites in Cyprus

Natural disturbances, mainly water activity, inflicted major destruction in the tomb groups of the island. The tombs were usually infiltrated and eventually filled with water, causing the grave contents to float and then be re-deposited. This considerable rearrangement of contents makes it impossible to study the internal spatial arrangement of grave goods and skeletal population, or derive any associations. Sometimes, objects of personal adornment such as pins, were conveniently situated near the skeletons' shoulders, but at a higher level; it cannot be asserted with certainty that this was their original position, or that they belonged to the clothing apparatus of any individual inhumation. The formation of silt deposits also indicated water action in the tombs.

Preservation of the skeletal material is usually poorer than in the Levant. However, as in the latter, it is subject to cultural factors dictating the rearrangement of earlier interments in order to accommodate subsequent burials. Indications for intentional disarticulation of the skeletal material are not evident in Cyprus.

The preservation of the tomb structures is fairly good but considerable roof collapse has taken place in most tombs. The majority are chamber tombs with an entryway (dromos) leading to the chamber(s). Tombs are either single or multichambered, but there are some pit graves, too. Chambers accommodate either single or multiple inhumations. Multistage disposal programmes seem to be the norm, but in most cases multiple successive burials take place in a short time span and the whole burial group does not consist of a great number of deceased individuals. Thus, there is tighter control over the number of the interred.

Problems related to the publication reports of these sites refer to individual styles of publication. Cemeteries were excluded on a chronological basis and not so much on the grounds of insufficient publication. Major work undertaken by the Swedish Expedition on the island (SCE IV:IA, 1972) and Stewart's work at Vounous (Stewart 1950) provide two examples of fairly good standards of publication. The final publication

of the most recently investigated site of Kissonerga[8] is forthcoming, but recording of the data was conducted in such a detail that the information needed was readily available. Minor discrepancies in the Cypriot corpus are dealt with in the relevant chapter (Chapter 5).

3.6 Crete

The Cretan record constitutes a large body of material so far insufficiently treated. The distribution of early Bronze Age cemeteries is in close correspondence with that of the settlements and also with that of the major palatial centres on the island.

The distribution pattern of Prepalatial cemeteries is not isomorphic and it is apparent that this pattern was affected by archaeological bias, too (Fig. 1). Indeed most of the research conducted in Crete was focused on the palatial centres and surrounding areas. The absence of formal disposal grounds in the west part of the island does not probably reflect the reality. The picture is so far unclear; no major project toward the recovery of sites in the West has been undertaken, despite the work of the Swedish Expedition at the site of Kanli Kastelli at Khania[9].

The mortuary record of Crete has not been dealt with in any detail. Some articles dealing with the evidence for social ranking in Prepalatial cemeteries have appeared (e.g. Soles 1987), as well as articles regarding evidence for complex ritual activity in the Mesara Plain tombs (Branigan 1987b). Soles's study was an effort to compile all the evidence available for the most well preserved Prepalatial cemeteries of the island in a concise manner and present the evidence for social stratification. The most extensive work conducted on tomb groups in Crete is still that of Xanthoudides (1924) and Branigan (1972) on the tombs of the Mesara Plain in the southern part of the island.

[8]The site of Kissonerga-*Mosphilia* has been excavated by the Lemba Archaeological Project (LAP) under the direction of Prof. E.J. Peltenburg during the years 1983-1993. The final publication is *forthcoming* in Peltenburg *et al.* (1994).

[9]See, Tzedakis and Hallager (1987).

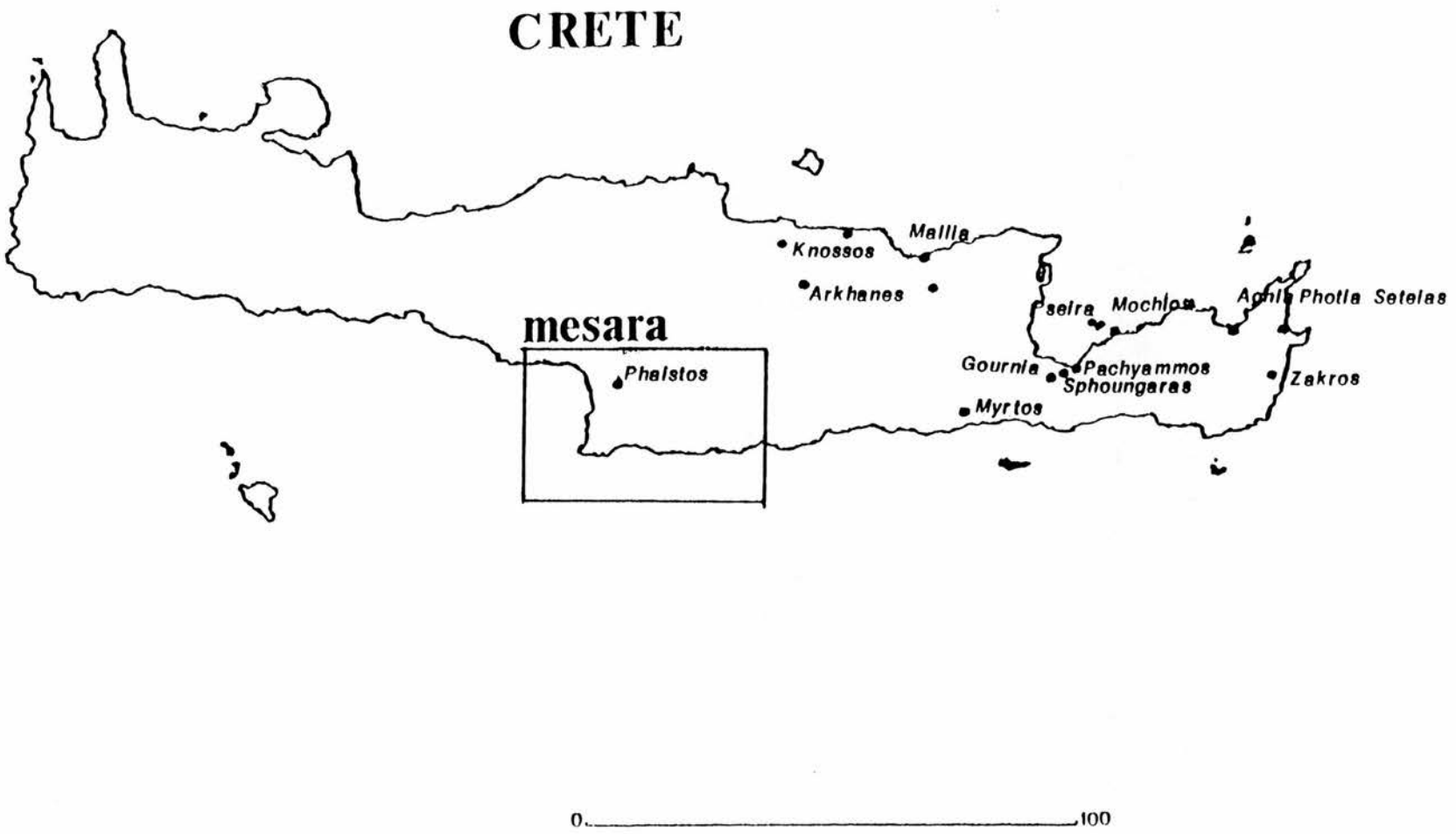

Fig. 1 Map of major EBA burial sites in Crete

The area comprises a large cemetery complex with about seventy five burial sites dispersed around the Plain. Apart from these studies, other cemeteries have been investigated and published by the Philadelphia Museum publications (Seager 1912; 1916; Hall 1916). The French Expedition at the palatial site of Mallia have extensively investigated the surrounding cemeteries and published their results in periodicals[10].

Individual reports on the excavation of tomb groups from the island are numerous and they are mainly found in Greek and foreign journals of archaeology[11]. Some of the Mesara tombs have been excavated by the Italian Expedition on the island[12]. Other cemeteries such as Phourni at Arkhanes (Sakellarakis 1976) and Aghia Photia (Davaras 1971) are not yet fully published. The whole record is, therefore, highly problematic in terms of publication standards.

In addition, most minor publications are quite dated and publication methods vary to such an extent that in numerous cases it has proved impossible to extract any information at all. Yet, the record itself is prolific, exhibiting a variety of mortuary practices before the actual emergence of the Cretan palaces. The selection of only three sites from Crete (see Chapter 6) was foremost determined by publication standards.

Prepalatial Cretan cemeteries are quite extensive and have been used as formal disposal areas throughout the Bronze Age. Single period sites have been excavated on the island, and similar to Cyprus, this situation provided a better chronological control over the data. Multi-stage disposal programmes impose difficulties upon the handling of these assemblages. Plundering activity and natural disturbance further obscure the picture. The custom of collective successive inhumation in the built tombs of Mesara and in other

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[10]See, Etudes Cretoises (1945).

[11]E.g. Alexiou, S. in Kretika Chronika (1951) for EM burials at Kanli-Kastelli, Marinatos, S. in AA (1933) for Ellenes Amariou, Marinatos, S. (1928) in Zeitschrift des Hauptuerbandes deutscher Hohlenforscher for EM cave and rock shelter burials at Ellenospelio, Alexiou, S. (1958) in AA (1958) for the Lebena Tholos tomb, Matz, F. (1942) for the Apesokari Tholos tomb, Pendlebury, J.D.S. *et al.* (1938) in BSA (1938) for the cave of Skaphidia, Daux, G. (1960) in BCH 84, for the Galana Kharakia cemetery, Hatzidakis, J. (1914) in AD 1, for EM burials at Gournes, Pendlebury. J.D.S. (1936) in BSA 36 for cave burials at Lasithi Plain.

[12]See *Annuario* (1931)

sites has completely distorted our view on the number of deceased individuals and grave associations per tomb.

Tomb use covers a lengthy time span, in some cases whole generations of individuals per tomb. Any attempt to sort out the chronology of these burials and the stratigraphy in each tomb has proved unsuccessful and it can only be subject to further bias. Single deposits are found in pithoi or larnakes used to accommodate one or two individuals, however, in many instances grave goods are lacking as a result of cultural factors.

Apart from severe plundering, some of the tombs were even used in modern times by the villagers, as shelters for their animals. Natural disturbances have caused roof collapse in built tombs and other parts of the structures. Other activities in the tombs, such as burning and fumigation in prehistoric times have seriously affected the burial deposits.

The nature of the Cretan record can only be characterised as highly cumulative and incomplete. Any study of mortuary remains from the island must seriously take into account the variety and the effect of post-depositional processes on one hand, and the problems associated with publications on the other.

The variation in the mortuary practices evident in the Cretan assemblages highlights the character of early Bronze Age Cretan society. Whereas no safe association between skeletal material and grave furnishings can be made, the record itself is characterised by a pluralism in both mortuary architecture and burial inclusions. Tombs range from pithos burials - usually containing a single interment - to house-like constructed tombs with elaborate facades and multiple interments, or the characteristic tholos tombs of the Mesara region where the habit of collective burial is so strongly emphasised. Inhumations in rock shelters, caves or pit graves were also present. Grave inclusions range from complete absence of any equipment to elaborate grave goods made from imported materials (see Chapter 6: 6.12.3)

Preservation of the skeletal population is usually poor and data on age or sex strikingly absent. Publication standards are the lowest of all three areas and extra effort was required to assess the nature and characteristics of Cretan deposits. It must be noted that due to these discrepancies the statistical significance of the analytical results is minimal.

3.7 Methodology: An Outline

Data from the tomb groups are collected on the basis of the maximum information provided by the publication with regard to the basic categories of mortuary variability as defined by O'Shea (1984). The information extracted from the burial record is summarised in Table 2.

Table 2

1. Biological and Demographic Info: Age, Sex, Pathology
2. Treatment of the Deceased and Methods of Disposal: Position, Facing, Alignment, Type of Inhumation
3. Tomb Typology and Energy Expenditure:[11.1] Dimensions of burial unit and sub-unit (e.g. dromos/shaft), Number of burials per unit, roof status, tomb type, Chronology
4. Grave Equipment: Number and type of vessels per Ware category (Plain-Fine) for pottery. Industry, Class, Type, Material, Derivation, Plate/Figure reference for small finds
5. Spatial Arrangement: Spatial reference of burial unit within cemetery

Evidence as to methods of disposal is generally poor even in the case of single inhumations where detailed descriptions of the skeleton would be expected. Age and sex of the skeletal population is rarely provided. Often sexing is based on grave associations and not on physical anthropological evidence.

The most reliable evidence comes from the type of inhumation, where the disposal programme is indicated. This piece of information allows for an individual

11.1 "Energy expenditure" and "energy flow" are the two variables developed by O'Shea (1984) in order to assist the researcher estimate the amount of labour input in the construction and furnishing of a burial facility, and in the whole process of funeral and inhumation. In the present thesis, the statistical significance of these variables is minimal due to the nature of the data. Therefore, the use of these terms is general and no attempt towards their detailed quantification is made.

assessment of the specific context apart from the excavator's remarks. As such, it comprises the less biased part of the burial report.

A unique Burial Number is attributed to each interment. When burial is multiple and the exact total number of skeletons is unknown, Burial Number refers to the whole burial group in the tomb.

Description of the mortuary facility contains the minimum information needed to assess energy expenditure and state of preservation. It also contains information on the chronology and typology of tombs. Where the data on tomb measurements was lacking in the publication text, dimensions were taken from the published scaled drawings. It must be noted that discrepancies between measurements provided in the text and drawings sometimes exist (e.g see Beth Shan tombs in Chapter 4); on the whole, however, they can be considered safe in terms of relative energy expenditure.

Evidence concerning grave inclusions is found in the publications in the form of registers of finds, accompanied by respective illustrations in most cases. Despite the fact that initially the database was designed to attribute a unique Small Find Number (SFN) to each object - apart from the pottery - it was finally decided that the registration number of the official publication would be kept as the SFN - where possible - in order to facilitate referencing. Small Find Numbers are accompanied by the relevant Burial Numbers when the association between skeletons and artefacts is possible.

In cases where only one registration number is used for more than one objects the same number is kept and decimal points are used to discern between the different objects (e.g. 1.1, 1.2 etc). Where no registration number is provided in the publication, the object is allocated a number for the purposes of the analysis. Referencing to illustrations and figures is provided in Appendix I of the thesis in order to facilitate identification of the objects.

Pottery was treated in a different manner. Initially it was considered best to collect and accommodate all the information available and treat pottery vessels as

individual small finds. However, since no safe associations could be made between interments and individual pots, and the bulk of pottery inclusions was too large to allow any comprehensive study, it was finally decided that pottery would be treated in terms of its quantity and quality; totals of ceramic vessels per Ware Category were counted and types (shapes) of vessels per category were inserted. In this manner it was possible to monitor changes in the pottery repertoire and associate them with any other changes evident in the record.

Ware Category (Fine-Plain) was defined on the basis of surface treatment. Any assessment on the quality of the pottery in the tombs could only be based on the register descriptions and illustrations provided in the publication. Therefore, all the slipped, polished, and painted wares are assigned to the Fine category, whereas the pottery which did not receive such treatment is registered under the Plain category. Ceramic sherdage was not included; the total sample of complete vessels was considered adequate for the purposes of the present research.

Organic materials, such as wood, animal bones etc are not included in the analysis unless they comprise the material of which an identifiable artefact is made. This piece of data is kept in separate notes. The site reference and the spatial reference of each tomb within the site serve to examine mortuary differentiation on that level. At present, this examination is limited to the study of tomb type distribution that may indicate differences among the various tomb groups within a cemetery. It would be desirable to study the internal arrangement of skeletal population and tomb artefacts, but this information is usually missing due to post-depositional disturbances.

Problems in the chronology and stratigraphy of the tombs are treated separately in each cemetery. Chronological and stratigraphic problems are discussed in the analysis chapters (4, 5, 6) in order to indicate the extent of "noise" in the sample. On the whole, a rather flexible chronological framework was adopted in order to include the most well preserved tombs of the era. All tombs which were badly preserved in terms of structure

and contents were not included since they did not further enhance our knowledge on mortuary practices. It must be noted that the detailed analysis of the tomb groups is subject to the particular problems of each site and each tomb specifically. It is, therefore, of great importance to assess these problems carefully before presenting the results of the final analysis.

With regard to the manifestation of complexity in the specific mortuary contexts, it is studied through the patterns of mortuary differentiation attested in each cemetery. It is important to note that differentiation is postulated when **at least** two out of the five variables employed (Table I) point to the manifestation of mortuary differentiation. Often, one variable may indicate differential treatment, but the other variables may not support such a proposition. To avoid increasing the bias by overrating the evidence, it was deemed necessary to establish the minimum number of variables for a safe assessment of mortuary differentiation.

Patterns of mortuary differentiation are discussed separately for each site. In the concluding parts of the analytical chapters (4, 5, 6) the information from all cemeteries in each area is pulled together and discussed in relation to the evolution of social complexity.

Chapter 4

The Emergence of Social Complexity in Southern Levant

Introduction

This chapter focuses on the analysis of the EBA Levantine cemeteries selected for the purposes of this thesis (see Chapter 2). The analysis aims to identify aspects of social differentiation attested in Levantine funerary contexts.

Before the results of the analysis are discussed an introduction to sociopolitical developments in the EBA of southern Levant is provided, along with a chronological framework for the period. Brief information on the topography of each cemetery and its surroundings and its relation to possible settlement occupation is also provided. The specific set of Data Quality Control Factors (see Chapter 2, 2.3) for each particular site is outlined in the relevant section in conjuction with an assessment of the site formation processes.

Problems associated with the chronology and stratigraphy of the tombs, as well as patterns of tomb use, are discussed and the results of the analysis presented. Patterns of mortuary differentiation are discussed separately for each site, and in the concluding part of the chapter the overall evidence is evaluated.

4.1 The Background of Sociopolitical Developments in the southern Levant during the EBA

The transition from the Chalcolithic to the EBA period in the Levant has been debated by several scholars (Hennessy 1976, de Vaux 1971, Wright 1961, Hanbury-

Tenison 1986, Bentley 1987, Esse 1991). Most scholars tend to recognise a higher degree of continuity between the two periods than previously thought, and particularly between the Chalcolithic and the EB I (Rast 1980). Recent research at the site of Bab edh Dhra in Transjordan has provided both the chronological and cultural sequences necessary to reinforce this argument (Schaub and Rast 1989). Moreover, the study of raw data from older excavations such as Jericho (Kenyon 1960) made the attribution of the material to specific chronological phases possible and bridged, to a certain extent, the gap created by the use of different terminology; for instance, the designation "Proto-urban" used by Kenyon (1960: 4) for a number of tombs from Jericho has been shown to correspond with what has been called the "EB I" period at other sites (Rast 1980: 6). Furthermore, recent evidence from sites like Bab edh Dhra has shed light on the character of southern Levantine communities during the earlier part of the EBA.

Traditionally, it has been held that the southern Levant has been either under the Syrian-Mesopotamian, or the Egyptian sphere of influence, mainly due to its geographical location between the two (Rast 1980: 1). It has also been maintained that influences from both cultural areas may have been in operation simultaneously and, therefore, their impact is often difficult to assess (1980: 1). The problem is closely related to interpretations of the Levantine material culture, which have depended heavily upon the intense search for parallels in the adjacent regions. Cross-cultural comparisons of that kind have often underestimated the internal dynamics of human cultural and social behaviour, the idiosyncrasies of each area and the mechanisms of adaptation.

Recent research concerning sociopolitical change in the southern Levant during the 3rd millennium BC argues in favour of geopolitical arguments related to the existence of cultural domains (e.g. Rast 1980). Consequently, the process of sociopolitical and cultural change in the Levant is understood in relation to relevant developments in the neighbouring areas; the re-adjustment of the geopolitical base of power between the two is considered as crucial to the understanding of the 3rd millennium Levant (1980: 6).

The southern Levant has frequently been thought of as a backwater in relation to Syria-Mesopotamia and Egypt, and its material culture interpreted within a larger framework that assesses the degree of influence from the adjacent regions at any given time. Actual population influxes have been suggested for specific phases within the EBA such as the EB IV, or intermediate EB-MB (*henceforth* EB IV) and the early EB I.

The above summary serves to demonstrate that the southern Levant has often been considered the recipient of the final product of changing sociopolitical conditions in the wider region and furthermore an area in balance between two main cultural zones. The "inclination of Palestine" (Rast 1980: 11) towards one area or the other may offer a convincing explanatory model for the fluctuations of complexity evident in the archaeological record of the area; however, it must be stressed that southern Levant followed its own sociopolitical trajectory marked by a distinct individualism in the manifestation of complexity. It is, therefore, important to monitor this trajectory of complexity in the area and then attempt to explain change in the social landscape of EBA Levantine communities.

The cultural and sociopolitical developments in the area during the 3rd millennium B.C. can be monitored through the conventional tripartite phasing developed for the EBA in southern Levant. During the EB IA and B period there is evidence for cultural continuity from the preceding Chalcolithic (e.g. Rast 1980, Bentley 1987, Esse 1991, Schaub and Rast 1989) and for the existence of distinct variation in the settlement and subsistence patterns among the early EBA communities in the area in comparison to the later EB II-III "urban" phase. On one hand, there is evidence for the continuation of a farming economy already practised since the Late Chalcolithic in the Golan Heights and Jordan Valley proper, and on the other, a pastoral mode of economy is suggested for the part of the country around the Dead Sea. The settlement pattern of the latter indicates sparse occupation and supports the view of a nomadic life pattern (Rast 1980). In this context, the tomb groups dating to that phase from Bab edh Dhra are of great importance

since they reveal disarticulation programmes traditionally associated with mobile life patterns (e.g Kenyon 1979: 98; Rast 1980: 7).

In Jericho also, the few tombs dating to that phase (JA 94, JA 114 and JA 13) bear evidence for disarticulated, secondary burials. The number of inhumations in each of these tombs is so high, that the excavator (Kenyon 1979: 97-98) was convinced secondary burial was the norm for the period.

In those sites selected for analysis, the sequence for EB IA and B can best be monitored at the site of Bab edh Dhra, and less well so at Jericho. The evidence for settlement at Bab edh Dhra during this phase is sparse and is described as camp occupation with a few short-lived structures (Rast 1980: 7). The mortuary evidence consists of chamber tombs containing disarticulated inhumations; the combination of the two led Rast to argue in favour of a transhumant life pattern (1980: 7).

Conversely, it has been argued that there are several indicators pointing to sedentism and agriculture comprising a major part of the subsistence economy (Bentley 1987: 11-21). One of these is the existence of formal disposal areas at both Bab edh Bab edh dhra and Jericho that may indicate a certain degree of permanency[13]; another, is the demographic size of the EB IA mortuary population at Bab edh Dhra (Bentley 1987: 21-27). These indicators in conjuction with a re-evaluation of the nomadic hypothesis and the apparent cultural diversity of EB IA communities (Rast 1980: 7) may in fact point to variation in the life patterns of individual communities in the southern Levant during the earlier part of the EBA; different pottery traditions from site to site, and even within the same site, corroborate the argument (Rast 1980: 7). The contention here is that the mobile character of some early EBA Levantine communities may have involved elements of sedentism and a mixed economy that included both pastoralism and agriculture.

Items deposited in the tombs of this phase indicate long-distance exchange networks and emphasize the mobile character of southern Levantine communities. The

[13]Rast (1980: 9) notes the beginnings of permanent settlement at Bab edh Dhra in the EB IB.

operation of exchange ventures has been considered as further indicating the "migratory" character of this people (Rast 1980: 8). Objects, as well as ideas, were transmitted through these exchange routes as early as the EB I period. During this time the southern Levant seems to be influenced by Egypt. Alabaster, carnelian[14] and other materials were imported during the EB IB. Imitations of Egyptian funerary goods such as maceheads and beads were manufactured in the Levant, either by imported Egyptian, or local material, and were subsequently deposited in the tombs. The presence of Levantine pottery in Egypt during the EB IB phase (Rast 1980) further underlines the argument of Egyptian interconnections. Evidence for potters' marks on vessels, a practice well known from Egypt, comes from the large corpus of EBA pottery from Bab edh Dhra (Schaub and Rast 1989). Jericho bears evidence of Egyptian connections also, however, the sample is much smaller in this period.

To summarise, the picture that emerges for EB I southern Levant incorporates several parameters, namely a mixed subsistence economy involving both sedentary agriculture and transhumant pastoralist patterns and a great degree of mobility that allowed for an intensification of the exchange networks mainly with Egypt. The non-permanent element in settlement occupation and the variation in the subsistence mode and cultural expression during this formative phase played a significant role in the growth of a highly individualistic type of "urbanism" in the later part of the EBA.

It has been suggested (e.g. Bentley 1987) that the social structure of LChalco and EB I southern Levantine communities, probably involving kinship elements, comprises the key to an understanding of their social organisation during that period. It has also been maintained (e.g. Philip 1989) that these parameters have determined the urbanisation process in the southern Levant and its fluctuations. This point, however, is further discussed in the concluding part of the chapter.

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[14]Although carnelian was possible available in the southern Levant, in the Sinai.

The EB II and III phases mark the emergence of "urban" centres in the Levant on sites like Jericho (Kenyon 1960) and Bab edh Bab edh dhra (Schaub and Rast 1989). Evidence for contacts between Egypt and the southern Levant is shown in the occurrence of the so-called "Abydos Ware" in Levantine contexts. These typical painted jugs are commonly found in First Dynasty tombs both from Abydos and Saqqara and a number of them have been uncovered at southern Levantine sites (e.g Kenyon 1960; Schaub and Rast 1989). The interpretation of these vessels as either items of tribute (Rast 1980: 11), or trade (Lapp 1965: 122) is still highly problematic; however, they seem to have been manufactured in the Levant (Rast 1980: 10), although the origin of the painting tradition was probably Egypt (Callaway 1972: 197).

The occurrence of the Abydos pitchers[15] in funerary contexts in the southern Levant may signify a certain degree of emulation of Egyptian burial symbolism and tradition. Otherwise, Egyptian cultural influence during EB II has been considered as limited (Rast 1980) in accordance with the sparse number of Egyptian artefacts in Levantine contexts.

The appearance of the first fortified urban centres during EB II and III may indicate a receptiveness of cultural ideas from the Syrian-Mesopotamian zone. The well established pattern of urban settlements in Syria may have provided the impetus for the rise of urbanism in southern Levant (Rast 1980: 12-14). However, the Egyptian influence never ceased to exist, even during EB III.

Egyptian/ising artefacts were excavated at the Sanctuary A at Ai and Jericho (Rast 1980: 12), and at Bab edh Dhra (Schaub and Rast 1989: 287-294). However, Rast (1980: 12-14) notes several indications for an intensification of the contacts between the northern and the southern Levant. Seal impressions, fortification systems, metals -

[15]Abydos jugs have also been uncovered in non-funerary contexts such as the temple at Ai (Callaway 1972)

though copper sources are found in Sinai and Arabah - and the appearance of Khirbet Kerak Ware[16] in Levantine contexts are cited in support of this claim.

The question of an inclination of the southern Levant towards Syria-Mesopotamia, or Egypt, therefore, is of major importance for an understanding of the EBA in the area. It has wider implications for the emergence of complexity and the apparent regression during EB IV. Indeed, it is reasonable to argue that the southern Levant was receiving cultural input from the countries in its borders and could not remain unaffected by sociopolitical developments in neighbouring areas; nonetheless, it seems that contacts with the North were established on top of the already existing relations with Egypt which, if weakened at times, did not cease.

It would be relevant to argue that certain selective procedures were followed in the adoption, incorporation, or actual import of items and ideas in the southern Levant. It is also important to understand that, despite the manifestation of sociopolitical phenomena, like urbanism, in the archaeological record of most sites in the area, there was a certain degree of variation in the amount of input received by the individual communities. Individual sites, like Bab edh Dhra for instance, preserve their own cultural idiom well attested in their mortuary and settlement record. This type of regionalism, alongside the survival of LChalco elements in the social structure of southern Levantine communities (see Bentley 1987), determined the trajectory of sociopolitical complexity in the southern Levant and the urbanisation process in the area.

The last phase of the EBA is marked by the collapse and fragmentation of the Levantine "urban" centres accompanied by a series of changes in the settlement and mortuary record. This apparent discontinuity in the archaeological record has been widely discussed by scholars like Kenyon (1960), Prag (1974), Shay (1983), Palumbo (1987), Bentley (1987) - to cite but a few - and more recently by Dever (1992) and the present author (Baxevani 1994, *fortcoming*).

[16]The point of origin, or the distribution centre of the Khirbet Kerak Ware has been considered to be NE Anatolia (see Hennessy 1976: 75-76).

Changes in the settlement pattern include the breakdown of urban settlements and subsequent small scale occupation. Continuation of tell occupation has been documented for several tell sites (Prag 1974; Davies 1986) but is usually described as of non-permanent character[17]. This distinct modification of the settlement pattern has led to a series of interpretations hinting at the "mobile" character of EB IV southern Levantine communities.

Environmental reasons, such as deterioration of the climate (Richard 1980), population influx (Kenyon 1960; 1979), and/or geopolitical explanations (Rast 1980) have been provided. Recent fieldwork undertaken on sites with well documented EBA sequences in Transjordan, like Bab edh Bab edh dhra (Schaub and Rast 1989), has highlighted our knowledge of the EB IV phase and its variations. Most scholars now agree that the apparent discontinuity in the record is not a "gap", as previously thought. It seems that a widely accepted explanatory model is only emerging through the amalgamation of former theories. Population immigration theories like the one forwarded by Kenyon (1979: 186-210) have not yet been totally dismissed, despite the appearance of more recent models attempting to offer alternative explanations (e.g. Richard 1980).

Recent research in the Jordan Valley, Transjordan and Israel by a number of expeditions (see Dever 1992) now shows that the number of EB IV sites may exceed 1500 or more. Contrary to previous views that regarded the EB IV southern Levant as a depopulated area, it is now shown that although settlement patterns and subsistence strategies had changed, sedentary occupation in agricultural village agglomerations was still the norm to a very large extent; in addition, recent excavations indicate that some of the EB IV sites were of "urban" character.

The main corpus of published evidence comes from the EB IV tomb contexts. The main characteristic of EB IV burial programmes in the Levant is the appearance of single

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[17]The EB IV occupation at Megiddo, however, is quite substantial (see Davies 1986).

articulated skeletons accompanied by metal weapons. In comparison with the earlier burial tradition that required multiple interments, the EB IV burial domain is distinguished by the individualistic character of its inhumations and grave goods. Patterns of mortuary differentiation emerge from the study of EB IV cemeteries in the area, as can be amply seen in the present sample, but the difficulty lies in the interpretation of these patterns.

The attribution of new elements in the southern Levant to the cultural zone of Syria-Mesopotamia has given further support to the theories mainly expressed by Rast (1980) who points to the growing interconnections between the southern Levant and the North from EB II-III onwards. Subsequently, it is suggested that the demise of urbanism during the EB IV may be better understood in relation to geopolitical events involving the two cultural areas and affecting the southern Levant.

The above discussion indicates that Levantine evidence should be placed in a cross-cultural framework in order to gain a better understanding of sociopolitical change during this phase. This notion is of great importance for monitoring the rise of complex society in the southern Levant, interpret the apparent fluctuations of complexity during the EBA, and finally understand the re-emergence of urbanism in the MBA.

This synthesis of arguments relating to the cultural and sociopolitical developments in the southern Levant during the 3rd millennium B.C. has provided a basic background for the present analysis. A brief discussion on the chronology of EBA Levant is now necessary to derive a chronological framework for the area.

4.2 The Chronology of EBA southern Levant

The phasing of the EBA in the southern Levant has mainly derived from excavated sites which have produced comparative material. For the purposes of this thesis, relative chronology is employed in order to provide the chronological context for

the research. The main reason for this is that absolute dating is not considered of particular relevance to the arguments forwarded and certainly does not affect the methodology employed. However, since absolute chronology provides some idea of the time-scale of the processes under investigation, it is also discussed.

It must be first noted that radiocarbon dating comprises a secondary source of evidence for the EBA in the Levant, mainly because Levantine chronology has relied heavily on Egyptian synchronisms (Weinstein 1984: 297). A comprehensive corpus of absolute dates from the area during this period is to be found in two studies (Callaway and Weinstein 1977; Weinstein 1984) dealing with the EBA, and the EBA and earlier periods respectively. Older publications like that of Jericho (Kenyon 1960) have provided a few absolute dates, whereas recent work in Transjordan (Schaub and Rast 1989) has added to our information.

With particular regard to Bab edh Dhra, which has produced a fine chronological and cultural sequence, it must be mentioned that the absolute dates present certain anomalies mainly due to the nature of the deposits from which dates were derived. In any case, it should be borne in mind that there are several inherent problems in radiocarbon dating of archaeological contexts, and several principal ones with regard to the southern Levant (Weinstein 1984: 312).

In order to follow the phasing of the EBA in the area, it is first necessary to establish the boundaries of the EBA, namely the beginnings and the end of the period. Kenyon has provided some radiocarbon dates from the few early (Proto-Urban) tombs at Jericho. Tomb A 94 has produced a C^{14} date of 3260 B.C. $\pm$ 110 B.C. (Jericho I, 1960: 25) which is now considered as late EB I. Weinstein (1984: 306) refers to the EB IA and IB phases as synchronous with the late Predynastic in Egypt, and cites dates ca. 3400-3200/3100 B.C. derived from sites such as Jericho (T. A 94) and Bab edh Bab edh dhra. This certainly pushes back the beginnings of the EB I, and indeed there is now increased

evidence that the beginnings of the phase may be traced back to ca. 3600 B.C (Baird, *pers.comm.*).

The EB IC period[18] is considered as contemporary with the end of the Predynastic period in Egypt, and dates based on this correlation are ca. 3200/3150-3000 B.C. (Weinstein 1984: 307); accordingly, the EB II is dated to ca. 3000-2750/2700 B.C.

The EB III period is correlated to both Egyptian and Syrian connections and dates to ca. 2750/2700- 2400 B.C, when the final phase of the EBA, the EB IV, begins. The EB IV lasts till ca. 2000-1900 B.C. (Weinstein 1984: 307-308). The information is important because it indicates that EB IV - contrary to older chronologies that minimised the period - lasted for about half a millennium.

All the afore-mentioned dates have been based on the study of comparative material from EBA sites, some of which are included in the present thesis. The beginning of the EBA can be placed at the second half of the fourth millenium B.C. and the end of the period ca. 2000/1900 B.C. This provides a flexible chronological framework for the purposes of the research.

4.3 Tomb Groups from EBA southern Levant

There are a number of extensive formal disposal areas which have been excavated in the southern Levant. For reasons which were explained in detail in Chapter 2, only four sites were selected for an analysis of their mortuary variability. Archaeological site formation processes affecting the sample have been discussed in Chapter 3. A brief presentation of each site follows and the set of DQCF is presented before the analysis of each cemetery.

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[18]The existence of this sub-period has been debated (see Esse 1991).

4.4 The Cemetery of Beth Shan (Northern Cemetery)

The site of Beth Shan is identified with Tell el Husn situated on the west side of Jordan valley. It was continuously settled from the Chalcolithic period. Excavations on the tell were first undertaken by the University of Pennsylvania Museum (Oren 1973: 1-2). The earliest evidence for an urban centre on the site appears during the EB I-II period (strata XV and XIII).

The Northern Cemetery yielded some 230 graves all of which had suffered severe disturbance due to natural causes (earthquakes, landslides) and extensive plundering and re-use. The majority of the graves were cut during the EB IV and as such it comprises one of the largest EB IV cemeteries in the Levant.

4.5 Data Quality Control Factors

The final publication of the excavations at the Northern cemetery (Oren 1973) includes 21 EB IV tombs. Another 16 tombs and coffins of later periods contain EB IV remains. However, these were excluded from the present sample due to the mixed nature of their deposits.

A typology of the chamber tombs was developed based on their morphology and discussed in the publication. Every tomb is described and measurements are provided for the majority of them. A catalogue and illustrations of the finds from each grave is also provided. Skeletal information is unfortunately lacking despite the fact that most EB IV graves contain a very limited number of inhumations (usually one burial). Some of the deposits are disturbed, but there are quite a number of undisturbed ones. EB IV material could be isolated easily in most cases since any intrusive burials belong to much later periods. The present sample consists of the least re-used tombs in the cemetery and any intrusive material is rare or non-existent. Material earlier than EB IV was not present in the tombs as no earlier tombs were found in the Northern Cemetery.

A set of DQCF has been developed for Beth Shan based upon the individual features of the cemetery, discrepancies in the publication and research design. According to this:

1) Finds from the tombs are assigned the registration number they have in the publication, despite the fact that they are often repeated, for cross-reference purposes.

2) Finds which have not been attributed a registration number are provided with a Small Find Number accompanied by a decimal point.

3) Multiple chamber tombs, whereby different chambers are allocated letters of the alphabet (A, B, C, etc), have been provided with numeric designation. For instance, Tomb 108A = Tomb 108.1, where the decimal point refers to the corresponding letter of the alphabet.

4) Tombs which were destroyed and yielded no useful information, or contained no human remains, have been excluded from this research. Although this restriction has limited the number of tombs in the sample, quality control is enhanced.

5) Individual pottery sherds are not included in the present research since they comprise fragmentary evidence that cannot be adequately treated in quantitative or qualitative terms.

6) The major discrepancy in the publication is the disagreement between the plans of the tombs and the actual dimensions provided in the text. Dimensions were taken from the published plans in cases where this piece of information was lacking in the text. A comparison between measurements in the text and published plans, where available, shows that either the plans or the measurements are inaccurate. Therefore, measurements of tombs must be regarded as of relative value.

7) Anthropological information concerning the position, orientation, age and sex of the skeletons is scanty. This recurring problem does not allow for a study of gender-specific burial treatment and associations.

4.6 Chronology and Stratigraphy of Tomb Groups and Patterns of Tomb Use.

The total number of EB IV tombs used in this analysis is 22 graves (n=22). Internal chronology could be ascertained, particularly since no pre-EB IV deposits were uncovered. The stratigraphic relationships among tombs are not dealt with in the publication, but as indicated in the ground plan of the cemetery, there was dense occupation of the area and later tombs were cut through earlier ones.

Of possible importance is the distinction of tombs on typological and chronological grounds, i.e. whether different tomb types relate to specific sub-periods. Oren (1973: 40) has attributed the whole cemetery to a phase called "EB IVA" which he considers to be earlier than the "EB IVB" of the central and southern Levant. EB IVA refers to the northern tomb groups of the southern Levant which show affinities with coastal Syria. The three tomb types A, B and C (Oren 1973: 19-25) seem to co-exist in the cemetery; there is a lack of chronological distinctions. According to the excavator single and multi-chamber tombs are encountered in northern Levantine and Syrian cemeteries during the same phase with no apparent chronological significance. Pa tterns of tomb use indicate that inhumation in single and multiple chamber tombs was the norm. Burials were mostly single in each chamber. Single chambered graves (Type A) were either re-used in later periods, or completely destroyed. Only a few tombs of this type survived without much alteration of their original plan and contents (Oren 1973: 19). Spatial analysis indicates that Type A tombs were not restricted to any particular part of the cemetery, but the distribution of this type seems to indicate a concentration around and on the tell of Beth Shan (Oren 1973). The wider distribution of this tomb type in the southern Levant points to a geographical spread in all parts of the country. Parallels for Type A tombs are found in contemporary Megiddo, Jericho, Gibeon, Lachish and Tell Ajjul (Oren 1973: 20-21).

Multiple chamber tombs, with two or more chambers were also discovered in Beth Shan. Double chamber tombs were mainly excavated in the northern part of the

cemetery, while others, principally re-used ones, were exposed in all other parts of the site. Oren (1973: 21) differentiates between double and multiple chamber tombs and cites parallels for this type (Type B) from Jericho, Lachish, Tell Ajjul and Dhahr Mirzbaneh (Oren 1973: 21-22). Double chamber tombs were also uncovered at the site of Bab edh Dhra (Schaub and Rast 1989) in the Transjordan.

Multi-chamber tombs (Type C) at Beth Shan contained some undisturbed deposits and at least three of them were sealed by a blocking stone (Oren 1973). Most of them were re-used for later burials. Parallels are to be found mainly at Megiddo and are generally associated with a preference for the specific tomb type in Syria and the northern Levant (Oren 1973: 24). They contain mostly a single inhumation per chamber, as indeed is the norm for this phase. Beth Shan is a typical EB IV cemetery in the northern part of the southern Levant, representative of the period in all aspects of its funerary evidence. An analysis of the mortuary variability in this cemetery complex follows in the next sections.

4.7 Analysis of Mortuary Variability
4.7.1 Biological and Demographic Information.

The skeletal population in the sample is rather limited and consists of 18 inhumations (n=18) in total. Unfortunately, there is no biological or demographic information provided in the publication and the sample is, in any case, too small to treat in quantitative terms. The only inference that can be made is that most of the burials must have been of adult individuals. Although no anthropological information is provided for the inhumations, there is some evidence regarding post-mortem treatment. The identification of at least one adult skeleton in flexed position (Tomb 89.1, BurNo 11) may indicate that this was the norm for Beth Shan since most EB IV cemeteries contain adult inhumations. Age and/or sex data are virtually absent.

4.7.2 Treatment of the Deceased and Methods of Disposal

Of the 18 inhumations (n = 18) in the sample, there is information for only 5, with regard to post-mortem treatment. Two were in flexed position (n = 2), two in crouched (n = 2) and one burial (n = 1) was disarticulated (Fig. 4). For three of them (n = 3) there is information regarding their alignment; they were aligned N-S, two (n = 2) were facing E and one (n = 1) was facing SW. It may be suggested with caution that a N-S alignment may have been the norm. The meagre evidence for disarticulation cannot be considered particularly enlightening since evidence for post-mortem treatment is generally lacking.

4.7.3 Grave Equipment

Few tombs contained grave goods other than pottery, and the majority contained only ceramic vessels (Fig. 5). On the basis of the pottery repertoire it is clear that there is a greater variety of shapes in the Beth Shan tombs than at any other contemporary cemetery in the sample.

This observation is further supported by Oren's point (Oren 1973: 26) that both the Megiddo and Beth Shan pottery inventories seem to indicate that common household items were buried in the tombs, unlike other southern Levantine tomb groups where a very standardised set of pottery types is being interred in the tombs.

The Beth Shan ceramic assemblage consists of small, plain jars, but also includes other shapes, like juglets, goblets, teapots and lamps in both the Fine Ware (FW) and Plain Ware (PW) categories (Fig. 6). Funerary deposits on the slope of the tell have yielded material closely paralleled to that of the Northern Cemetery (Oren 1973: 40-41). However, the settlement levels have not yielded any such material. This is considered important with regard to settlement and site use since it indicates that the tell was not occupied during this period and only the slopes were used for burials.

Fig. 6 BETH SHAN
POTTERY FREQUENCIES

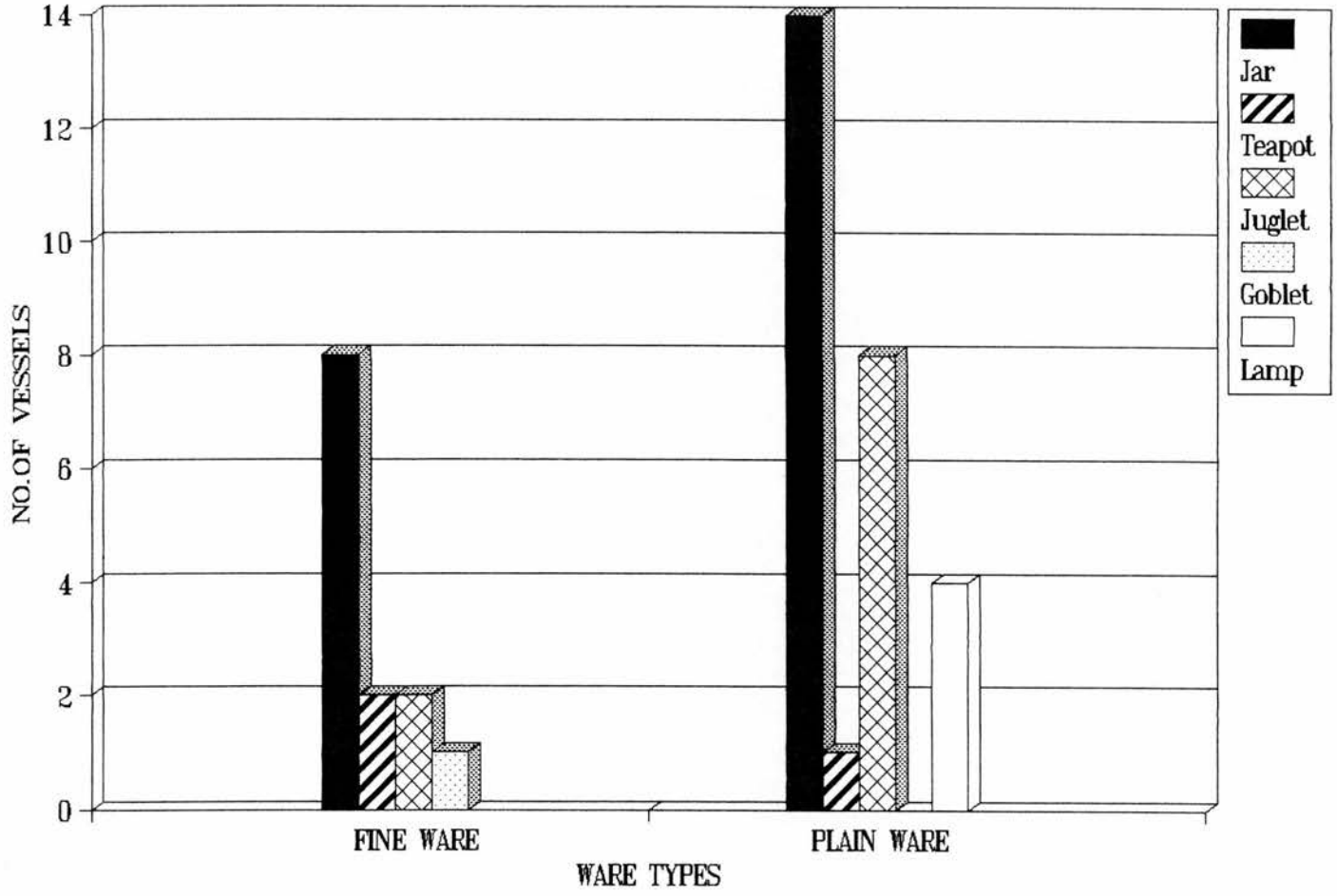


Fig. 5 BETH SHAN
GRAVE EQUIPMENT FREQUENCIES

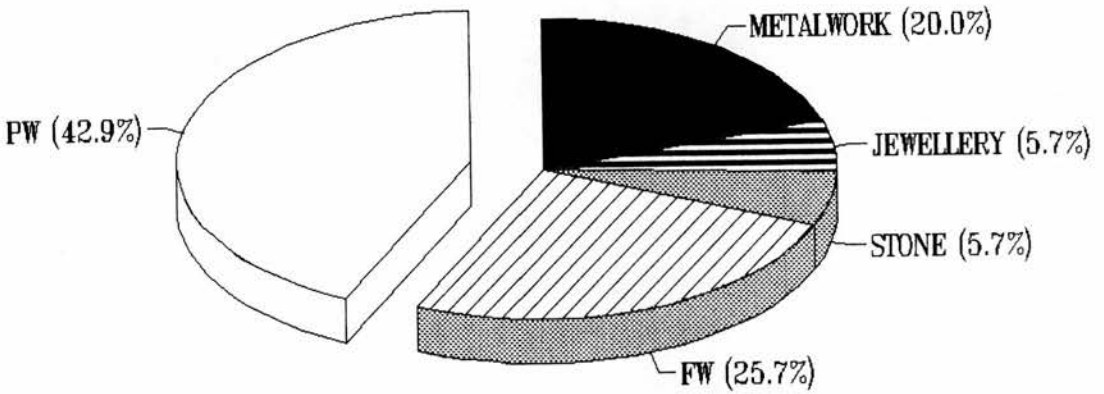
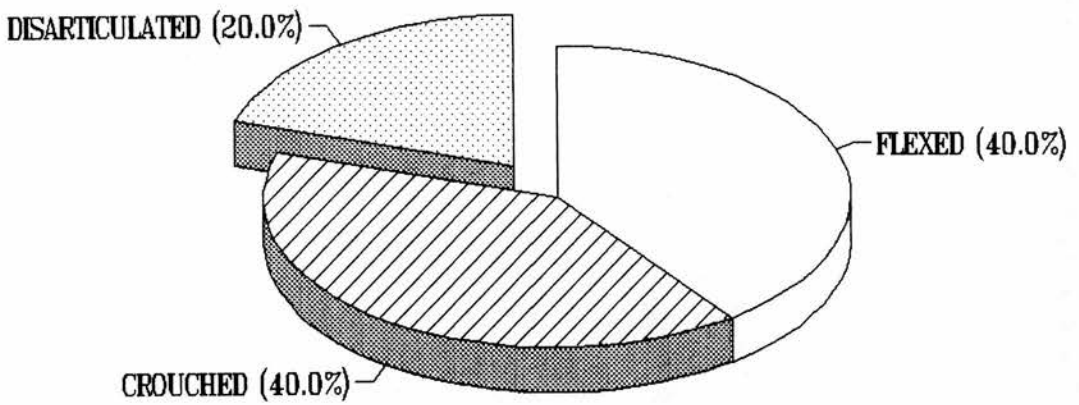


Fig. 4 BETH SHAN
POST-MORTEM TREATMENT



The pottery repertoire at Beth Shan has stronger links with the earlier part of the EBA and is considered to mark both a typological, and chronological distinction, between northern and southern Levantine tomb assemblages (Oren 1973: 28-37). With regard to other classes of grave equipment (n = 11), metalwork (n = 7) comprises the major part of grave furnishings. Javelins (n = 6) are predominant at Beth Shan, while daggers, common elsewhere, do not occur at all (Fig. 7). The other category of metalwork, pins (n = 1), are paralleled in Megiddo, Ai and a few other sites (Oren 1973: 40).

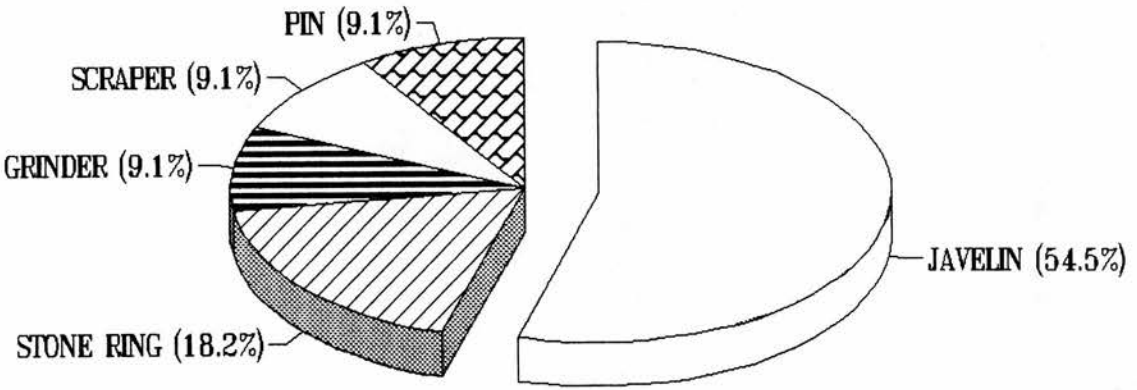
Parallels for the Beth Shan javelins come from Jericho and Lachish (Oren 1973: 39). The metal repertoire also includes a grinder (n = 1) and a scraper (n = 1). A stone ring (n = 1) uncovered at the site was paralleled in Megiddo, Jericho and Tell Ajjul (Oren 1973: 40).

4.7.4 Spatial Arrangement

There are several difficulties in assessing the internal spatial arrangement of grave inclusions and buried individuals, mainly due to the fact that published plans do not contain a layout of the interments and associated finds. This is particularly unfortunate in view of the fact that all tombs comprise single burial deposits which could be efficiently studied with regard to this variable. Since this piece of information is lacking, a study of the spatial arrangement has to be based on distribution maps of tomb types and grave inclusions with reference to the excavated sections of the site.

There seems to be a concentration of multi-chamber tombs in section SQB-1, where, however, most tombs in the cemetery were excavated. Grave inclusions are equally concentrated in the same part of the cemetery. Since all sections were not equally investigated the information is subject to excavational bias and the distribution must be considered as random. It is interesting to note though that of the thoroughly investigated tombs of section SQB-1 (n = 10) the majority (n = 7) are multi-chambered.

Fig. 7 BETH SHAN
GRAVE GOOD FREQUENCIES



There can be no conclusive evidence as to the spatial aspect of mortuary differentiation at Beth Shan due to extensive fieldwork bias; all areas of the cemetery have not been investigated to the same extent. This variable, therefore, is not considered in the analysis.

4.7.5 Description of Mortuary Facilities: Tomb Typology and Energy Expenditure Measures

As has already been mentioned there are two main types of mortuary architecture on the site, single and multi-chamber tombs, the latter comprising two or more chambers. As a rule the chambers were approached by square or rectangular shafts which were connected to an elongated narrow passage, or *dromos*. The burial chamber had a dome-shaped roof and was usually neatly cut (Oren 1973). These tombs are best paralleled in the central and southern Levant (Oren 1973).

Double chamber tombs (Type B) are approached by either rectangular or long and narrow shafts. The characteristic of these tombs is that the chambers do not open from either side of the shaft, but the second chamber is entered through the first (Oren 1973). This indicates a preconceived plan for each double tomb; there seems to be no parallel for this type of burial architecture outside Beth Shan, although Oren cites one or two cases where the tomb might have been originally constructed according to this plan (Oren 1973: 22). It may be safely inferred, therefore, that this architecture is confined to this specific site or region and constitutes a local phenomenon.

It is noteworthy that none of these tombs have yielded undisturbed deposits and the fragmentary human bones that have been uncovered in a few of them can only suggest that more than one skeletons had been inhumed in these contexts.

Multi-chamber tombs, up to five chambers each, were often re-used for later interments; there were a few which contained undisturbed deposits and they still had their original blocking stone *in situ*. They seem to present a high degree of irregularity

in their plan and dimensions (Oren 1973); the main burial chambers were approached by a rectangular shaft and elongated *dromos*. They are best paralleled in Megiddo (Oren 1973: 22) and Cyprus, where, however, multi-chamber tombs are far more complex in plan including other features like recesses, or niches where burials were also made (SCE IV: IA).

Oren (1973: 22-25) maintains that multi-chamber tombs comprise a north Levantine expression of mortuary architecture and, indeed, to-date no such tombs have been uncovered in the South. Tombs at Megiddo and inland Syria point to the place of origin of this tomb type, according to Oren; this is a plausible hypothesis if the geographical proximity of Beth Shan to Syria is considered. Several other features, like the flat roof of most chambers and the elevation of the floor level in the *dromos*, show resemblances to tombs from Megiddo and may suggest that non-mortuary structures were used for burial purposes (Oren 1973: 24).

An examination of architectural variability of the measured tombs (n = 19), as opposed to the total number of tombs (n = 22), and relative energy expenditure shows that only a few chambers (n = 8) had dimensions that equalled or exceeded 3m length and width; the majority (n = 12) had dimensions less than 3m. As to the height, most chambers were about 1m height. Shafts were usually small and narrow with an average of 1m length and 1.50m width. Shaft height was usually less than 1m. This piece of data indicates that more labour was expended in the construction of large multiple tombs, as indeed would be expected.

Measures of energy expenditure cannot be safely assessed on the basis of measurements taken from the tombs, mainly because the discrepancies between text dimensions and published plans does not allow for such a quantitative study. Any further statistical manipulation of such measurements cannot be meaningful.

There are two (n = 2) single chamber tombs which exceed 4m length (Tombs 87 and 203). These evidently do not constitute the norm for the cemetery and alternative

reasoning must be employed to interpet them. Some kind of differentiation is implied here through the use of large mortuary facilities to accommodate single interments, but the evidence is not conclusive.

4.8 Patterns of Mortuary Differentiation at Beth Shan

On the basis of methods of disposal, it is possible to assess that disarticulated (secondary) burials designate a different status. However, since data concerning methods of disposal is generally lacking for most inhumations no correlation between post-mortem treatment and grave equipment can be established. Of the individuals associated with metalwork (n=5), only one (n=1) has been identified as a flexed skeleton; there is no information regarding the rest. Similarly, the only inhumation associated with jewellery (n=1) is that of a skeleton in flexed position.

Grave equipment when correlated to energy expenditure indicates that grave goods generally occur in the largest tombs (length over 3m), whereas the smaller tombs present lower frequencies. Of the ten (n=10) larger tombs, the vast majority contain pottery (n=8) and other artefacts (n=9). Of the smaller tombs (n=9), almost half (n=5) contain pottery and only a couple (n=2) contain other objects.

A pattern of mortuary differentiation emerges only when all variables are studied together. It is suggestive of social distinctions among the deceased population of EB IV Beth Shan. On the basis of the available evidence, post-mortem treatment, grave furnishings and energy flow (tomb size) comprise the main variables through which differentiation was expressed. Clearly, it is impossible to reconstruct the social structure to the extent that would allow vertical and horizontal social aspects to be distinguished.

However, it is important to link this pattern of mortuary differentiation to changing socio-economic relations in the structure of EB IV communities, attested in the changing format of burial symbolism and ritual. The burial traditions of the earlier part

of the EBA required the multiple inhumation of a considerable number of individuals in large chamber tombs which contained a bulk of grave goods (see Chapter 4, below). In this respect, the introduction of different practices in the implementation of EB IV mortuary programmes, evident in Beth Shan, points to structural change in EB IV Levantine society. The analysis of early EBA cemeteries in the southern Levant (see Chapter 4, below) vividly demonstrates this contrast between the earlier and the later part of the EBA with regard to patterns of mortuary differentiation.

4.9 The Cemetery of Jericho

Jericho is situated in the Jordan Valley, about 10km from the Dead Sea. It is considered to be the lowest city on earth (Kenyon 1979) since it lies about 250m below sea level. The perennial spring of Ain es-Sultan has provided the water needed for good agriculture in the surrounding lands throughout the city's history. Excavations on the mound were first undertaken in 1867 by the Palestine Exploration Fund and later on by the Austro-German Expedition in 1908-1910. Prof. Garstang conducted excavations in 1930-1936 on behalf of the University of Liverpool, which were then followed by the British school of Archaeology in Jerusalem excavations between 1952-1958 under the direction of K. Kenyon.

The cemetery was revealed in the lower N and NW slopes of the tell and it was soon shown that there had been several different areas where tombs were clustered. Tombs date from the LChalco period down to the LBA and even the Iron and Roman Ages. The burial record of Jericho comprises the most prolific and best preserved one in the southern Levant, providing a unique temporal and cultural sequence for the EBA. It is not surprising, therefore, that a number of researchers (e.g. Shay 1983; Palumbo 1987) have repeatedly employed the Jericho data in order to gain some insights into the EBA society of the southern Levant.

The EBA tombs included in this research have been sampled from Kenyon (*Jericho I*, 1960) since the specific groups adequately meet both the chronological and publication standards set in Chapter 2. The general time span they cover is from the so-called "Proto-Urban" phase (*Jericho I*: 4) which has proved to be contemporary with the EB I in other southern Levantine sites (Weinstein 1984: 306-307), to the end of the "Intermediate EB-MB" (*Jericho I*: 180), termed EB IV. Control over the Jericho sample has been provided by the set of specific DQCF developed for the cemetery.

4.10 Data Quality Control Factors

The Jericho publication stands out as one of the most detailed available and provides excellent information both in terms of text and published plans. However, there are a number of discrepancies which have been noted in order to prevent misinformation. These were dealt with as follows:

1) Fragmentary pottery vessels are not included in the present sample since they are without full descriptions and only their registration numbers are provided in the publication. The incomplete vessels that can be adequately identified in terms of ware, surface treatment, shape and date are included in the analysis.

2) Pottery, or other finds, which come from unstratified parts of the tombs, are not included in the sample since their context is not safely known. Kenyon (1960, *Jericho I*: 87) designates this class of evidence as "unstratified". The reason for this exclusion, is that the vast majority of EB I and II-III tomb deposits comprise multiple burial programs. In such cases, it is of importance to manage and isolate the relevant material, both chronologically and typologically.

3) Any finds, including pottery, which are not assigned to the EBA are not examined. A note of their intrusion is kept to indicate extensive re-use or disturbance.

4) Any finds deriving from sieving are not included in the present research, because no description is provided and contexts are almost unknown.

5) Tombs which have been partially investigated are not examined since the information they have yielded is mainly fragmentary.

6) Tombs which only survive as deep pits or fissures, have not been recorded for reasons similar to DQCF 5.

7) Pottery vessels mended from sherdage are not recorded since no description of them is provided.

8) Diagnostic sherds published as complete vessels, are not included in the present research.

9) Assorted beads, described as "many", without reference to their total number, have been recorded as "bead group" and assigned one SF number. In any other case, they have been attributed unique SF numbe*rs*. When different materials are present in the same *bead group*, one SF number is used.

10) In EB IV tombs, facing refers to the position of the skull (head to), and not to the actual direction to which the face is pointed. This information is not published.

11) Where no registration number is provided in the publication, an SF number has been assigned for the purposes of recording. There has been an effort to assign numbers with decimal points following the last registration number mentioned in the text, as in the Beth Shan cemetery. Registration numbers are consistently repeated in the publication.

4.11 Chronology and Stratigraphy of Tomb Groups and Patterns of Tomb Use

The cemetery area was extensively used for burials during several periods. There was a preference for specific areas of the cemetery during each period. The spatial arrangement of tombs depended upon various factors, such as the suitability of the soil

for digging rock-cut tombs. The various tomb categories proposed by Kenyon for the EB IV (*Jericho I*: 180-181), are certainly associated with different areas in the cemetery and comprise distinct tomb groups. The extensive use of the cemetery and multi-stage burial programmes have caused several problems in the stratigraphy of these deposits. The excavation of these contexts by individually distinguishable deposits has effectively solved some of them.

The total number of tombs in this sample (n=92) covers the whole of the EBA. The EB I tombs (n=3), the transitional EB I-II (n=1), the transitional EB II-III (n=4) and the only EB I-III (n=1) are much fewer than their EB IV counterparts (n=83). Kenyon (*Jericho I*: 52) notes that the number of EB I-III tombs is very small and provides two possible explanations: a) that these contexts had suffered severe erosion and therefore they do not survive, and b) that they contained such an enormous number of inhumations that a greater number of facilities was not required by the Jericho community. The latter explanation is not plausible on the basis of evidence for EB I-III tombs elsewhere in the southern Levant (e.g. Bab edh Dhra).

The chronology of the tombs has been established on the basis of both typological grounds and stratigraphy. Kenyon (*Jericho I*: 182) discusses the possibility of chronological differences among the various tomb types of the EB IV, but she concludes that there are no grounds to sustain this view.

Patterns of tomb use indicate that a lot of EBA tombs were used for later burials, and new tombs were also cut through older ones. Nonetheless, there was apparently a conscious avoidance of cutting through earlier graves in most cases. The earlier EBA tombs accommodated a considerable number of individuals relative to tomb size. Earlier interments were usually pushed in the rear part of the burial chambers to make room for later inhumations. EB IV tombs accommodated one, or two, individuals at most in accordance with the newly emergent burial traditions. Chambers were then blocked by large stones and the shafts were filled.

Secondary inhumations were placed in the tombs after exposure to decay. Kenyon (1979: 97) discusses the evidence for secondary disarticulated inhumations in the EB I tombs. According to this, the skeletal remains from EB I tomb A 94 indicated that the deceased individuals were first left to decay and then inserted in the burial chamber where their skulls and long bones were carefully arranged. In any case, both secondary disarticulated burials and articulated ones were eventually deposited in the chamber tombs of the same cemetery. Thus, it may be safely argued that the cemetery comprised a formal disposal area as opposed to random burial ground.

4.12 Analysis of Mortuary Variability
4.12.1 Biological and Demographic Information

There are no age or sex data regarding the inhumations in the EB I-III tombs. Consequently, no demographic data can be derived for the site during these phases. Kenyon (*Jericho II*, 1960: 3), makes a rough estimate on the EB I mortuary population, of ca.790 individuals.

The situation is markedly different during EB IV. Anthropological evidence is available for a number of these tombs. Kenyon (*Jericho II*: 1) makes an estimate of ca. 356 individuals in the EB IV burial facilities. The demographic structure of the population cannot be reconstructed with certainty due to the fragmentary nature of the anthropological evidence (*contra* Shay 1983). The sample is biased for several reasons, the most important of which are the number of disarticulated burials and the distinct lack of female skeletons.

Disarticulation processes render the mortuary population sample unverifiable. The gender representation ratios also indicate the bias. Since the identification of age and gender depends on the state of preservation of each skeleton it becomes evident that only assumptions can be made with regard to the disarticulated segment of the population.

4.12.2 Treatment of the Deceased and Methods of Disposal

The majority of the EB IV skeletal population comprised disarticulated burials (n=47), and less than half were single intact inhumations in flexed (n=4) and crouched (n=25) positions (Fig. 8). Of the aligned burials (n=14) most had a general E-W orientation (n=13), and were facing W. Although the population was mainly adult (n=30) there were at least some children (n=4) and infants (n=4) interred (Fig. 9).

There are two distinct patterns of post-mortem treatment, that of articulated, primary inhumation and that of disarticulated, secondary burial. For the moment, no discussion is made concerning the significance of these patterns in relation to mortuary differentiation; however, this aspect of mortuary variability focuses our attention on horizontal as against vertical[19] social distinctions. With reference to EB IV Jericho, research is divided; some scholars maintain that post-mortem treatment here is associated with horizontal distinctions, or even ethnic ones (Kenyon 1969; Prag 1974; Shay 1983). Others - including the author - argue in favour of some kind of vertical social differentiation manifested in these contexts (Philip 1989; Palumbo 1987; Baxevani 1992).

Statistical methods were employed to examine the skeletal population in demographic terms and even extract biological and social information from the EB IV burials (Shay 1983). Shay (1983: 31) infers that the distinct absence of female skeletons is due to pre-interment disarticulation treatment of the female segment of the population and that non-disarticulation was reserved solely for males. Her observations are based on the sexing of EB IV skeletons from the 1955-58 season (*Jericho II*, Appendix H: 665) which showed that all female skeletons were completely disarticulated.

Unfortunately, anthropological information is not available for the EB IV tombs which were excavated during 1954-55 (Kenyon 1960, *Jericho I*). According to Kenyon (*Jericho I*: 187), there is a possibility that at least three burials (Tombs J 3, J 37, J 105 in Area A) may have been those of women on the basis of their associations (a pin and a

[19]Horizontal distinctions refer to social differentiation on the basis of age and sex, while vertical distinctions refer to status distinctions not associated with age/gender.

Fig. 8 JERICHO EB IV
POST-MORTEM TREATMENT

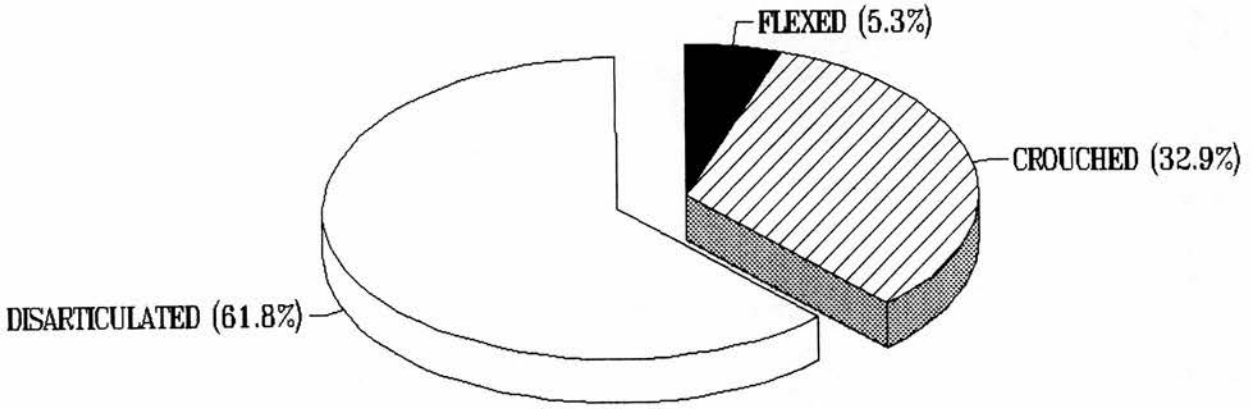
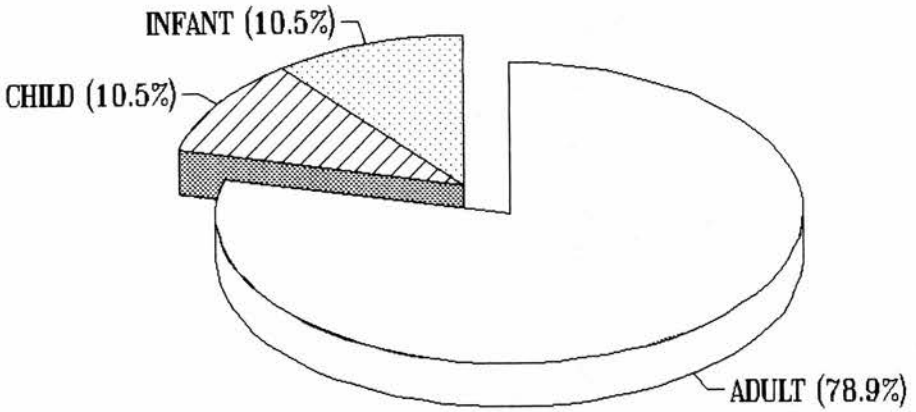


Fig. 9 JERICHO EB IV
AGE OF INDIVIDUALS



may have been those of women on the basis of their associations (a pin and a bead for each interment); these are all single, articulated inhumations. Since this piece of information is missing, however, it is impossible to discern gender specific grave goods.

No detailed information is provided for the EB I-III tombs on the site, although both articulated and disarticulated skeletons were found. The evidence, for either treatment is precarious due to the cumulative nature of the deposits. In any case, the deceased were accompanied by masses of grave goods, mainly pottery vessels. It is impossible to associate the artefacts with individual skeletons, particularly since all contexts are disturbed; a study of these contexts has to rely upon the accompanying grave packages.

4.12.3 Grave Equipment

The number of grave goods from the EB I-III tombs on the site is related to the number of individuals per tomb. The major class of artefacts in these contexts are the beads (Fig. 10) and the so-called "cult objects" (Kenyon 1960, *Jericho I*: 93, Fig. 29) made of bone (Fig. 11).

Beads (n=47) deposited in the tombs of these period are manufactured in a wide range of materials such as alabaster, carnelian, copper, faience, bone, and stone. The second recurring category is the "cult objects" (n=44). These are bone implements with pierced holes (usually three) of virtually unknown function. They are found in such great numbers in the tombs that one is tempted to associate them with funerary symbolism and cult.

Metal objects (n=7) (Fig. 12) occur in the same quantities as stone artefacts (n=7); the range of metal artefacts is impressive including beads (n=3), a ring (n=1), a bracelet (n=1) and a crescentic axehead (n=1), but metal frequency is low in comparison to jewellery

Fig. 10 JERICHO EB I–III
JEWELLERY FREQUENCIES

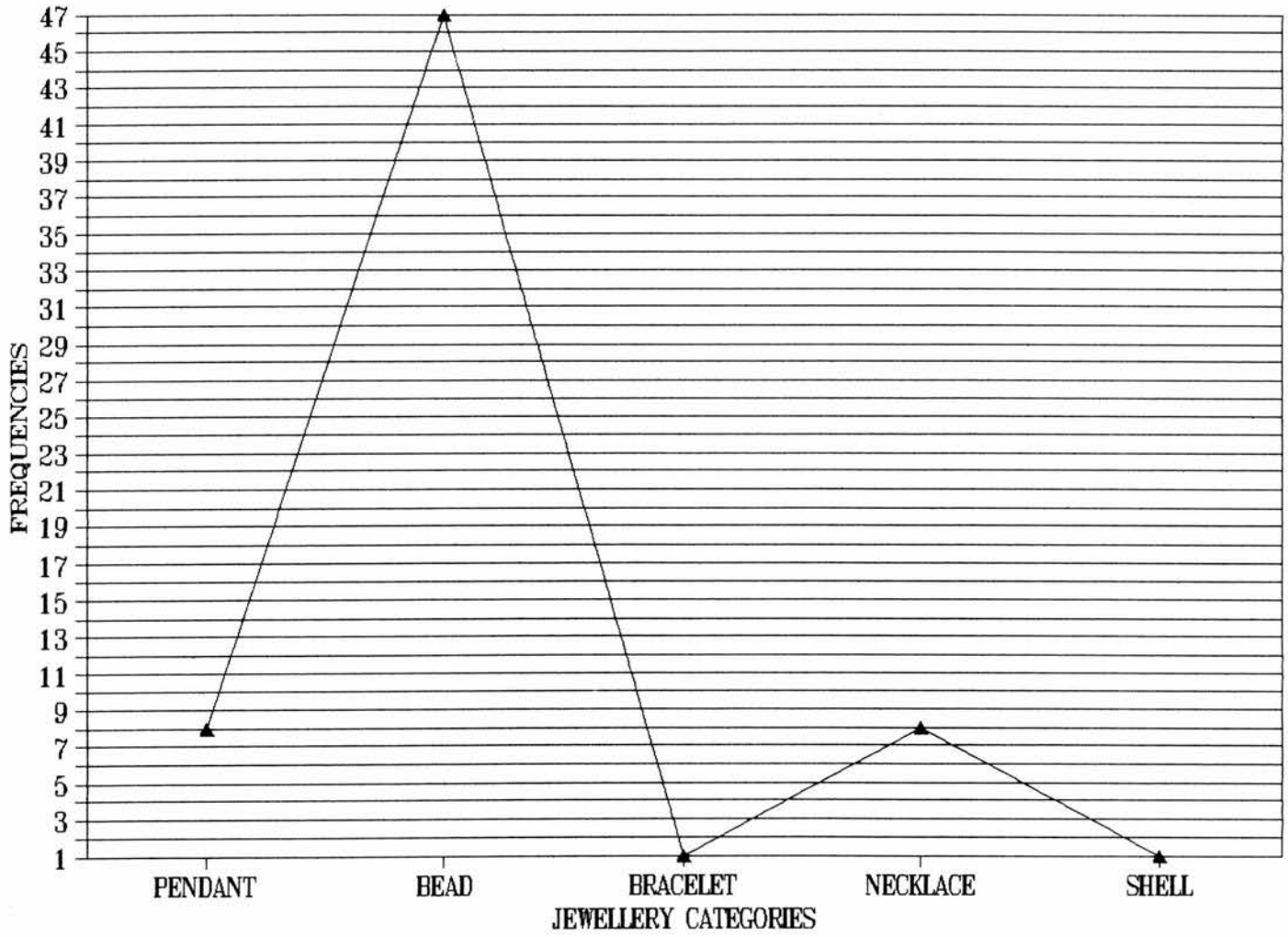


Fig. 11 JERICHO EB I–III
ORGANICS FREQUENCIES

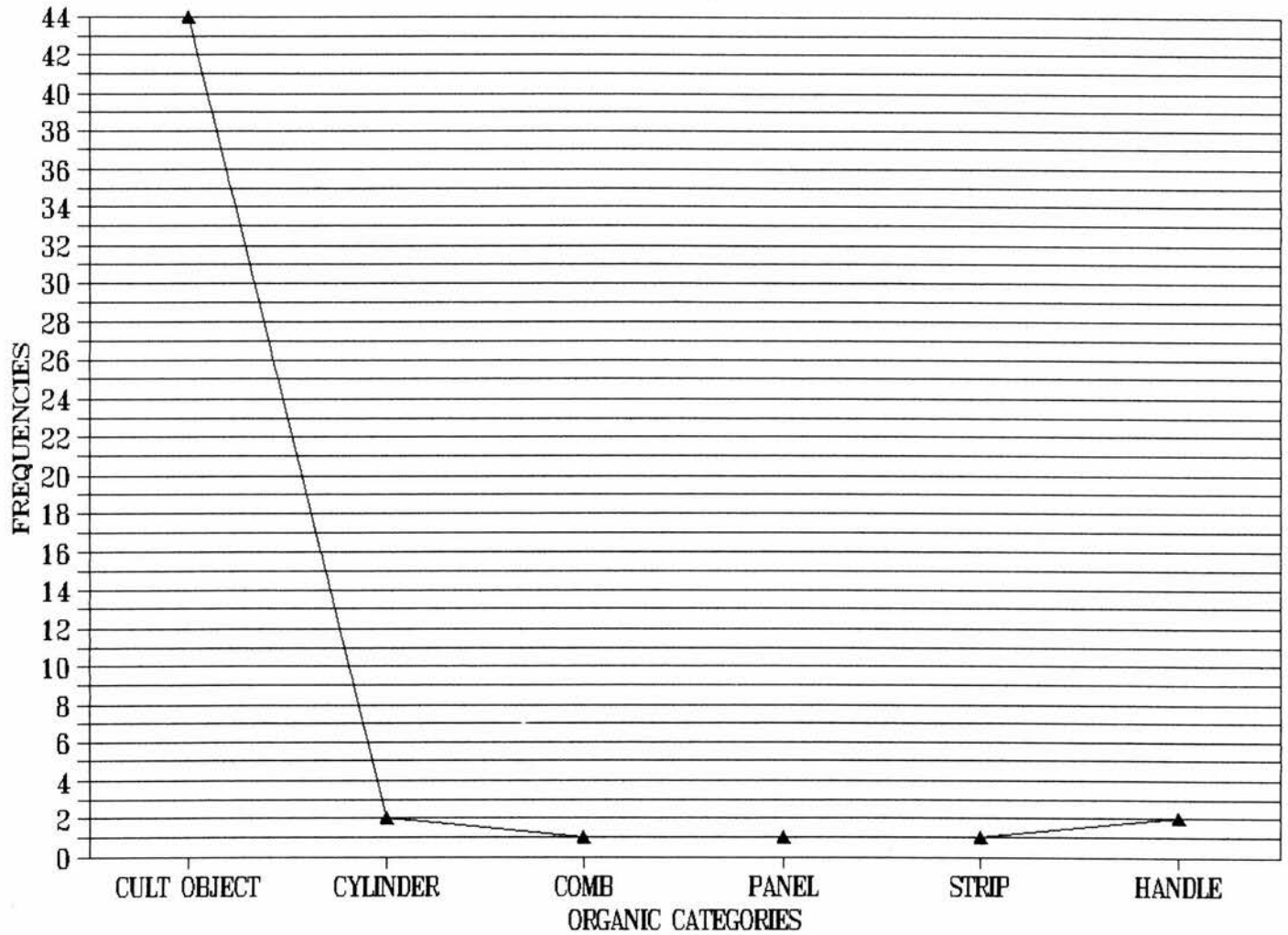
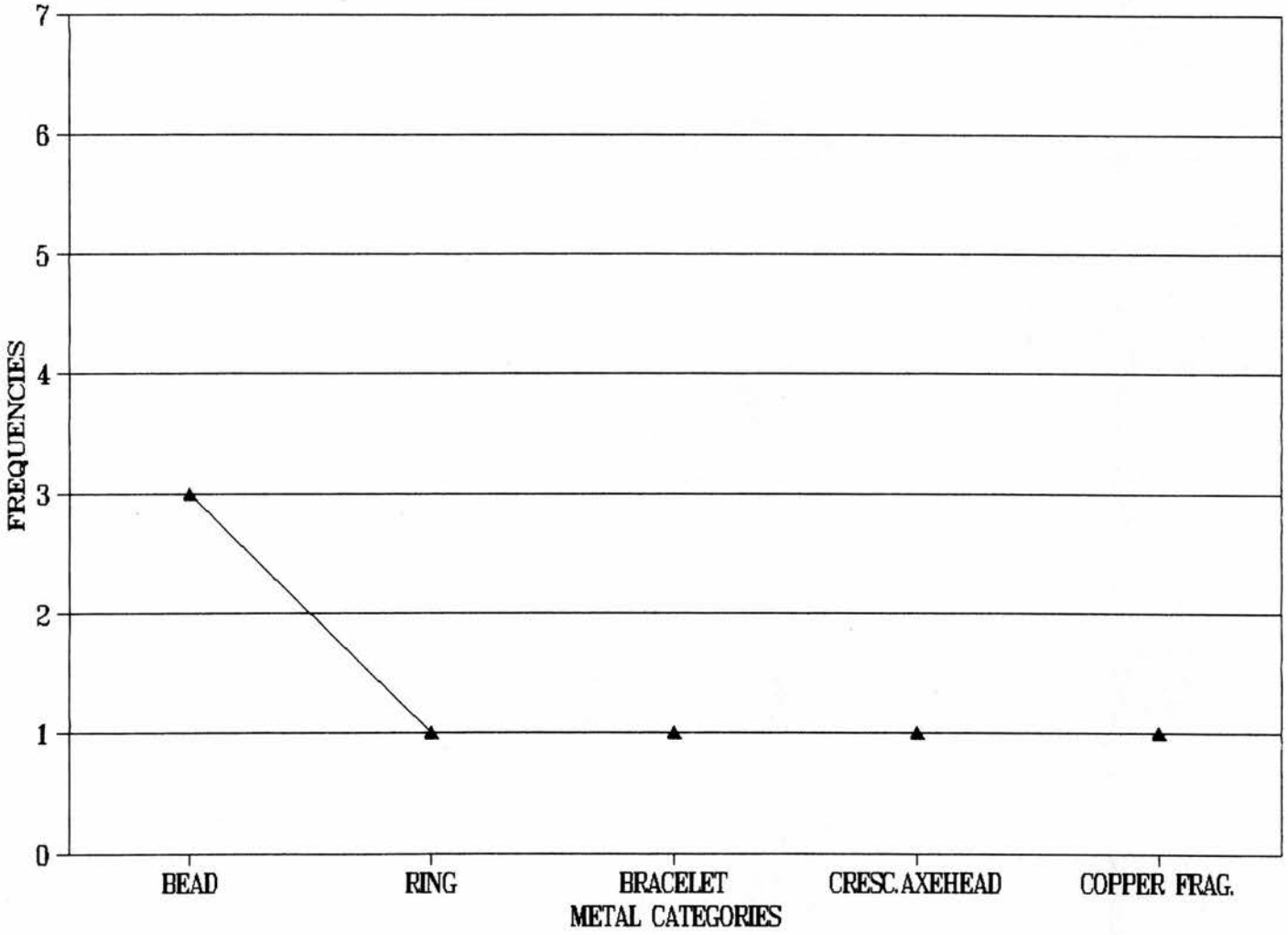


Fig. 12 JERICHO EB I–III
METALWORK FREQUENCIES



(n = 70), bone objects (n = 50) and pottery (n = 900). It is also noteworthy, that the majority of tombs contained at least one metal artefact.

With regard to pottery (n = 900), the majority of vessels (n = 600) belonged to Fine Ware types (*henceforth* FW). The range of pottery shapes in the FW category is greater than the Plain Ware category (n = 300) (*henceforth* PW). Although the ceramic repertoire includes a range of shapes with variable frequencies there are a few types which are not found in each category; jugs, twin vessels and strainers do not occur in PW, whereas bottles, small jars and lamps do not occur in FW. The examination of the EB I-III tombs showed no correlation between the FW frequencies and metalwork. Only a couple of tombs where FW was predominant, also yielded metalwork.

A different situation appears in the EB IV tombs at Jericho. Metalwork (n = 50) is predominant in these contexts (Fig. 13); most items are daggers (n = 14) and pins (n = 12). All the other categories have lower frequencies. A correlation between post-mortem treatment and metal deposition shows that almost all of the articulated individuals (n = 29) were accompanied by metal items (n = 22). Of the disarticulated individuals (n = 47), the majority (n = 28) were buried with metal artefacts and pottery.

The ceramic industry is very standardised during this period and the range of shapes is rather poor. There are selective patterns of ceramic deposition evident in the association between specific tomb types and pottery (*Jericho I*: 199-205). The sample indicates that pottery comprises the major correlate of disarticulated inhumations as opposed to articulated skeletons which are foremost associated with metal weapons (Figs 14 and 15). Only a few articulated inhumations (n = 5) were associated with ceramics only, whereas most of the disarticulated burials (n = 28) were accompanied by pottery and occasionally metal.

The examination of post-mortem treatment and grave equipment in the EB IV tombs at the site indicates that at least two variables point to a pattern of mortuary

Fig. 13 JERICHO EB IV
GRAVE EQUIPMENT FREQUENCIES

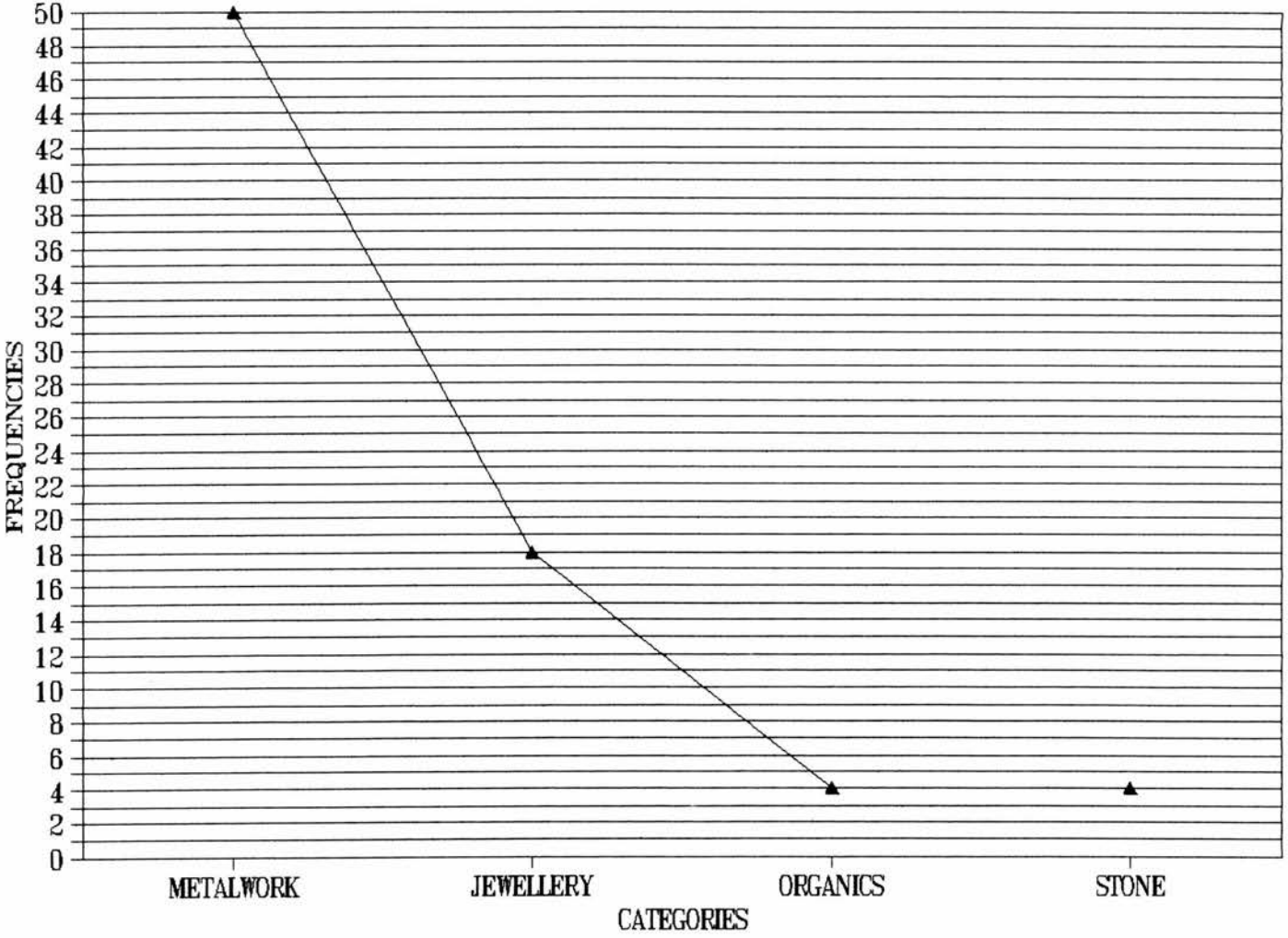


Fig. 14 JERICHO EB IV
POST-MORTEM TREATMENT ASSOCIATIONS

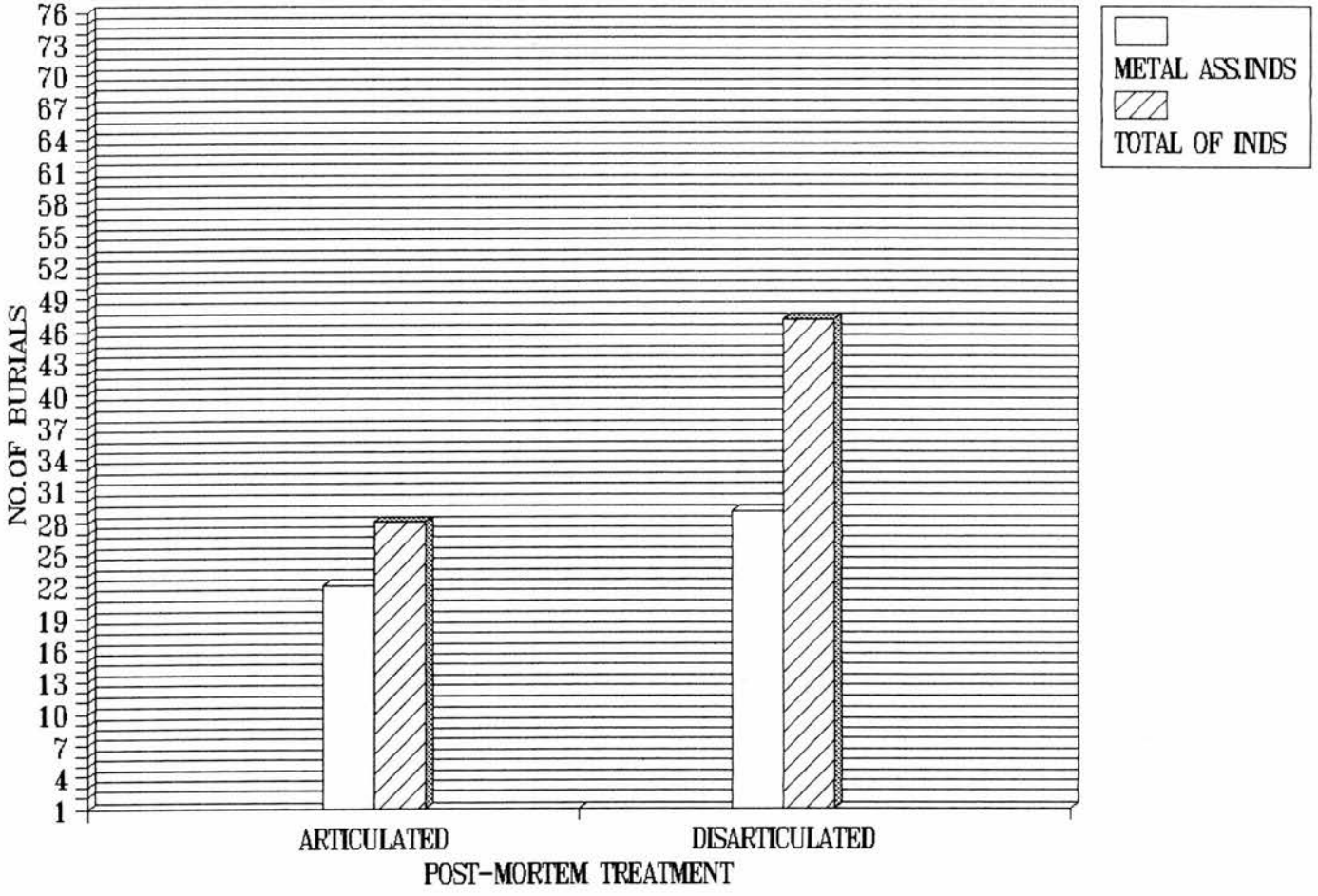
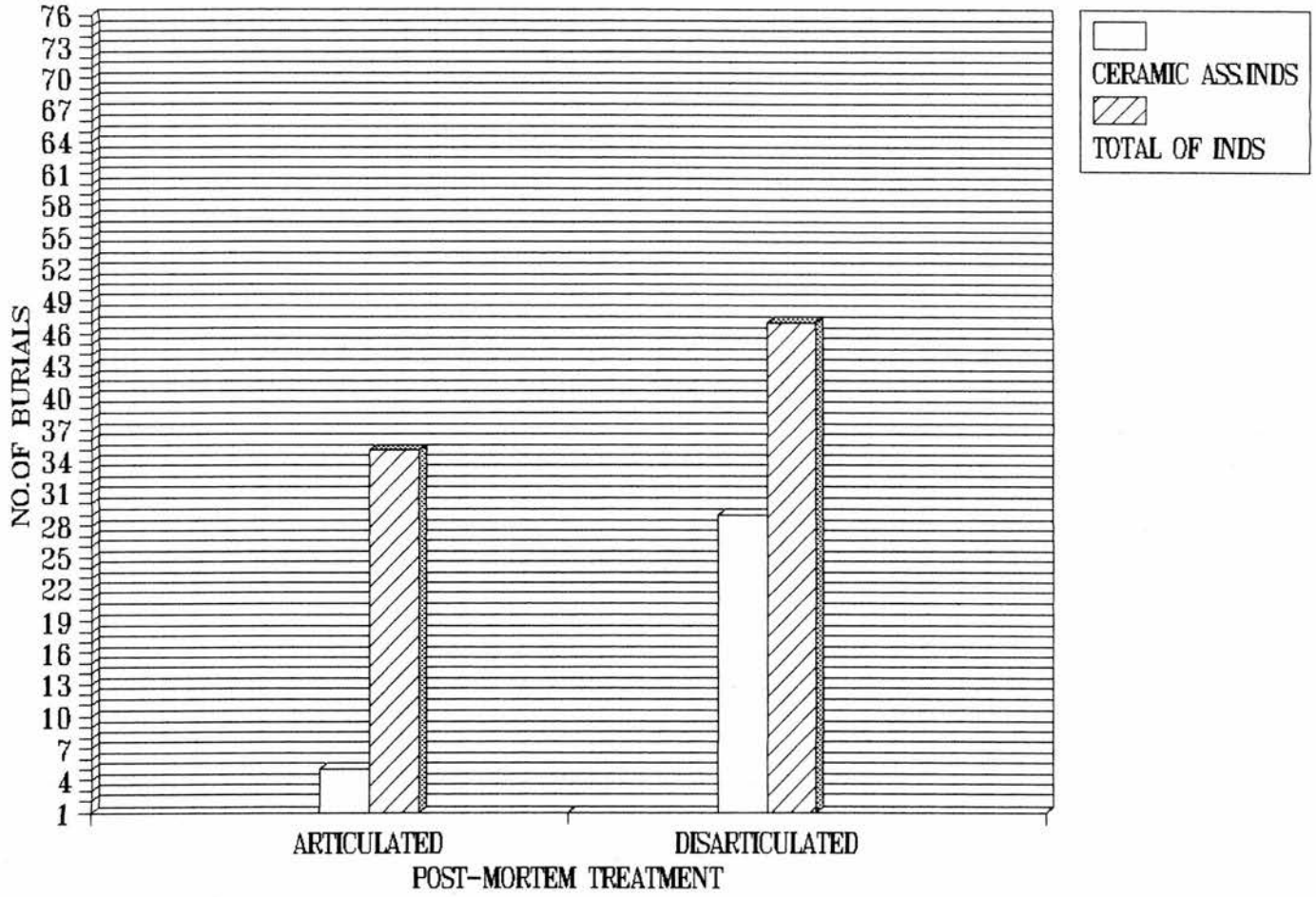


Fig. 15 JERICHO EB IV
POST-MORTEM TREATMENT ASSOCIATIONS



differentiation. Two more variables are examined in the following pages in order to verify this pattern.

4.12.4 Spatial Arrangement

There is extremely little to be said about the internal spatial arrangement of skeletons and artefacts in EB I-III mortuary domains. The cumulative nature of these deposits renders this study impossible. The distribution of EB I-III tombs on the site shows a preference for specific areas of the cemetery, however, the sample is not sufficient to indicate other reasons for this choice.

The spatial arrangement of tomb types during the EB IV, when correlated to all aspects of mortuary variability, points to a lucid expression of differentiation in the Jericho burial domains. Kenyon's discussion on the EB IV tomb groups (*Jericho I*: 180-185) reveals the highly structured nature of EB IV burials. Each tomb type has its own characteristics in terms of location, post-mortem treatment, grave equipment and funerary architecture. Evidently, the differences observed among these distinct tomb groups require explanation. Since the chronological argument is dropped by the excavator herself (*Jericho I*: 182) and the mingling of characteristics in some of these domains (*Jericho I*: 182) weakens the ethnic argument, it is only possible to look for social interpretation. This interpretation is sought at the end of the analysis of this cemetery, after tomb typology and energy flow have also been examined.

4.12.5 Description of Mortuary Facilities: Tomb Typology and Energy Expenditure Measures

All of the EB I-III tombs at Jericho comprised single-chamber tombs of rather large proportions, some of them exceeding 3m chamber length and width. No information exists with regard to the shafts since most of them had been destroyed.

Measures of energy flow in the EB IV are related to the tomb typology proposed by Kenyon (1960, *Jericho I*: 180-185). Accordingly, the most "expensive" tombs were the Outsize, Square Shaft and Pottery type tombs; the Dagger and Bead type tombs were of smaller size and thus required less labour for their construction.

Despite the fact that measures of energy expenditure have been disputed as measures of social status (Tainter 1978; Bentley 1987), energy flow when correlated with other aspects of mortuary variability in the present sample shows that differentiation was also made in terms of labour expenditure.

4.13 Patterns of Mortuary Differentiation at Jericho

The number of EB I-III tombs at the site is very small to allow for any distinct patterns to emerge. Multiple burial also renders meaningful contextual analysis impossible. Burial patterns are more effectively studied in Bab edh Dhra where the sample of EB I-III tombs is substantial (see Chapter 4, below).

Apart from evidence for cremation in EB I Tomb A 94 (*Jericho I*: 8), the inhumation of a vast number of individuals in this tomb distinguishes this context from its counterparts in Bab edh Bab edh dhra. It is important to note that the EB I tombs on both sites contain a smaller number of skeletons in comparison to the EB II-III tombs which accommodate a vast number of individuals. This piece of data indicates that the mode of interment changes through the early EBA from communal to collective. This change also marks the beginnings of urban life in the associated settlements on both sites (Kenyon 1979: 167-185; Schaub and Rast 1989: 547)

However, some EB I tombs at Jericho (e.g. A 94, *Jericho I*: 16-25) have yielded an enormous number of burials and finds. Some 113 individuals are estimated for A 94, a total that by far surpasses the contemporary Bab edh Bab edh dhra contexts; other EB I

Jericho tombs (e.g. A 13, *Jericho I*: 47-48) are of comparable size in mortuary population and finds.

Another similarity between the EB I tombs on both sites is in the post-mortem treatment of the deceased individuals. They all comprise disarticulated inhumations deliberately arranged within the burial chamber; the long bones are usually piled up in the centre of the chamber while the skulls are situated in a separate row. Unfortunately, this pattern of internal arrangement was not as clear in Jericho due to the more cumulative nature of its deposits.

The evidence shows that on both sites, the EB II-III tombs contain a huge number of skeletons. In Bab edh Dhra this change is marked by the introduction of different mortuary facilities to accommodate the dead (see Chapter 4, below). In Jericho the same rock-cut tombs are used and some of the EB I-III chambers re-used. Thus the continuity in burial architecture is not disrupted in Jericho as it is in Bab edh Dhra.

The quality of grave goods also changes on both sites between the EB I and EB II-III, with the introduction of an enhanced artefactual repertoire present in both the settlement and burial contexts. Carinated vessels appear in the EB II-III contexts at both Jericho and Bab edh Dhra and new metal weapon types are introduced (e.g the fenestrated axe). Moreover, the quantity of grave furnishings increases, though in accordance with the number of inhumations in these tombs.

The evidence from Tomb A 94 in Jericho is indicative of a collective mode of interment as early as the EB I. This may be of significance in terms of social inferences since it may suggest there was not a gradual development from communal to collective interment. The latter was already practised in EB I Jericho.

The major point to be made with regard to the EB I and II-III tombs is that they manifest a reluctance on behalf of the burying group to exhibit differentiation among the deceased members of the society. The communal/collective mode of interment points to intentionally minimal differentiation during a period that has been associated with more

complex sociopolitical organisation in the Levant. Social distinctions that may have existed are not detected in the record; inequalities in access to resources, post-mortem treatment and energy expenditure are not visible either.

The EB II-III burial mode is in marked contrast with the situation in the EB IV contexts. In the previous paragraphs it was shown that there seems to be a correlation between the rise of urbanism in the southern Levant and change in the format and execution of burial programmes. Change in the social structure of EB II-III southern Levantine communities is sustained by the burial record, while the settlement record yields evidence for organisational change too.

In this respect, the EB IV situation stands in marked contrast to what went on before. At Jericho, in particular, mortuary variability is enhanced by the highly formal nature of burial programmes during this period.

Methods of disposal indicate radical change, from multiple disarticulated/articulated inhumations to single, intact interments for a certain segment of the population. This differentiation by post-mortem treatment is further emphasised by the presence of different grave good packages for each mode of interment. In relation to the above mentioned, labour expenditure varies for each mode of interment with its associated grave kit, and spatial location is used to discern among the different tomb groups.

All variables used in this sample to detect mortuary differentiation indicate that different statuses are displayed in the EB IV domains. The point is that the substantial changes in the execution of burial programmes during the EB IV, and the vivid manifestation of mortuary differentiation in these domains, has to be interpreted.

A general discussion on the EB IV is found in the concluding part of this chapter. It is necessary at this point, however, to discuss the Jericho evidence in more detail, since it comprises the best preserved evidence for the period. First, it is important to isolate the characteristics of the EB IV tomb groups in relation to both Kenyon's typology and

observations (*Jericho I*: 180-185), and the results of this analysis. The following summary table gives a description of the main features of these tombs:

Table 3

Square Shaft type: **Main Location**: Area J, **Burial**: Single Intact, **Grave Goods**: Metal Weapon-Pottery

Dagger type: **Main Location**: Area A, **Burial**: Single Intact, **Grave Goods**: Metal Weapon

Outsize type: **Main Location**: Areas O, P, **Burial**: Disarticulated-Intact, **Grave Goods**: Pottery-Metal Weapon

Pottery type: **Main Location**: Areas H, G, **Burial**: Disarticulated, **Grave Goods**: Pottery

Bead type: **Main Location**: Areas K, D, **Burial**: Disarticulated, **Grave Goods**: Beads, occasional metal

Measures of energy flow indicate that the Outsize, Square Shaft and Pottery type tombs were the largest facilities on the site. When all variables are pulled together it becomes evident that the most "elaborate" type is the Square Shaft tomb followed by the rest of tomb types in the sequence presented in the above summary.

This clear-cut pattern of burial programmes points to different statuses held by the deceased in these domains. It does not necessarily follow that the higher status individuals were the ones buried in Square Shaft tombs, however, since the manifestation of differentiation is so distinct, it must be acknowledged that social distinctions were sharp and inequalities had to be apparent. The reasons dictating this behaviour on behalf of the burying group must be sought in the social structure of the EB IV Jericho community that required the maximisation of differentiation in burial domains.

Although this may involve different ethnic groups and horizontal distinctions not discernible in the archaeological record, vertical distinctions are far more evident (Palumbo 1987; *contra* Shay 1983). The fact that only a segment of the population had access to metal resources for instance, or the differentiation between intact and

disarticulated skeletons is indicative of a high degree of inequality in the Jericho community. Again, it is not clear which post-mortem treatment is a correlate of high status, but the distinction is so sharp that inequality is sustained; similarly, the differences between grave goods (metal vs pottery or beads) are compelling indicators of vertical social distinctions. Clear-cut levels of social stratification are difficult to establish, however, stratification is obvious in these contexts.

Even if different chronology, or the existence of different communities/groups - not necessarily ethnic - is suggested for the tomb groups of EB IV Jericho, sharp inequalities are still apparent. Access to metal production in these contexts attests to differential treatment among the various social groups at different times or within a single phase.

The analysis of the Tell Ajjul cemetery (Chapter 4, below) corroborates the Jericho evidence with regard to the manifestation of mortuary differentiation and social inequalities. Evidently, major structural change took place in EB IV southern Levant evident in both the disruption of the settlement record and the implementation of different burial programmes in which mortuary differentiation was vividly displayed.

4.14 The Cemetery of Bab edh Dhra: Analysis of Mortuary Variability

The site of Bab edh Dhra lies SE of the Dead Sea and includes a fortified city and a large cemetery. The site was discovered in 1924. but excavation only begun in 1965 under the direction of P.W. Lapp, on behalf of ASOR. Publication of the settlement is still pending, but preliminary information has been provided by Lapp (1965), and Schaub and Rast (1989).

The cemetery comprises a substantial disposal area surrounding the settlement. Preliminary reports on the cemetery excavations were published by Lapp (1965) while the final publication appeared recently (Schaub and Rast 1989).

The tombs on the site have provided an excellent chronological and cultural sequence for the early part of the EBA. The main corpus of published material includes the EB I tombs and the EB II-III charnel houses.

4.15 Data Quality Control Factors

In terms of publication standards Bab edh Dhra stands high although the anthropological information is still pending[20] A set of DQCF was developed for the cemetery, in order to exercise control over the Bab edh Bab edh dhra sample and keep consistency in the research design. According to this:

1) Registration numbers of the finds are repeated in the publication text, so an effort was made to keep the same numbers for cross-reference purposes. Like previous sites, decimal points were used to distinguish the finds (Chapter 4, *supra*).

2) Sherds are not included in this sample. An effort was made to record the least fragmentary vessels which could be thoroughly described.

3) Raw organic material such as wood remains or shell is not included in the sample. This class of finds has not been described, or assigned a registration number in the publication text. A note of their presence is kept separately.

4) A number of discrepancies are found in the publication, namely finds for which no description is provided, or identical figure numbers for different objects. Where these ambiguities cannot be resolved objects are not included in the sample.

5) Badly eroded shallow burials (e.g. EB IB burial A 13) are not recorded.

6) A small number of EB IV tombs has been published in a less detailed manner than the rest of the tombs. The EB IV sample was considered insufficient and, therefore, it was excluded from the present research.

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[20]However, see Bentley (1987) for a bio-archaeological analysis of the dental remains from the EB IA Bab edh Dhra tombs.

7) The tumuli discovered have not been included in the sample since their date is uncertain, and intrusive material has been found in them.

4.16 Chronology and Stratigraphy of Tomb Groups and Patterns of Tomb Use

There are three main tomb types at EBA Bab edh Dhra, single-chamber tombs, multi-chamber tombs and the characteristic charnel houses, which are in fact large rectangular mudbrick structures. The architecture of mortuary facilities on the site has provided a chronological framework in which to place this evolution. Collective/communal burial programmes are the norm throughout the early EBA; the number of interred individuals varies in the various phases.

During the EB IA (ca. 3150-3050 BC) at Bab edh Dhra, chamber tombs (n = 33) contain a relatively small number of individuals (n = 139); this amounts to an average of c. 4-5 individuals per tomb. Despite water seepage in the chambers and disarticulation of the skeletons, the internal phasing in the chambers is fairly easy to follow. There are instances of single burials in individual chambers, in which case internal stratigraphy has not been affected.

The EB IB phase (ca. 3050-2950 BC) marks the appearance of the first built tomb (Tomb 43); the tomb is a forerunner of the later charnel houses on the site. The bulk of charnel houses (n = 10) appears in the EB II-III phases (c. 2950-2300 BC).

The phasing of the charnel houses is seriously disturbed by a number of site formation processes, including natural disturbance, multi-stage burial, extensive period of use and intentional modification of the landscape to accommodate the new funerary facilities. Consequently, internal stratigraphy in these contexts does not provide a fine-grained chronology.

The main EBA phases represented at the site are the EB IA, which is represented by the majority of tombs from the cemetery (n = 33), the transitional EB IA-B which is

represented by one tomb (n = 1) containing a single adult inhumation, the EB IB represented by one built tomb (n = 1), the EB II represented by a few tombs (n = 2), the transitional EB II-III with the main phase charnel houses (n = 10) and the EB IV represented by two tombs (n = 10) excavated by Lapp's expedition (Lapp 1965) and another three tombs (n = 3) excavated by Schaub and Rast (1989).

Patterns of tomb use indicate that the EB I facilities were used for the burial of a small number of individuals who were members of a single family (Bentley 1987). With the advent of the EB II-III "urban" period, the mode of interment changes from communal to collective. Hundreds of deceased individuals are accommodated in the large charnel houses of the period. These burials are multiple and successive over a long period of time. Tomb use is further discussed in the following pages with regard to disarticulation practices in the EB IA chambers.

4.17 Analysis of Mortuary Variability
4.17.1 Biological and Demographic Information

There is extremely little to be said in this regard, since anthropological information is lacking in the publication. Moreover, the vast number of disarticulated burials has rendered any effort towards a reconstruction of the demographic structure at Bab edh Bab edh dhra extremely difficult.

Research undertaken on the EB IA dental remains from the tombs (Bentley 1987) has yielded a series of interesting results. First, the demographic size inferred for the EB IA population at Bab edh Dhra is substantial and may indicate a certain degree of permanency on the site. Second, the dental evidence from the tombs dating to both the EB IA and later phases indicates kin relations among the deceased individuals of each tomb. This is of crucial importance for the understanding of EB IA social structure since it points to kinship being the main functioning element of the society (Bentley 1987).

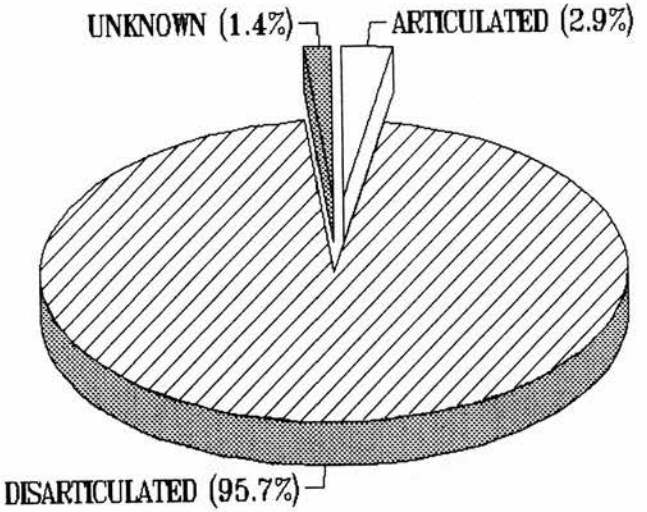
Corporate group structure is inferred throughout the EBA for Bab edh Dhra and the possibilities for a similar structure on other southern Levantine sites as well, are discussed (Bentley 1987: 241). Despite the fact that the information provided is extremely useful, it cannot be in any way tested against, or compared with, similar information from other contemporary burial sites in the sample.

4.17.2 Treatment of the Deceased and Methods of Disposal

The EB IA tombs (n = 33) on the site contain multiple disarticulated inhumations (n = 133) in their chambers. There are a few articulated inhumations (n = 4) interred either next to the disarticulated ones or in individual chambers, where information on their positioning and orientation can be derived. The position of another two (n = 2) is unknown (Fig. 16). Very few skeletons have been sexed. The evidence shows that both sexes, including children, were buried together in these family tombs.

Post-mortem treatment (disarticulation) is quite elaborate comprising the detachment of skulls and their subsequent arrangement around the central pile of long bones from the skeletons. The picture is eloquent in these domains due to the small number of inhumations. The preconceived arrangement of the skeletal remains points to a highly formal burial tradition requiring a certain amount of energy input on behalf of the burying group; it is associated with a "collective", "non-urban" idiom, "which promotes collectiveness by dismembering the individual" (Bentley 1987: 27-67). This is an important aspect for the interpretation of disarticulated burials; however, the EB IA Bab edh Dhra tombs are communal and not collective. The difference lies in the number of inhumations per tomb and the nature of the physical relationship among the individuals; the small tomb groups that may be described as single family tombs are defined here as communal. The large tombs that contain an enormous number of successive interments and can be described as extended

Fig. 16 BAB EDH DHRA EB IA
POST-MORTEM TREATMENT



family/clan tombs are defined as collective. The latter tombs have equal probability to accommodate non-kin individuals.

It must be noted that data related to pre-interment treatment and secondary burial comprises evidence for a significant part of the funeral process, which is usually not archaeologically visible; on the basis of the evidence for primary burial, it is impossible to assess time and energy spent for pre-interment ritual activity. However, in the case of disarticulated inhumations it is possible to gain some insights regarding this activity and actually assess a greater amount of energy flow for funeral purposes. Second, the relation between disarticulation and a non-urban situation, and the equation between collectiveness and non-urbanism may be ambiguous. Similar levels of corporate involvement are indicated in the EB II-III (urban phase) mortuary contexts which comprise collective tombs like in their EB IA communal counterparts.

The evidence for a small number of articulated skeletons in EB IA Bab edh Dhra tombs is far more problematic. Although articulated inhumations may be considered as indicative of higher status, grave associations and energy expenditure do not corroborate the view. Articulation must signify a different status-duty relationship between the specific individuals and the rest of the community. Whether this relationship entails vertical social distinctions is difficult to postulate before all aspects of mortuary variability are examined.

The transitional EB IA-B tomb has yielded one single adult inhumation (n = 1) in flexed position, oriented SE-NW with head to the south. The burial was accompanied by a PW jar, only. No comparative material from the site is available for this phase and, therefore, the burial stands alone for interpretation.

The EB IB built tomb has yielded four disarticulated adult individuals (n = 4) associated with beads and pendants made of imported materials. There is no new element regarding post-mortem treatment, however, the evolution of the new type of mortuary architecture points to change in the execution of burial programmes.

The EB II burials (n = 7) comprise multiple inhumations; the majority (n = 5) are now articulated burials associated with a wide variety of pottery vessels from both the FW and the PW categories. Here, there is a distinct change in post-mortem treatment patterns. Although most burial groups (n = 8) in the EB II-III charnel houses (n = 10) comprise disarticulated groups of individuals, it is the cumulative nature of these deposits that has rendered these skeletons disarticulated, rather than intentional post-mortem treatment. The number of the deceased per tomb cannot be estimated for the same reason.

The continuity in patterns of post-mortem treatment throughout the early part of the EBA and the first indications, in the EB II, for a replacement of the communal idiom by a collective one are indicative of significant changes in mortuary symbolism and ritual. Post-mortem treatment patterns indicate the emergence of different sets of social relationships between the members of EBA community at Bab edh Dhra, and hint at concomitant changes in the social structure.

No particular preference as to orientation or position is inferred from the few articulated inhumations. Similarly, both sexes and children are all interred in the same chamber tombs; built tombs contain mostly adult individuals.

4.17.3 Grave Equipment

There is a great degree of consistency in the small find repertoire of EBA tombs which includes artefacts mostly made of imported materials. Carnelian, alabaster, faience and lapis lazuli were the most common materials.

Already from the EB IA, there is evidence for long distance exchange and circulation of valuable materials. Carnelian and faience beads were found in the tombs and an interesting association between children's burials and certain materials is

revealed; children in EB IA tombs are consistently associated with beads made of carnelian, malachite and lapis lazuli (Fig. 17).

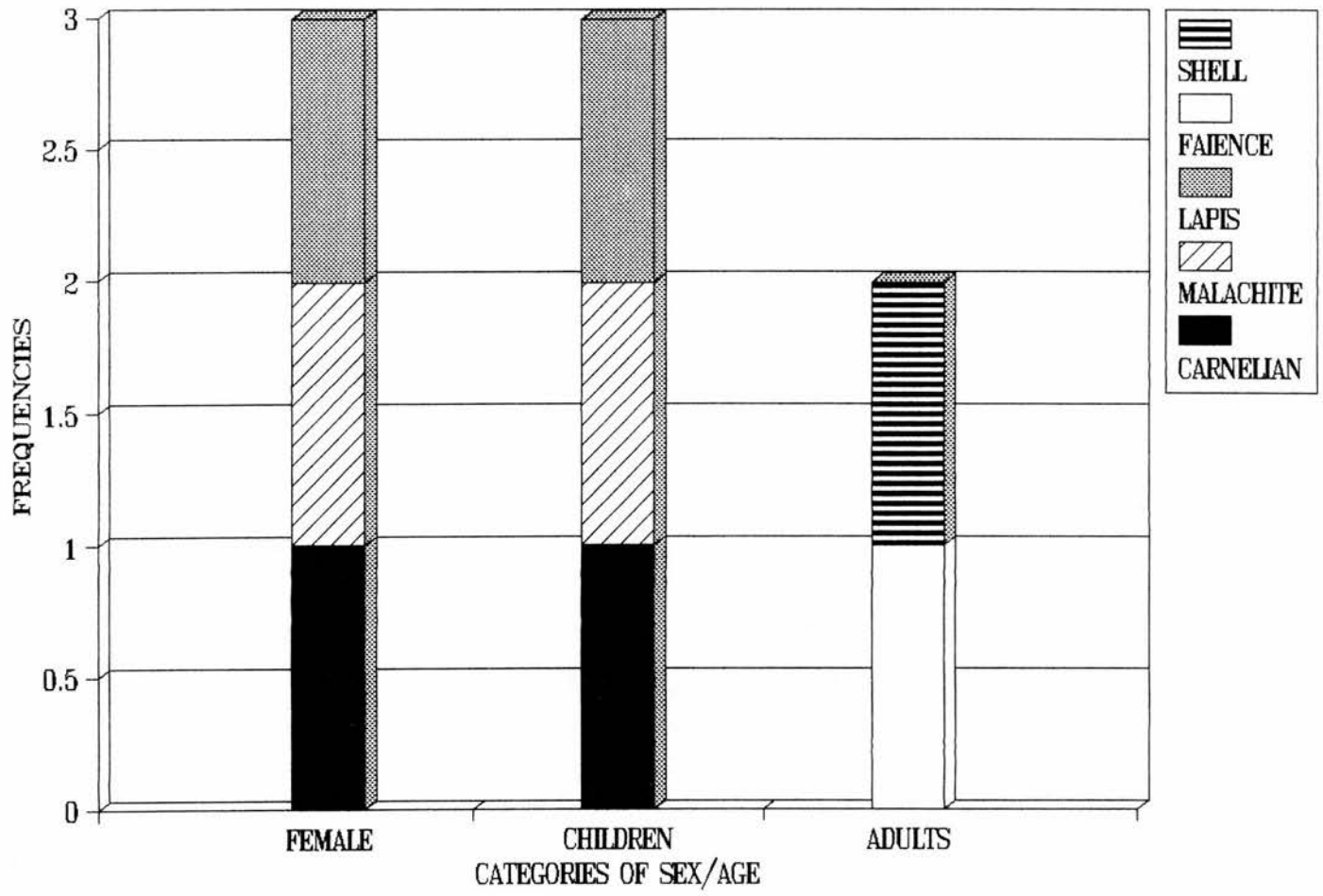
The standard EB IA non-ceramic equipment mainly consists of basalt bowls and beads almost exclusively made of imported raw material. Maceheads also occur in two EB IA tombs, manufactured in chalkstone. Another important point is that the only female skeleton identified in the publication is associated with beads made of exactly the same materials as children's beads, i.e carnelian, malachite and lapis lazuli. The association of children (and possibly females) with the specific materials while the adult population is only associated with faience and shell (Fig. 17) may be of significance with regard to gender distinctions. However, since the whole skeletal population sample has not been sexed, it would be premature to make any generalisations.

The general conclusion that can be drawn from the EB IA non-ceramic grave equipment is that it was highly standardised, comprising jewellery and basalt bowls as the standard grave equipment with the occasional deposition of other items, like maceheads, in the burial domain. No significant differences in the quantity of these items were observed, apart from the associations discussed above.

The EB IB tomb on the site yielded beads and pendants associated with four (n=4) adult disarticulated inhumations. Beads were made of bone, shell, faience and crystal, whereas the pendants were manufactured in mother-of-pearl and alabaster/limestone, respectively.

The artefactual repertoire does not present a great degree of variety apart from the occasional occurrence of maceheads, which, although considered as indicative of Egyptian influence (David 1982), have their predecessors in the Chalcolithic of the southern Levant. Apparently, the grave equipment comprised a standard kit throughout the EB IA, and the persistence of the same type of equipment must be considered as indicative of both the formality of burial programmes and continuity of burial traditions.

Fig. 17 BAB EDH DHRA EB IA
SEX/AGE GRAVE GOODS ASSOCIATIONS



The examination of the ceramic repertoire in the EB IA tombs reveals a certain variation in patterns of deposition. With regard to the FW category, there is a marked individualism in vessel types accompanying multiple inhumations of disarticulated adults (Fig. 18). Each tomb has yielded an almost entirely different group of vessels, including composite forms like kernoi. In the PW category, there is a marked uniformity in pottery types deposited in the tombs; in all cases, they are either jars, or juglets.

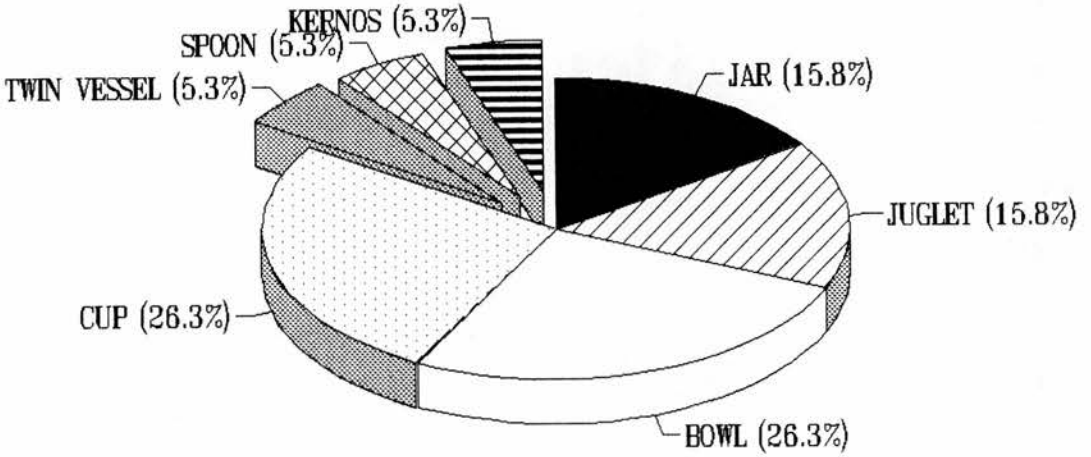
Multiple inhumations of disarticulated children in EB IA tombs are associated with smaller amounts of ceramics, which presented a greater degree of uniformity. FW types included bowls and cups, whereas PW types consisted entirely of jars and juglets as in the adult domains.

There are several conclusions that can be derived from the study of ceramic associations in EB IA tombs. First, it is evident that the FW category contains a variety of ceramic forms, as opposed to the PW category which presents a very limited, rather standardised repertoire of jars and juglets. It may be inferred that the latter category comprises the main household items that were deposited in the tombs, whereas the FW comprises the most elaborate part of EB IA pottery production. Second, items that could be considered as vessels of daily use, like bowls and cups, always occur in the FW category. Jars and juglets occur in the FW category only when associated with a specific burial type (multiple inhumations of disarticulated adults), a fact that distinguishes them from their counterparts in the PW category.

Information for the EB II-III grave equipment derives from the built tombs (charnel houses) on the site. These tombs have yielded an abundance of material. There are ten such tombs in total (n = 10), three (n = 3) of them dated to the earlier part of the EBA, the EB IA (Tomb 84) and the EB IB (Tombs 8 and 53). The rest of the tombs date to the main phase EB II-III.

Built tomb 84 has yielded no artefacts, however three PW vessels (n = 3) were found in it. Tombs 8 and 53 have produced a number of artefacts, such as faience

Fig. 18 BAB EDH DHRA EB IA
FW POTTERY FREQUENCIES



jewellery, one copper point (n = 1) and even one silver pin (n = 1). The pottery repertoire consists of jugs, juglets, LGW jars, carinated platters, saucers, cups and spouted vessels. The majority of pots belong to the FW category. The charnel house ceramic repertoire is clearly distinct in both the quantity and range of wares and shapes (Fig. 19).

The rest of finds (Fig. 20) are made of mainly imported materials, such as ostrich shell, carnelian, crystal, alabaster, lapis lazuli, faience, copper and even gold (tomb 41). The majority of finds are bead groups (n = 35), however, the first occurrences of metal weapons (n = 13) are noted in these contexts. Two crescentic axeheads were found in tombs 44 and 51 (n = 2), some dagger blades (n = 4) (tombs 41 and 51) and a couple of knives (n = 2) (tomb 51). There is continuity from the earlier part of the EBA in patterns of jewellery deposition. Items like the maceheads and the basalt bowls continue to appear in these contexts but are now fewer.

Variation among the charnel houses in terms of grave equipment is noted, but not easy to assess. The most striking context is Tomb 51 with an abundance of artefacts and pottery, including pithoid jars and jugs of all types. The majority of ceramic vessels are juglets.

It is worth noting the deposition of metal weapons in these contexts as the new element clearly associated with the evolution of charnel house architecture. The rest of the material culture from these tombs, demonstrates a continuity from the earlier phases and a persistence in the execution of traditional burial programmes.

4.17.4 Spatial Arrangement

Intentional spatial arrangement of the skeletons in EB I tombs is revealed through the re-ordering of bones in the chambers. This pattern of major cultural significance is not apparent in many cemeteries with disarticulated skeletons; often, site formation

Fig. 20 BAB EDH DHRA EBII–III
CHARNEL HOUSE EQUIPMENT FREQUENCIES

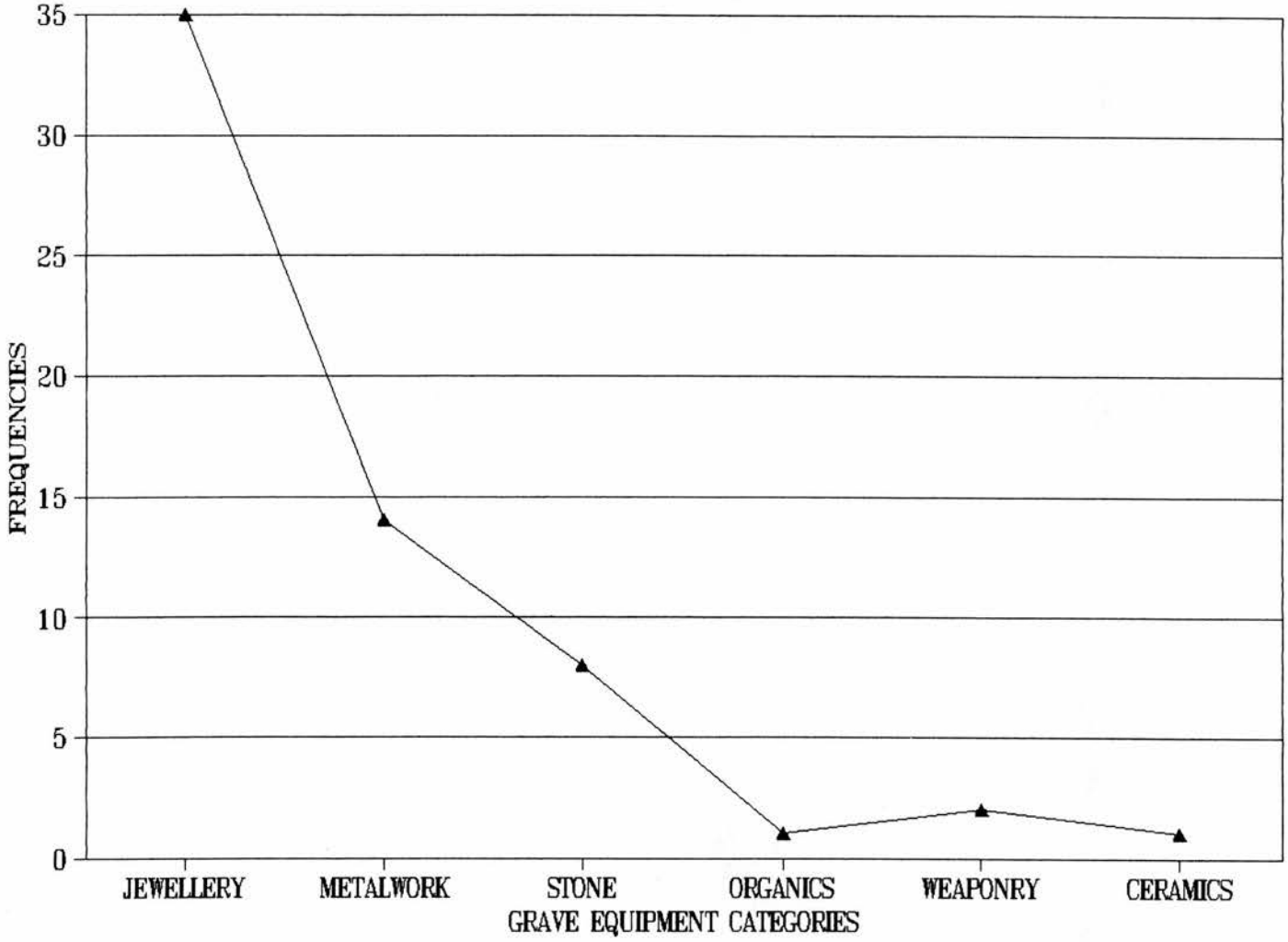
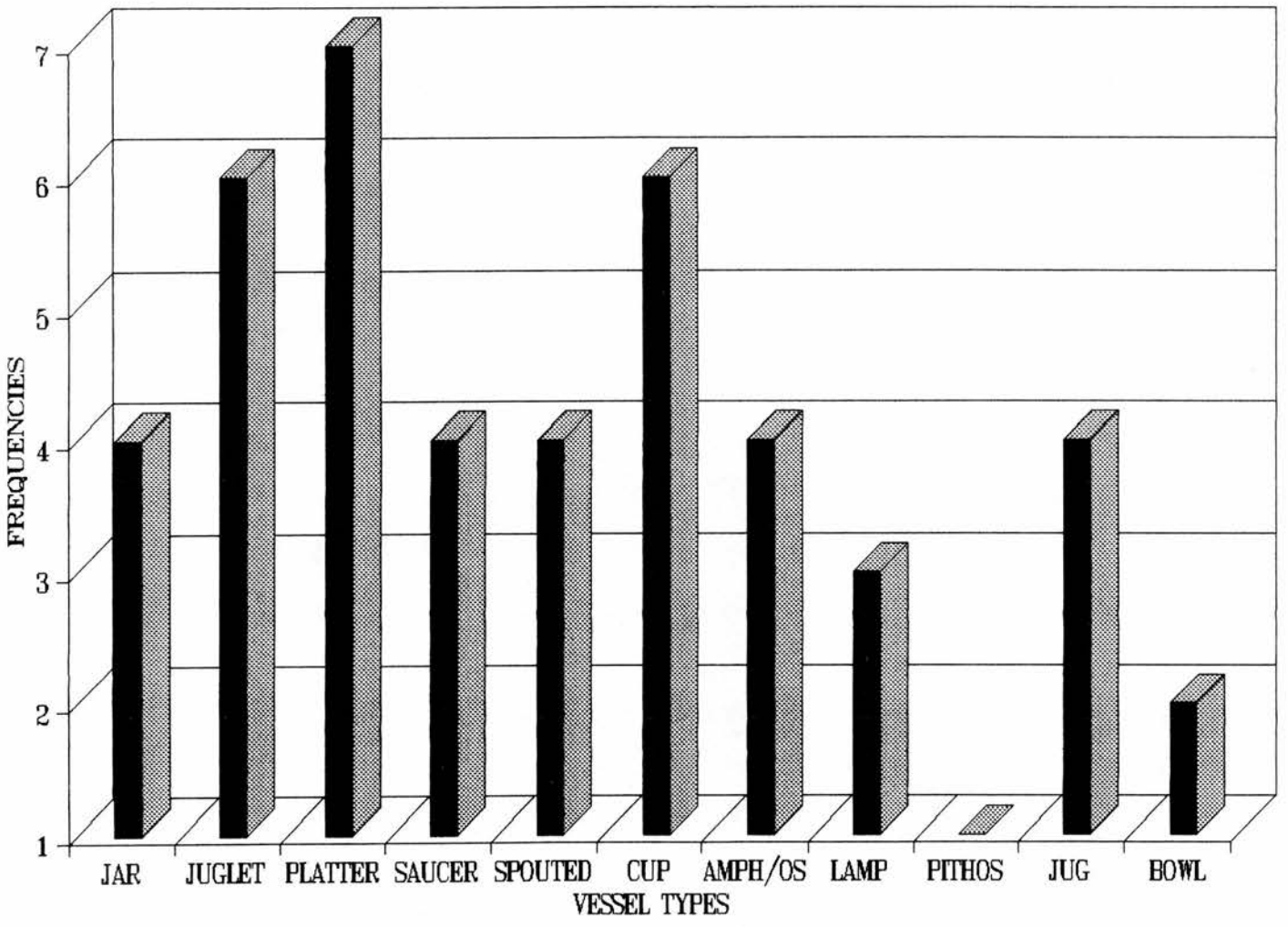


Fig. 19 BAB EDH DHRA EBII-III
CHARNEL HOUSE POTTERY FREQUENCIES



processes do not allow for a detailed examination of this aspect of mortuary symbolic expression.

The majority of tombs of all types were excavated in cemetery A at Bab edh Dhra. Fewer tombs were investigated in cemeteries C and D. There seems to be no significance in the spatial distribution of tomb types, pottery or other artefacts between the main two cemeteries. However, there is a distinct differentiation in the ceramic typology uncovered in each area during EB IA, considered as representing two contemporary but different communal groups (Schaub and Rast 1989: 554-556). During subsequent phases (EB II-III) the spatial distribution of charnel house clusters does not seem to bear any significance with regard to mortuary differentiation.

4.17.5 Description of Mortuary Facilities: Tomb Typology and Energy Expenditure Measures

In terms of energy expenditure, most EB I tombs seem to be relatively small. They can be characterised as family, rather than clan tombs. Out of thirty-three (n = 33) chamber tombs of that period, the majority (n = 23) have dimensions that do not exceed 2m in chamber length and width. Only three (n = 3) tombs exceed these measurements; measurement data are not available for another five (n = 5) of the EB I tombs at Bab edh Dhra. Labour expenditure seems to be related to the number of the deceased.

Energy flow has been generously spent over the construction of the rectangular mudbrick tombs (n = 10) of the EB II-III. These tombs are unique in terms of mortuary architecture, and their evolution on the specific site can be closely monitored from their incipient stage (EB IB) down to the main phase charnel houses. They usually have monumental dimensions and the largest of all, Tomb 51 measures 11.60 x 5.75m. Their roofs have collapsed and their exact height is unknown.

Of all the charnel houses, tomb 51, seems to be the most "expensive" tomb when all aspects of variability are taken into account. It is the largest facility in Bab edh Dhra

and displays the greatest amount of funerary equipment, featuring some new elements such as the metal weapons. In terms of ceramic equipment, it is the only tomb that has yielded pithoid jars, which now appear for the first time; also the whole range of jugs and juglets representative of this period is present in the tomb. A granite macehead was also excavated. Although, status distinctions are difficult to assess, Tomb 51 stands out as the "richest" burial domain in EB II-III Bab edh Dhra.

Mortuary differentiation on the basis of energy expenditure cannot be assessed for Bab edh Dhra, and therefore, this variable is not considered in the analysis. Energy flow is apparently related to the number of the deceased and not to any status distinctions.

4.18 Patterns of Mortuary Differentiation at Bab edh Dhra

On the basis of the data available for the EB IA tombs, mortuary differentiation is expressed in one variable, that of post-mortem treatment. The disarticulated individuals designate a different status to the articulated ones. Status, in this context is probably horizontal and rather relates to different communal or kin groups, or even to sex distinctions which, however, cannot be verified.

The standardisation in the grave good kit interred with these skeletons is indicative of the formality of burial programmes. No internal distinction can be observed in these contexts, a fact that hints at some kind of levelling mechanism in operation in order to efface any differences that might have existed in the living community.

A second observation is the association between children's burials and specific materials, namely carnelian, malachite and lapis lazuli. The sample of children's burials is very small in comparison to adult inhumations. However, all four children in EB IA tombs were associated with beads made of the specific materials. The only female

skeleton in the sample, although associated with the same materials, does not provide conclusive evidence; child associations are far safer to postulate.

Third, pottery typology varies enormously in comparison to the rest of the artefactual repertoire; almost every EB IA tomb has yielded a different group of shapes and types of vessels in the FW class, which comprises the majority in these contexts. PW ceramics are always jars and juglets. This distinct variation in patterns of pottery deposition is not observed in other classes of artefacts; pottery, for some reason, does not seem to be subject to rigid mortuary ritual rules apparently valid for other classes of equipment. Children's burials and the female interment of Tomb 83 were accompanied by both FW and PW vessels which, however, presented a much greater degree of uniformity, i.e they were always bowls, cups, jars and juglets.

On the grounds of the above observations it seems that an effort was made to minimise differentiation and portray all deceased individuals in a similar manner. Minimal differentiation in terms of post-mortem treatment and patterns of artefact deposition seem to be related to horizontal distinctions in the community; no variable points to vertical social distinctions. This conclusion is well in accordance with the description of these contexts as communal tombs of biologically related individuals (Bentley 1987).

The advent of a new type of mortuary architecture, the charnel house, marks the beginning of the EB II-III period in the cemetery and the commencement of permanent, urban life in the settlement (Schaub and Rast 1989). These large and expensive tombs were used for multi-stage, collective burial programmes. Masses of pottery and artefacts were deposited in these contexts. Grave goods include the same range of artefacts as in the earlier phase, however, with a new element, the metal weapon. The association of this type of burial facility with metal deposition becomes evident by the presence of one copper point (n = 1) in the earliest built tomb on the site, EB IB Tomb 8. All but two built

tombs of the main phase (EB II-III) contained metal weapons and two of them yielded the characteristic crescentic axeheads.

Other classes of finds include jewellery, made of a variety of local and imported materials, stone palettes reminiscent of their Egyptian counterparts, and pendants. The large corpus of pottery from the built tombs includes all the known wares and types pertaining during this phase. A number of new shapes appear now for the first time, like the amphoriskoi, and some older shapes like the narrow-necked juglets now become more common. Pithoid jars, probably used for large scale storage, were found only in built tomb 51, where a number of innovative features occur in association.

It is important to consider the pithoid jars excavated in tomb 51, since these are the only vessels that bear evidence for large scale storage. This tomb seems to have been used to accommodate some kind of surplus since, on one hand, it is the only tomb that yielded storage vessels, and on the other, it is the only tomb that yielded such an amount and range of artefacts.

If the built tombs are to be interpreted in some manner, the interpretation should encompass several parameters: a) that this type of mortuary facility was the only one in use during these phases that we know of, and b) that no individual associations between skeletons and finds can be derived due to the cumulative nature of the deposits. Therefore, any social differentiation, horizontal or vertical, that may have existed is not visible. These were probably large collective tombs used by all segments of the society and at the same time, they might have been used as repositories of surplus by a society that had already proceeded to an urban level. Thus, an association between collective interment and increasing sociopolitical complexity may be suggested.

Multi-stage burial programmes associated with an urban idiom are evident in both Bab edh Dhra and Jericho. However, since no marked differentiation can be established for these tombs either, it is reasonable to maintain that similar mechanisms of equality observed during the EB IA are in operation, reflecting an ideal picture of a

society with a strong collective element in its structure. That is not to say that the society was actually functioning on that basis in terms of social organisation, but that the ideal portrayal of it (the social structure), as assessed from the tombs, can be described as such.

To reiterate, mortuary differentiation on the basis of at least two variables can be assessed in the EBA tombs at Bab edh Dhra. These variables change with time; during the early phases of the EBA, post-mortem treatment determines the parameters of differentiation in the burial domain. In subsequent periods, energy expenditure and grave equipment are associated to provide measures of differentiation. Throughout this process, there is constant control over the expression of mortuary variation, evident in the standardised and formal implementation of burial programmes. The evolution of a new type of funerary architecture during the EB II-III, associated with metalwork consumption, attests to socio-economic development epitomised in the changing forms of mortuary ritual.

It may be suggested that there are, at least, two archaeological correlates of increasing complexity in the EB II-III tomb contexts of the southern Levant. One is collective burial; the other is increasing artefact consumption. The first points to change in the structure of funerary ritual, while the second indicates the creation of surplus that needs to be controlled through mechanisms of consumption.

4.19 The Cemetery of Tell Ajjul: Analysis of Mortuary Variability

The site of Tell Ajjul lies SW of Gaza. When Petrie excavated the site (Petrie 1931) he concluded that Tell Ajjul was in fact ancient Gaza. Early settlement occupation of the Chalcolithic and EBA periods was not found on the site. However, two large cemeteries of the so-called "Copper Age" (*Ancient Gaza I* and *II*, 1931) were excavated

by the British Expedition. Both cemeteries are now said to date to the EB IV (Kenyon 1956) and indeed the finds they have yielded corroborate the chronology.

Settlement and mortuary remains have been uncovered from the later part of the Bronze Age. For the purposes of the present thesis only the EB IV sample has been isolated. The EB IV cemeteries, known as areas 1500 and 100-200 respectively lie east and west of the mound.

4.20 Data Quality Control Factors

The publication of the EB IV cemeteries at Tell Ajjul comprises one of the oldest publications in the thesis sample. The inclusion of the particular site was determined by, mainly, regional factors since the site is situated in the southernmost part of the Levant.

Problems regarding the original publication were numerous. The re-publication of the tombs by Kenyon (1956) was employed in the present research. The bulk of discrepancies and problems is dealt with as follows:

1) Every tomb is recorded after careful cross-reference between the two publications.

2) Tombs which do not contain any human remains are not included even when grave goods are found in them.

3) Some pottery is not illustrated by Petrie (1931), or described by Kenyon (1956), and consequently the ware and general ceramic treatment are unknown. These vessels are not included in the sample.

4) Anthropological data regarding age and sex do not exist in either publication.

5) Although tombs were denuded to a large extent it seems that most, or even all, of the so-called "disturbed" burials (Kenyon 1956), were originally disarticulated and deposited in bone piles.

6) Tomb type L 14 (Kenyon 1956), although mentioned in Kenyon's publication is not described.

7) Individual pottery vessels have been assigned to different types by each of the two authors and, therefore, cross-reference has proved extremely difficult. When these vessels are illustrated, a safer assessment of their ware can be made.

8) Dimensions of all tombs were given by Petrie in inches and subsequently converted to metres in order to keep consistency in the author's research.

9)Individual discrepancies between the two publications are noted, for example tombs which are missing from Petrie's or Kenyon's, or both publications. These tombs are simply not included in the sample. An overall assessment of both pieces of work shows that the deficiency in Petrie's publication was followed by a less deficient, but still inadequate, re-publication by Kenyon mainly due to Petrie's original recording methods.

4.21 Chronology and Stratigraphy of Tomb Groups and Patterns of Tomb Use.

Both areas in the cemetery have yielded EB IV material, however, deposits were very disturbed by natural causes such as water denudation. Disarticulation practices further obscured the skeletal population sample.

The main issue related to the chronology of the tomb groups at Tell Ajjul is whether the two areas in the cemetery belong to different dates; on the basis of ceramic and artefactual chronology it seems that both areas were in use during the same period. Thus, they provide a single-period sample of tombs. Their internal stratigraphy was seriously disturbed and consequently, patterns of burial treatment were often difficult to assess. The re-examination of the data by Kenyon (1956) provided reconfirmation of the chronology and information on tomb typology and post-mortem treatment.

4.22 Analysis of Mortuary Variability
4.22.1 Biological and Demographic Information

Due to the complete lack of anthropological data biological and demographic evidence is missing. The only relevant piece of information derives from the association between the extent of the cemetery and its mortuary population, and the tell evidence, which is virtually non-existent. This corroborates the argument that during the EB IV settlement occupation was sparse or absent at the Tell Ajjul excavated area, as on other EB IV sites.

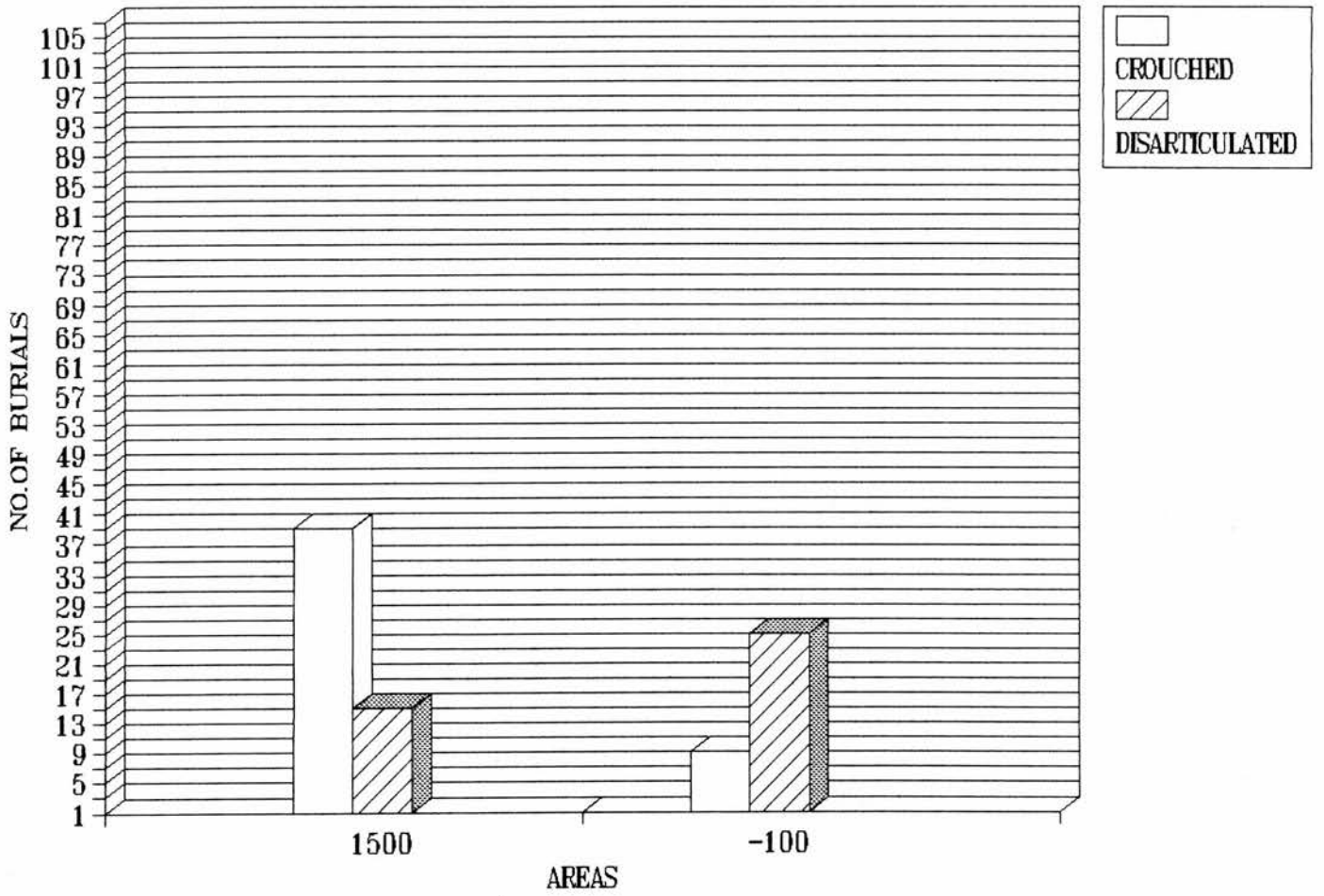
4.22.2 Treatment of the Deceased and Methods of Disposal

Information related to post-mortem treatment and pre-interment practices is indicated in the disarticulation of several burials on the site. On the basis of the data there are some marked differences in patterns of post-mortem treatment between the two areas of the cemetery.

There is a total of 105 (n = 105) inhumations from Tell Ajjul (Fig. 21). Area 1500 contains 48 burials (n = 48), whereas area 100-200 contains 57 inhumations (n = 57). The majority of skeletons (n = 39) in area 1500 are intact, in crouched position, aligned E-W (n = 28) with head to north. They are all single burials. The majority of burials in area 100-200 are disarticulated skeletons (n = 25). Some of the articulated, crouched burials (n = 15) are aligned E-W (n = 5) with head to north. They comprise single burials like in area 1500.

There is a distinct pattern of post-mortem treatment discerning between the two areas of the cemetery . As in the case of EB IV Jericho where different treatment was associated with different burial and spatial domains, post-mortem treatment at Tell Ajjul has a definite spatial correlate. The validity of this information is demonstrated when all other aspects of mortuary variability are examined.

Fig. 21 TELL AJJUL EB IV
POST-MORTEM TREATMENT



4.22.3 Grave Equipment

The standard grave good furnishings consist of PW pottery, jewellery (mainly beads) and metalwork (copper daggers). An interesting pattern emerges when the information on grave goods is examined spatially. The vast majority of finds from area 1500 are copper daggers (n=19) associated with single intact skeletons in crouched position (Fig. 22). Two bead groups (n=2) of unknown material and two (n=2) stone rings were also found. In area 100-200 the majority of skeletons are accompanied by PW pottery (n=28). Only one inhumation (n=1) was found with a copper dagger, and another two (n=2) with a stone ring and some beads.

In terms of pottery equipment, area 1500 shows that usually only the articulated skeletons were accompanied by ceramic vessels, mostly PW (n=25), whereas the disarticulated ones were only occasionally found associated with ceramics (n=6) (Fig. 23). Area 100-200 demonstrates that the disarticulated burials (the majority) were mostly accompanied by pottery vessels (n=28) (Fig. 24).

4.22.4 Spatial Arrangement

The spatial aspect of mortuary differentiation is best exemplified in this cemetery. Areas 1500 and 100-200 display distinct differences in all dimensions of funerary variability, including the last variable, energy flow, which is examined in the next section.

This pattern of spatial differentiation, though an evident one, is not as clear-cut, since both types of post-mortem treatment are represented in both cemeteries and there are, even sporadic, occurrences of grave goods that are clearly associated with each of them. Differences seem to cross-cut the two areas and this renders its interpretation more complicated.

Fig. 22 TELL AJJUL AREA 1500
POST-MORTEM TREATMENT ASSOCIATIONS

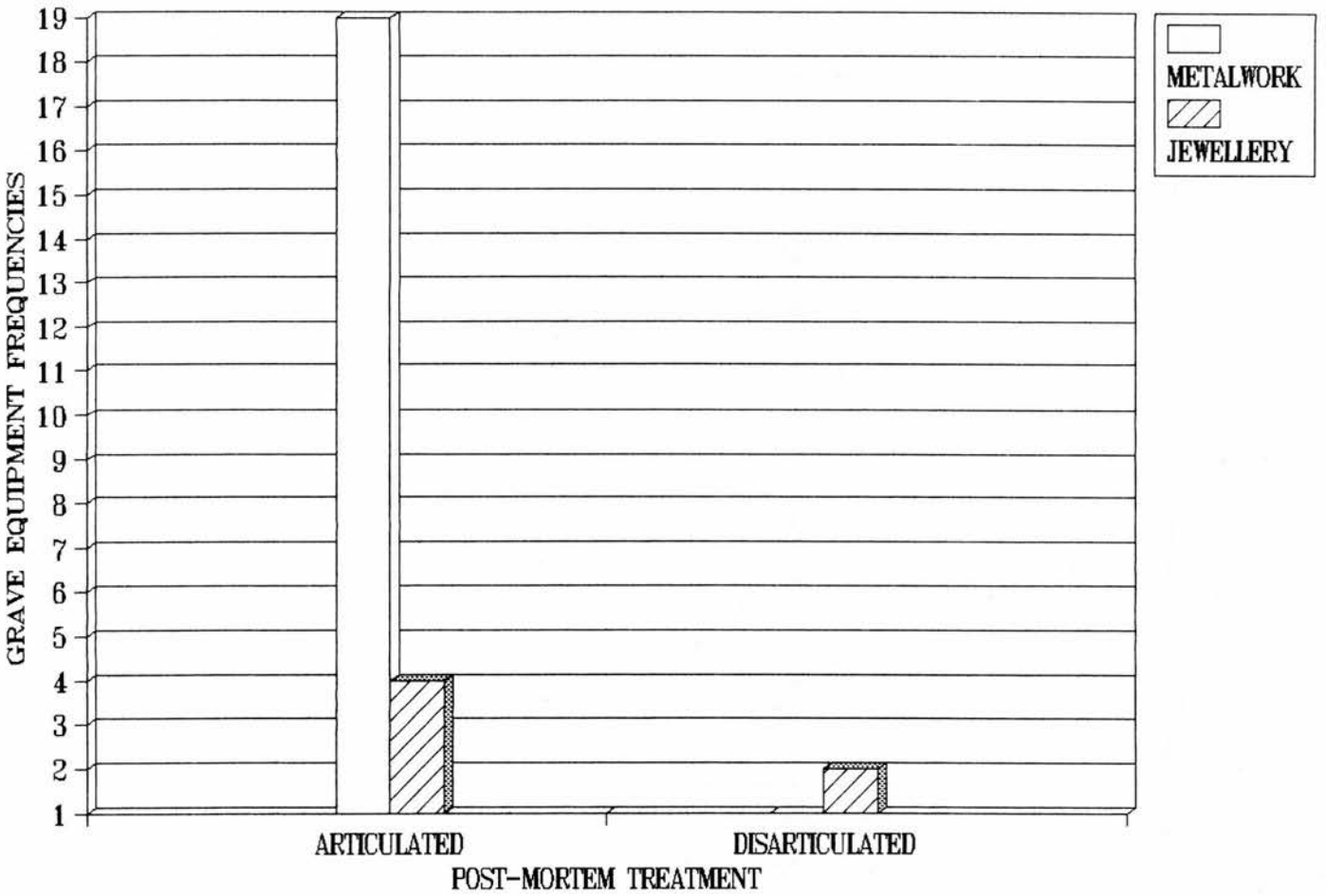


Fig. 24 TELL AJJUL AREA 100-200
POST-MORTEM TREATMENT ASSOCIATIONS

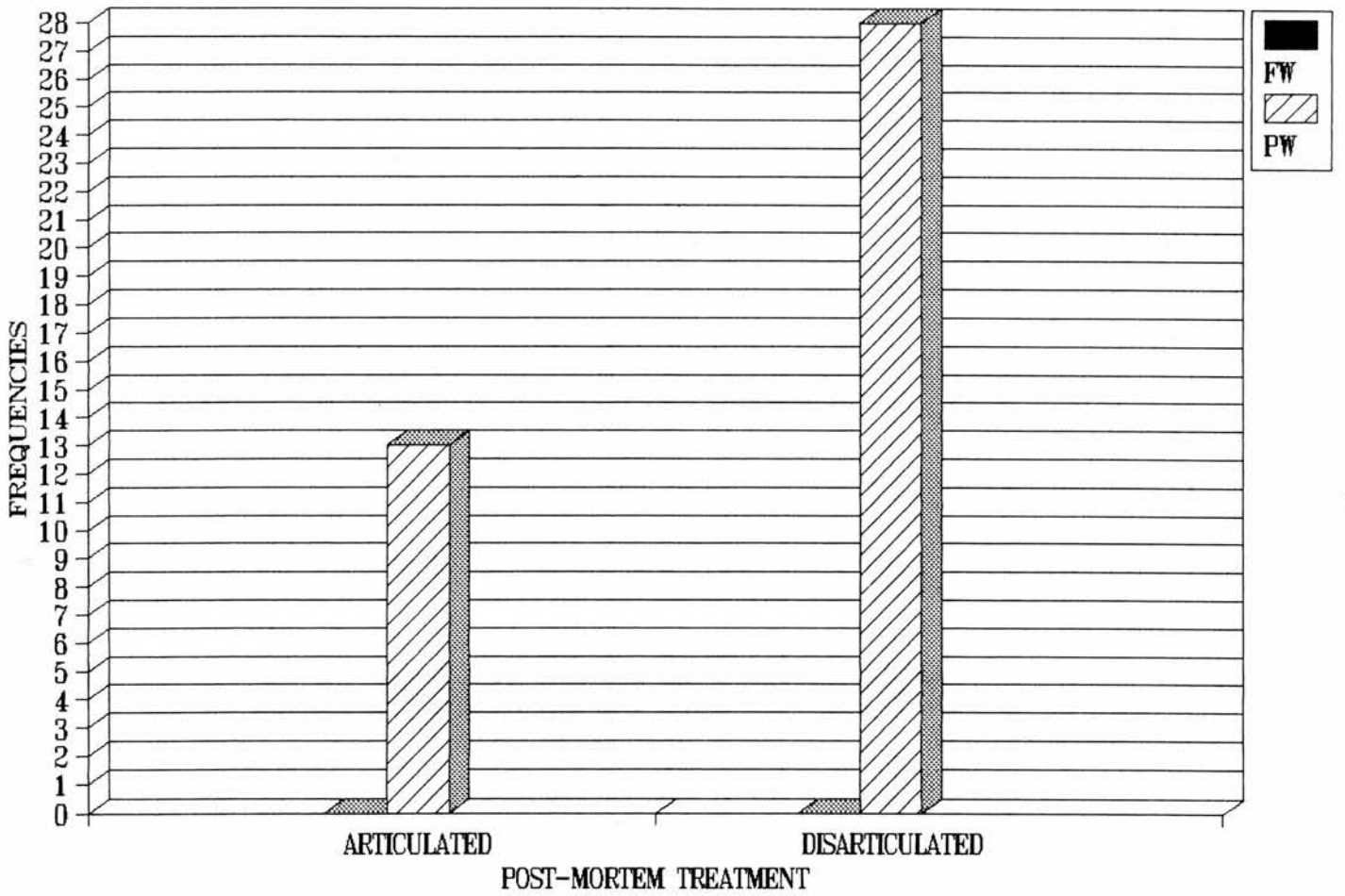
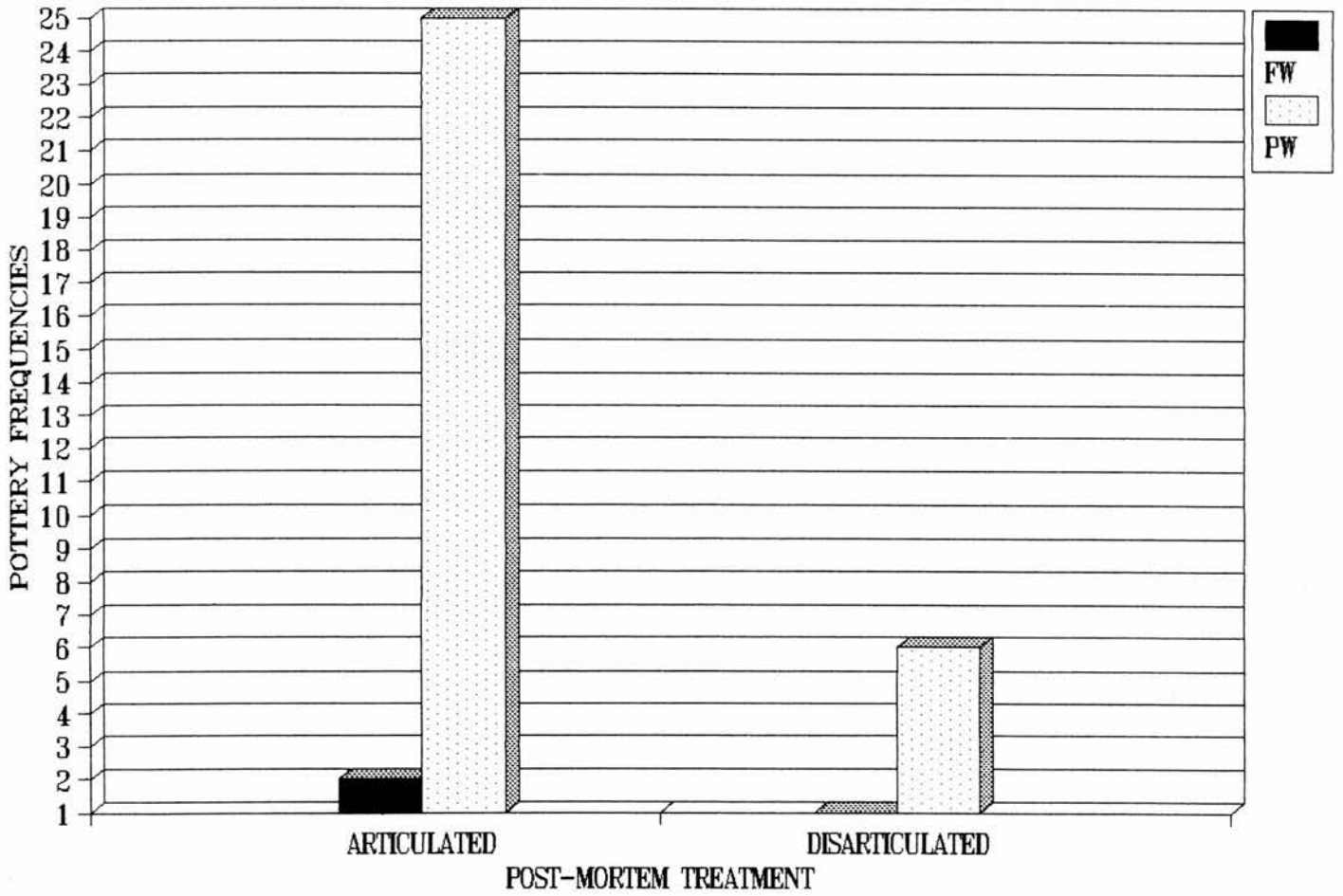


Fig. 23 TELL AJJUL AREA 1500
POST-MORTEM TREATMENT ASSOCIATIONS



What is noteworthy is the fact that the spatial element is employed on top of all other variables to emphasise differentiation in the specific contexts. Whether this differentiation was horizontal or vertical is almost impossible to assess because the anthropological data is lacking; nevertheless, the distribution of metal between the two areas is a compelling indicator of sharp inequality among the deceased. As in the case of EB IV Jericho spatial distributions of post-mortem treatment and grave equipment points to distinct burial programmes that serve to emphasise differentiation in these domains.

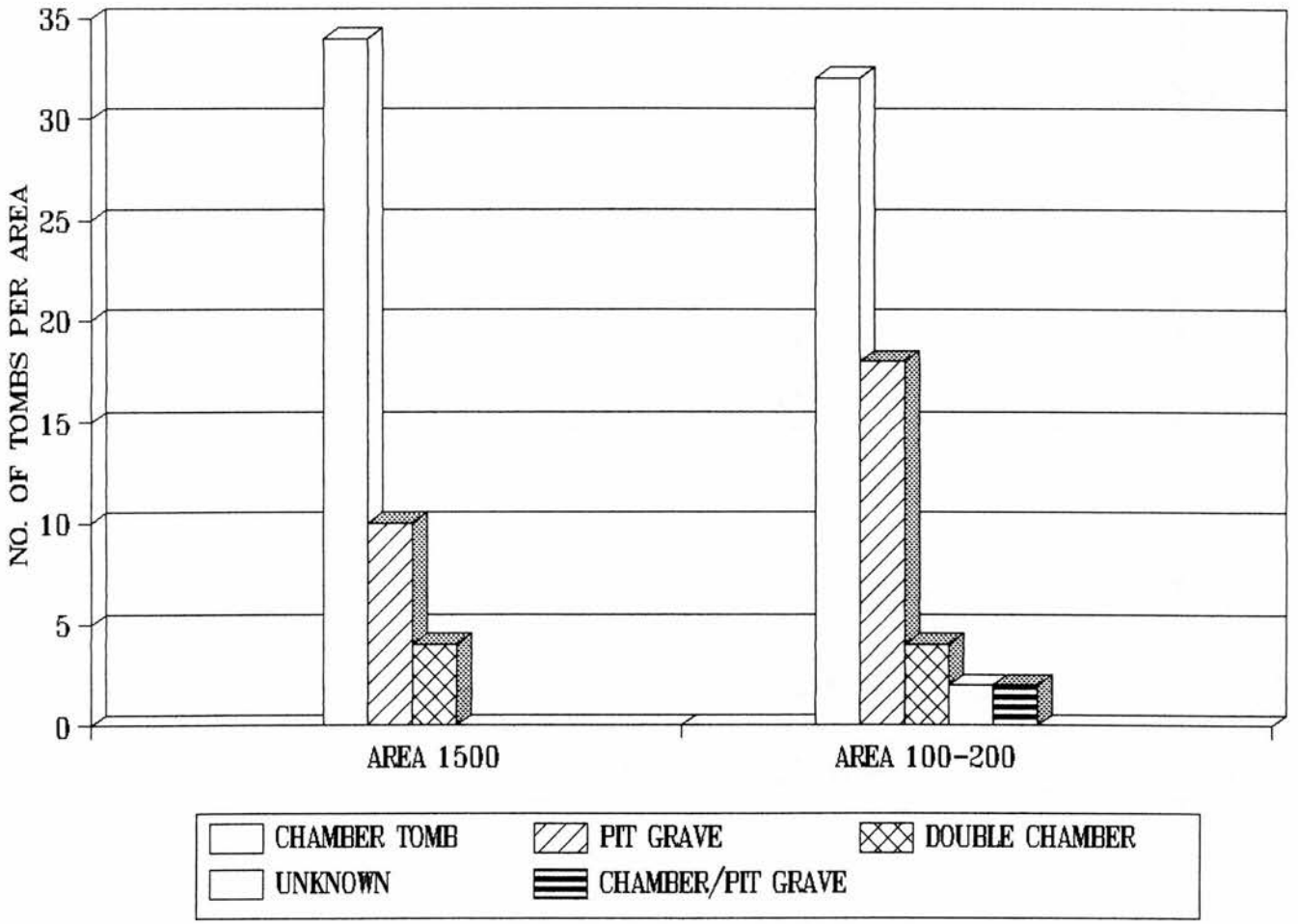
4.22.5 Description of Mortuary Facilities: Tomb Typology and Energy Expenditure Measures

There are three different tomb types excavated in area 1500 of the Tell Ajjul cemetery. These are, simple pit graves (type 2), built tombs (type 5) and chamber tombs (type 4). In area 100-200, only pit graves and chamber tombs were excavated (Fig. 25).

In terms of relative energy flow area 1500 type 5 tombs are the smaller facilities used. Types 2 and 4 have dimensions that exceed 1.50m. An interesting contrast appears when area 100-200 tombs are examined; both tomb types in this area have considerable dimensions and when the two areas are compared it is shown that area 100-200 tombs were more "expensive" in terms of labour spent over their construction. Energy expenditure measures, therefore, do not point to the same kind of differentiation established by the other variables.

The dagger burials occur solely in chamber tombs, thus pointing to a possible association between this type of interment and specific mortuary architecture. In view of the quantity and quality of grave equipment area 100-200 may be characterised as a "poorer" cemetery despite the fact that measures of energy flow do not support this view.

Fig. 25 TELL AJJUL EB IV
SPATIAL DISTRIBUTION OF TOMB TYPES



4.23 Patterns of Mortuary Differentiation at Tell Ajjul

The examination of mortuary variability on the site, shows a predominant pattern of differentiation expressed in spatial terms. There are several parameters to be considered before any clear-cut distinction between a "rich" and a "poor" disposal area are made.

First, it is important to remember that sex and age data is lacking for both areas. Second, the two patterns of post-mortem treatment observed in both areas have to be interpreted using the evidence from other EB IV cemeteries in the southern Levant. Third, the variety of mortuary architecture employed for these burials is noteworthy, particularly since most EB IV burial sites contain only chamber tombs.

Other points worth considering are the contrasting evidence derived from energy flow measures and the cross-cutting of post-mortem treatment, grave equipment and tomb types in both areas of the cemetery. These features are present to a greater or lesser degree in both areas. The interpretation of the particular cemetery, therefore, involves several aspects which merit consideration. Tell Ajjul, like most EB IV cemeteries in the region displays the new elements of the era, namely the metalwork tombs containing single inhumations. It is a far reaching conclusion to maintain an association between males and metal weapons since no sex data exists.

Patterns of mortuary differentiation point to the formality of EB IV burial programmes at Tell Ajjul and the intentional expression of differentiation in mortuary domains. Like EB IV Jericho, Tell Ajjul bears evidence for sharp distinctions which call for an interpretation that goes beyond the dichotomies of rich/poor burials and seeks to explain the reasons behind such a marked change in mortuary symbolism and ritual.

4.24 The Emergence of Complex Society in southern Levant

In this section of the chapter an effort is made to monitor the rise of complex society in the southern Levant through the manifestation of this process in the mortuary

record. The theoretical context of this discussion includes several parameters related to the interpretation of exclusively burial data to detect sociopolitical development and change. The most crucial constraint imposed upon the manipulation of such data is the highly symbolic nature of the funerary remains.

The evidence for mortuary differentiation has been long considered to comprise an important archaeological correlate of social complexity, however, this correlation is not a direct one; it is related to changing rules of mortuary ritual and symbolic expression that reflect the ideal social order, rather than daily sociopolitical organisation and interaction (e.g. Pader 1982; Morris 1987; Keswani 1989).

Patterns of mortuary differentiation, therefore, are filtered through this ideal social order and their meaningful intepretation depends upon the flexibility of the research design to provide alternative sets of correlates for complexity. As such, the manifestation of differentiation in burial domains is subject to rules and regulations determined by the burying group, i.e the living community. The display of equal/unequal treatment in all aspects of mortuary variability comprises a conspicuous expression on behalf of the society to portray the social personae of its deceased population. Mortuary variability is, foremost, a highly artificial expression of the social order. The funerary evidence from EBA southern Levant is tested against this theoretical perspective in order to provide insights into the evolution of socioeconomic and political organisation and rising complexity.

There are several issues to consider with regard to the trajectory of social evolution in the southern Levant. One is the rise of urban culture and increased complexity as a result of foreign, versus indigenous development (Joffe 1991: 3). Second is the notion of fluctuations in social complexity attested for the southern Levant during the third millenium BC (Joffe 1991: 5; Baxevani 1992). The archaeological record of the area exhibits discontinuities which point to cycles of collapsing and rising complexity that need to be explained. With particular regard to the burial record, a fluctuating pattern

of complexity is evident in the changing patterns of mortuary ritual. The final issue is related to the re-emergence of urban societies in MBA southern Levant and the beginnings of international economic and political interconnections in the East Mediterranean region.

With regard to the first point, there is a wide literature dealing with the discontinuities between the Chalcolithic and the EBA and the trajectories of transition from a village-level, small-scale society to one of increasing integration and complexity (e.g. Esse 1991; Joffe 1991). Some scholars maintain that the evolutionary trajectory of southern Levant was determined by the qualitative re-organisation of the society as early as the EB I, which is considered as the key to understanding later developments (Joffe 1991).

The archaeological evidence points to a variety of settlement agglomerations in different parts of the southern Levant; in the south for instance, evidence for settlement occupation includes Chalcolithic elements (see Lachish Area 15600, Tell el Hesi, Azor Installation C, in Joffe 1991: 13) and indicates Egyptian influence. At Bab edh Dhra, the EB IA phase comprises ephemeral occupation (Schaub and Rast 1989: 554). In the north, reduction in settlement size and number of settlements is noted (Joffe 1991: 13-15).

The mortuary record consists of chamber tombs used for the inhumation of several individuals accompanied by a highly standardised equipment. The examination of mortuary variability on EB IA Bab edh Dhra indicates differentiation on the basis of post-mortem treatment. However, in terms of other variables, no significant differentiation can be postulated. Burial data from this particular site point to kin, or lineage-based social units (Bentley 1987; Joffe 1991) which were clearly resistant to social distinctions; patterns of grave equipment deposition present a high degree of similarity and formality, thus indicating a conscious effort to eliminate differentiation.

The later part of the EB I (EB IB), is characterised by higher levels of societal organisation evident in the expanded settlement pattern of the southern Levant (Joffe

1991). Mortuary evidence from this phase at Bab edh Dhra points to continuity in patterns of post-mortem treatment, however, both grave equipment and mortuary architecture demonstrate changes in death ritual; the most prominent is the evolution of the charnel house as a distinct type of burial architecture and the appearance of metal weaponry in this context. Clearly, the changing pattern of burial practice is indicative of changes in the societal format of late EB I communities. The introduction of larger mortuary facilities like the charnel houses in the EB II-III points to the emergence of larger social units, and the deposition of metalwork, "a slender currency" (Joffe 1991: 29), raises questions related to resource access and control.

The process of development towards increasing complexity and change during early EBA has been often linked to contemporary sociopolitical developments in neighbouring areas, mainly Egypt (Rast 1980; Joffe 1991). The crucial question here is to what extent social evolution in the southern Levant was affected by the Egyptian presence in the area; although the impetus for a re-organisation of southern Levantine society may have been provided by the interaction with the highly complex, state society of Egypt, the archaeological record of the southern Levant displays a high degree of individualism in this process of increasing complexity.

Interaction with Egypt never produced a Levantine society which borrowed, or emulated the Egyptian model. Selective mechanisms developed by the Levantine communities must be inferred in order to explain such a pattern of contact and exchange. Environmental constraints have certainly played a significant role in the creation of a "pre-adapted" society (Joffe 1991: 7) that would certainly follow a different path towards complexity. However, the environmental argument does not suffice to explain intensive levels of interaction but much lower levels of emulation. On the basis of this less composite (i.e small-scale) nature of complexity, southern Levantine society has often been considered as underdeveloped in comparison to its neighbours. This notion has

been sufficiently argued against by Joffe (1991) who introduced the concept of scale in the examination of Levantine complexity.

The EB II-III period in the southern Levant is marked by changes in the settlement pattern which now becomes expanded with more sites demonstrating urban features and providing more identifiable forms of complexity (Kenyon 1960; Prag 1974; Rast 1980; Joffe 1991). The mortuary record of this period bears evidence for further social re-organisation, featuring predominantly collective inhumations in large chambered or built tombs and an abundance of grave equipment. Patterns of mortuary differentiation are difficult to assess in these contexts. The number and range of burial goods point to intensified contact with both Egypt and Syro-Mesopotamia (Rast 1980). The establishment of the charnel house at Bab edh Dhra as the main burial facility for EB II-III inhumations is indicative of an increase in the scale of societal organisation and of a much greater degree of sedentism, associated with the main urban phase on the settlement.

The new configuration of fortified, urban, settlements actively involved in exchange networks and centralised economic and political activity, consolidated socioeconomic relations that were based upon efficient resource control and exploitation. Whether the economic power was in the hands of small-scale elites which became crystallised in the urban environment is difficult to assess on the basis of the mortuary evidence, due to the collective nature of the EB II-III deposits and the limited size of the sample of early EBA tombs.

The evidence for social differentiation in mortuary domains continues to be minimal. The accumulation of hundreds of burials in each tomb eliminates individualism and underlines a collective sense in the manifestation of the social order. The transformation of the communal idiom of the EB I into a collective one in the EB II-III points to a concomitant change in sociopolitical organisation. Collective interment becomes a correlate of urban society in this respect.

It is beyond the scope of this thesis to examine Levantine urbanism and its manifestations in the EBA archaeological record in detail; however, the results of the analysis indicate that the trajectory of urbanism in the EBA southern Levant is highly individualistic and its correlates vastly differentiated from its counterparts in other urban societies of the Near East, like Syria and Mesopotamia, where elite burials provide a correlate of urbanism. The nature of EBA urbanism in the southern Levant has been questioned (e.g. Philip 1989: 195); the settlement record provides evidence for defended urban centres and relevant population aggregates, but the burial record does not provide the necessary evidence for social inequality and stratification (also Philip 1989: 195).

It has been suggested that the communal element present in the social structure of southern Levantine communities may have determined the trajectory of urbanism and complexity in the area (Philip 1989: 195). However, this element is transformed in the EB II-III period into a collective idiom; it may be that this is an expression of small-scale urbanism, or that urbanism itself is not yet fully developed. A comparison between the EBA and the MBA in southern Levant itself shows that evidence for social stratification is present in the MBA burial record (e.g. Philip 1989: 207-216). It is suggested, therefore, that the archaeological correlates of EBA urban society in the southern Levant may be radically different from relevant sets of correlates in other areas of the Near East. In the EBA context, collective interment is one such correlate. Attention must be drawn to the fact that "collective" does not necessarily imply "egalitarian" (also Soles 1988). Rather, a collective mode of interment serves to mask actual inequalities and distinctions that probably existed in the living society.

The final phase of the EBA bears evidence for a fluctuation in the trajectory of complexity in the southern Levantine communities. The abandonment of tell occupation to a large extent and the "replacement" of the "domestic mode of production" (Joffe 1991: 36) by multi-resource subsistence patterns marks a distinct change in sociopolitical organisation and socioeconomic relations, emphasized by considerable amounts of metal

goods of localised production and their conspicuous consumption in tomb contexts (Philip 1989).

The examination of mortuary variability from EB IV disposal areas displays several levels of differentiation with regard to the variables employed. The crucial parameters of that differentiation are epitomised by the highly structured implementation of burial programmes.

Evidence for social and economic inequalities is found in these contexts and although a clear-cut pattern of social stratification has not emerged, these deposits emphasize differentiation to such an extent that, if mortuary differentiation is accepted as a correlate of complexity, it is difficult to maintain a significant regression in complexity during the EB IV period. It is, therefore, suggested that the EB IV comprises a period of qualitative re-organisation of southern Levantine communities. The distinct artefactual repertoire of the tombs in relation to the contemporary settlement evidence points to a change in the societal configurations that may be related to environmental or geopolitical change.

Lower levels of complexity may be assessed for the EB IV since it is during that period that an emergence of elite groups can be sustained on the basis of burial data. The evidence from Jericho and Tell Ajjul points to the existence of small groups who had differential access to resources. This argument shows that a correlation between elite mechanisms and rising complexity is problematic, particularly since highly restricted resource control does not trigger highly complex forms of sociopolitical organisation (Tainter 1988).

To conclude, the trajectory of social complexity in the southern Levant was determined by several factors which were not always in the form of constraints, but often a product of socially selected procedures related to the small-scale nature of the society. The fluctuations of organisational complexity well attested in the mortuary record of the area point to the EBA southern Levant being a "middle-range" (Upham 1990) society

where the evolution of sociopolitical complexity was markedly different from other complex societies in the Near East, both in terms of quality and scale.

Chapter 5:

The Emergence of Complex Society in Cyprus

Introduction

The present chapter examines the mortuary variability attested in some well known EBA Cypriot cemeteries. The selection of the specific burial sites studied in this chapter has been based on the criteria already established in Chapter 2. Before the main analysis, a discussion on the background of cultural developments in Cyprus during the 4th and 3rd millennia BC is presented in order to set the relevant framework for this research.

The relative and absolute chronology proposed for the Cypriot EBA is discussed in a separate section. The analysis of mortuary variability at each site is introduced along with a discussion on patterns of mortuary differentiation. The sets of DQCF developed for each cemetery are presented with regard to each specific site and a discussion of the chronology and stratigraphy of tomb groups is provided. In the final part of the chapter the results of the analysis are discussed in relation to existing theories on the emergence of complexity in prehistoric Cyprus.

5.1. The Background of Sociopolitical Developments in Cyprus during the EBA

The main period of concern for the present research covers an extensive time span from the Late Chalcolithic period (*henceforth* LChalco) to the end of the Early Cypriot (*henceforth* EC) ca. 2800-2000/1900 (Peltenburg 1989). This time span is now considered by most scholars as a period of major transformations in the sociopolitical

format of Cypriot communities and a crucial formative stage in the evolution of complexity on the island (Held 1989, 1992; Knapp 1990; Manning 1992; Peltenburg 1992). The sociopolitical and cultural configurations on the island during these periods are attested in the archaeological record in the form of discontinuities and gaps apparent throughout the evidence.

The nature of the record becomes even more problematic when one considers the rarity of contemporary settlement evidence[13]. The bulk of archaeological data from EBA Cyprus derive from the excavated tomb groups of the North, in particular. This underlines the fact that Cypriot evidence must be manipulated with a great degree of caution, particularly when social inferences are drawn based on almost exclusively burial data.

The examination of sociopolitical developments on the island during the third millennium BC follows the conventional scheme of tripartite relative chronology for ease of reference (Peltenburg 1989: xvi). The discontinuity between the end of the Chalcolithic and the beginning of the EC appears to be quite dramatic and special attention is paid to this particular phase. However, it is necessary to set the background of the later part of the Chalcolithic against which later developments can be examined.

As a rule, Cyprus has been considered a sociopolitical "backwater" in comparison to its neighbouring countries, both mainland (Levant, Anatolia and Egypt), and insular (Crete). Several factors have determined its evolutionary trajectory, the most important of which seems to be insularity (Held 1992). Cultural retardation, in its temporal sense has been the focus of recent research in Cypriot archaeology and indeed, there seems to be a consensus on the fact that this isolation may have been, at least partly, a deliberate choice on behalf of the later prehistoric communities on the island (Held 1992; Peltenburg 1992).

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[13]For a recent comprehensive summary of the EC-MC sites that have been partly investigated see Swiny (1989). Stanley-Price (1977) provides a survey of settlement patterns during these periods. Also Held (1990) for a discussion of the evidence for early settlement configurations on the island.

The trajectory of complexity in Cyprus has been thought of as manifesting several distinct fluctuations, or going through cycles of decreasing and increasing complexity. This process has been described as "episodes of emergent complexity" (Held 1992: 11) marking the historical trajectory of Cyprus since early prehistoric times. Questions arise with regard to the reasons dictating this fluctuating pattern, why and when change occurred, and how development and change can be monitored in the partial archaeological record of the island.

To set the stage for an examination of the cultural developments on the island, it is necessary to view Middle and Late Chalcolithic (MChalco and LChalco) community configurations as village-based population clusters that did not exceed 400-500 individuals, practising a mixed economy of mainly deer hunting and agro-pastoralism (Held 1992). Occupation on these sites may have been seasonal, but parts of the sites were invariably inhabited (Manning 1992; Peltenburg 1992). Information regarding the communities of that era derives mainly from excavations in the southwestern part of the island, in Lemba-*Lakkous* (Peltenburg *et al.* 1985) and Kissonerga-*Mosphilia* (Peltenburg *at al. forthcoming*). These sites have provided excellent data with regard to settlement patterns, economy, ideology and social organisation. Continuity and transition from the MChalco to the LChalco has been established; the transition to the EC is only beginning to unfold (Swiny and Manning *forthcoming*).

According to the Chalcolithic evidence (ca. 3500-2300 BC) the western part of Cyprus seems to have flourished on the basis of a mixed subsistence strategy, with a distinct absence of foreign contact for a considerable time, judging by the few numbers of foreign imports. The internal dynamics of Chalcolithic society promoted a very distinct life pattern which allowed for storage facilities (Kissonerga 3, Unit 206 and Kissonerga 4, "Pithos House"), small-scale surplus accumulation, social differentiation well attested in the burials and an endogenous powerful ideological and symbolic system to develop.

It is maintained that Chalcolithic society consisted of self-sufficient small-scale communities in which complexity was a self-regulatory mechanism operating on the basis of the general population consensus (Peltenburg 1992; Manning 1992; Held 1992).

The degree of complexity achieved during the Middle and Late Chalcolithic in Cyprus comprises one of the earliest manifestations of sociopolitical organisation on the island. The evidence comprises a prolific record since both settlement and burial data have been pulled together for a meaningful study of the social and political format of these communities.

It has also been postulated that on the basis of the data available, social differentiation and complexity had already emerged on the island since the Neolithic and Chalcolithic periods (Last 1992, *forthcoming*). However, there was a marked qualitative difference between this pattern of complexity and later configurations (Held 1992). The difference can be also defined in scalar terms, since complexity in the Chalcolithic can only be measured on a different scale than that of the EBA. Arguments related to the rise of elites or power groups in the Chalcolithic based on a ranking system conferring to a small number of individuals must be re-considered. The interpretation of the sociopolitical trajectory of Cyprus in terms of the interaction of competitive elites obscures the mechanisms of social and political change by offering inflated descriptions of a small-scale society.

It is necessary to note that on the grounds of the data available no social group in Chalcolithic Cyprus seems to be adequately fulfilling the requirements of an elite (also Last 1992, *forthcoming*); elite correlates are not visible in most aspects of mortuary variability. The only possible attribute of a hereditary elite is the evidence for the ascribed status of certain children (Chapter 5, below).

There is limited information regarding the manifestations of Chalcolithic culture in the northern part of the island, mainly derived from excavations during the pre-1974 period (e.g Peltenburg 1982). On the basis of ceramic and stratigraphic evidence from

Kissonerga it is now proposed that the Philia Phase, which was for long held to be a phenomenon just prior to the emergence of the EC, is in fact contemporary with the LChalco of the South and comprises the another expression of the Chalcolithic culture (Peltenburg, *pers.comm*). In addition, recent radiometric dates from Sotira-*Kaminoudhia* provide a date ca. 2350-2100 BC for the end of the Philia Phase (Manning and Swiny 1993 *forthcoming*) that further supports the argument.

There is a general consensus on the island's marked regionalism in all aspects of its material culture and expression, promoted by the massive mountain ranges of Troodos and the Kyrenia Range that seem to have acted as boundaries in culture transmission. However, with the dawn of the Philia Phase, a more uniform expression of culture is attested in the occurrence of Philia pottery throughout the island (Bolger 1991). The co-existence of LChalco and Philia material at Period 4 Kissonerga (see Chapter 5, below) is indicative of exchange networks in operation that were previously unsuspected. It has been maintained that despite being short-lived the Philia Phase comprises the first real step towards increasing complexity, featuring predominantly intensification in metalwork activities, plow cultivation and enhanced transport through the use of draft and pack animals (Held 1992).

It is within this context of dramatic change in technology, economy and cultural expression that the demise of southern Chalcolithic communities evident in the destructions and abandonments of once flourishing settlements like Lemba and Kissonerga (Peltenburg 1992) has to be interpreted. If a model of endogenous evolution is used to explain social change on the island, then it is noteworthy that similar processes (abandonments of settlements, destructions, different burial practices, introduction of new pottery wares) were taking place at about the same time in the Levant (Richard 1987; Tubb 1983; Baxevani 1992) and the Aegean (Forsen 1992). Bearing in mind that elements of continuity between the pre-BA and BA periods are quite strong, both in the Levant and the Aegean, global reasoning cannot be employed to explain individual

patterns of change. Nonetheless, it serves to indicate that ca. 2300 BC, major qualitative changes in the format of East Mediterranean societies took place, prior to the emergence of MBA sociopolitical configurations. Evidently, this is a period that merits attention since it constitutes the key to later developments, however, this is also the period for which the archaeological record in Cyprus is full of limitations and pitfalls when attempting to interpret the data.

The excavations of major tomb groups in the North notably by the Swedish Cyprus Expedition (SCE) yielded an unparalleled wealth of information for the EBA in Cyprus. The cemeteries consisted of large chamber tombs containing multiple inhumations and an abundance of grave equipment. The earliest examples of such tomb groups are to be found in Bellapais-*Vounous* (Stewart 1950). Later EC tomb groups, often used for a considerable length of time, are to be found in Lapithos-*Vrysi tou Barba* (SCE IV: IA), Paleoskoutella-*Aghios Iakovos* (SCE IV: IA) where a group of tumuli were excavated, and other sites in the North.

Continuity in burial practices from the MChalco to the EBA is provided by the excavations at the MChalco cemetery of Souskiou-*Vathyrkakas* (Christou 1989) where a series of bell-shaped shaft graves were excavated containing multiple inhumations and plentiful grave goods, and the Kissonerga Period 4 (LChalco) chamber tombs (Peltenburg *et al. forthcoming*) containing RB/B wares. Both sites yield evidence for continuity and transition to the ensuing period through mortuary architecture, methods of disposal and nature of grave equipment.

It is possible to establish internal development in several aspects of mortuary practices and also point to the new elements. The latter have been summarised in recent studies (Manning 1992) but there are a few points that need clarification:

a) The appearance of metalwork, particularly weaponry, in funerary contexts marks the beginning of the new era. Nevertheless patterns of deposition seem to be far more complex than a "two-tier" pattern of "poorer" and "richer" burials (Manning 1992, in

press). In fact, the analysis of variability from EC cemeteries does not indicate such a dichotomy.

b) The occurrence of "several imports and exports" (Manning 1992, in press) seems to be minimal in these contexts, as can be seen in the following analysis. Foreign influence and inspiration has been postulated for certain categories of finds, most notably pottery, where the similarities in technology, style and fashion with Syro-Cilician wares have been extensively discussed (Bolger 1991). It is now shown that these are clearly local expressions of the RP wares which in fact have antecedents in the Chalcolithic and do not constitute imports from the mainland (Bolger 1991). Similarly, studies on EBA Cypriot metalwork (Philip 1988) indicate that both in terms of form and source, metal artefacts are local.

c) The description of the northern tomb groups as "rich collective" burials that can be easily compared to the ones from EM Crete (Manning 1992, in press) is rather unfortunate since EM funerary variability is, as yet, unparalleled elsewhere in the contemporary East Mediterranean, apart from the Royal Cemetery at Ur (Woolley 1963). It is, therefore, an error to monitor the rise of complexity and power groups on the basis of such a simplistic comparison between EM and EC burial contexts. Furthermore, a rich/poor dichotomy in EC cemeteries is not so easy to establish if one bears in mind the degree of post-depositional disturbances and looting of tombs that has considerably transformed the record and obscured variability.

d) Arguments in favour of the appearance of institutionalised, inheritable power, "expressed by a key individual" (Manning 1992, in press; Peltenburg 1993, *forthcoming*) based on the discovery of plastic art representing such a figure are unsustained to a very large extent since the available iconography does not by any means comprise a written source providing information on social organisation. The relationship between the specific artefact and the society that generated it can only become understood when the artefact is examined within an integrated social, cultural and depositional context.

In relation to the afore-mentioned points, it is important to emphasise that it is not possible to identify hereditary elites in the EC mortuary record. The evidence does not sustain arguments related to the emergence of social stratification and hierarchies. Moreover, there is essentially no contemporary settlement data against which such hypotheses can be tested.

In other words, most of the models proposed for EC society have rather stretched the evidence (also Swiny *pers.comm.*). Population estimates have been based on survey data (e.g. Catling 1972) and limited excavation on some EC and MC settlement sites (Swiny 1989; Manning and Swiny 1993, *forthcoming*). The elaborate iconography in some tomb contexts and the excellent craftsmanship of the finished products has shed some light on the economy and specialisation of EC communities. However, the burial of these objects has been taken *a priori* to reflect high levels of socioeconomic and political organisation.

Finally, the introduction of the plow comprises an important factor for agricultural intensification on the island during that period, while the intensification in the exploitation of native copper ores introduces a new parameter in the operational framework of EC economy. It is evident that change in several of the sub-systems of the society, economic, technological, ideological may have been only caused by a major qualitative change in the organisational format of the society itself. Society collapses at the end of the LChalco period (Peltenburg 1991; 1992), and re-organises itself in the beginning of the EC; the question is *how much* of this process of collapse and re-organisation can be seen in the Cypriot record.

Whereas the processes of collapse, fissioning and re-organisation in the Chalcolithic itself can be monitored with a considerable degree of confidence due to the nature and quality of data, the same is not valid for the transition to the EBA. In fact, when the Chalcolithic and the EBA are examined, the comparison is one of apples and oranges, since what we do see in the EBA relates to the ideal structure of the society,

rather than its daily organisation. This is an important point for the interpretation of the EC period and the derivation of social inferences.

Some of the major issues confronting the researcher of prehistoric Cyprus refer to the reasons dictating collapse and organisational change in the society, the timing of these processes, the possible stimulus for change and the mechanisms of development. On a broader scale, the articulation of Cyprus within the international framework of change and collapse in neighbouring societies is of crucial importance for the understanding of its sociopolitical trajectory.

At present, several models have been proposed for the emergence of complexity in Cyprus and the process of sociopolitical development and change. There are three major schools of thought best exemplified in the works of Knapp (1990), Held (1989; 1992), Manning (1992) and Peltenburg (1992) for the earlier and later prehistory on the island. The proposed theories relate: a) to the bio-ecological model examining the environmental constraints and potential of the island and how these determined cultural change on an island like Cyprus, b) to the operation of foreign stimuli to trigger change and development in a small-scale, insular society and c) to self-inflicted isolation and resistance to complexity.

There seems to be a general consensus that no prime mover can be considered to have operated in isolation in order to produce such a variable trajectory towards complexity. The process is rather thought of in terms of General Systems Theory and multiplier effect models (Renfrew 1972), but individual factors, like copper production and circulation, have been considered as providing powerful stimuli for social and political change (e.g. Knapp 1990).

Another point of agreement is that social stratification and complexity did not emerge out of egalitarian structures, but that complexity and its attributes had already emerged on the island since the Neolithic and Chalcolithic periods (Last 1992); the question is whether fluctuation and regression of complexity can be seen at certain times

designated as "gaps", or whether a processual development of complexity on a different scale and with different attributes can instead be suggested. Certainly, there is nothing processual about qualitative change in a society, but it is even more difficult to interpret the evidence on the basis of a *quantum leap*, like the one used by Cherry (1983) to explain the rise of palatial society in Crete.

The use of symbols in EC mortuary contexts is very similar to the one observed in Middle and Late Chalcolithic graves, only that the attributes of social differentiation have now changed, due to the new technological and economic configurations on the island. This raises several questions regarding social structure, ideology and organisation.

The following analysis of mortuary variability from LChalco-EC tomb groups indicates a pattern of qualitatively different, but not significantly increased complexity in EBA Cyprus (Chapter 5, below). This point is further discussed in the concluding part of the chapter.

The end of the EC on the island does not demonstrate any marked changes in the archaeological record. Funerary evidence comprises again the major corpus of data. However, there is now some evidence regarding settlements dated to the period (see Swiny 1989).

The majority of EC-MC settlements appear to have been rather small, but it must be borne in mind that excavation has been rather limited. Most of our data come from surveys (Rupp *et al.* 1984; Todd 1983; Stanley Price 1977; Held 1989). The EC site of Sotira-*Kaminoudhia* (Swiny 1989) appears to have been ca. 1 ha. The evidence for MC sites shows that they were larger (Held 1992). Despite the fact that with population size perhaps exceeding 1000 individuals these sites seem to have gone beyond small-scale village organisation, there is no solid data to argue in favour of larger agglomerations that would demand more complex, hierarchical organisation.

In fact, the Chalcolithic site of Kissonerga-*Mosphilia* had probably attained such a population size and density (Peltenburg 1991). The situation does not appear to be markedly different in the EC-MC periods. If it becomes accepted that the EC-MC burial record is a "rich" and prolific one, then there is an uneasy *hiatus* between the settlement and the burial evidence; the evidence for settlement configurations- though still meagre - does not correspond to the wealth of the funerary record. Here we are confronted with archaeological bias that has played a major role in the crystallisation of theoretical views. Clearly, an overrated view of the burial data has rendered the already impoverished settlement evidence disappointing.

This factor must be borne in mind when the elite argument is brought forward as a plausible interpretative framework for the earlier part of the Bronze Age; indeed, the major agglomerations of MCIII-LC seem to correspond happily to the richness of the contemporary burial contexts, unlike the situation described above for the early BA.

The examination of mortuary variability in late MC-LC sites (Keswani 1989a; 1989b) indicates that patterns of mortuary and social differentiation can be correlated to the rise of empowered elites on the island, regulating circulation and trade and engaged in wealth competition and status display. The use of the term "elite" in this context is far more appropriate, than for the earlier periods; it implies the existence of a supporting population to sustain the elite since population sizes in these settlements were so high as to allow for the rise of power and authority groups.

To summarise, a brief discussion on the background of cultural developments in Cyprus during the third millennium BC shows that the early part of the Bronze Age comprises a formative stage for the rise and development of sociopolitical complexity on the island. The record is full of discontinuities and problems still open to research, and indeed it is a advantageous coincidence that so much of the current archaeological research and related archaeological theory has focused on Cypriot prehistory. The notions of "emergent" and "incipient" (Knapp 1990) forms of complexity were introduced

in order to facilitate the understanding of complexity in small-scale societies and help monitor its trajectory in the archaeological record more efficiently.

There seems to be a certain degree of optimism and consensus regarding the interpretation of the Cyrpiot evidence based on current research. However, the pitfalls inherent in the peculiar non-settlement Cypriot record must be continuously assessed before any social inferences are made.

5.2 The Chronology of EBA Cyprus

Continuity and transition between the MChalco and LChalco periods has been established as a result of the fieldwork that the Lemba Archaeological Project (LAP) conducted in the Ktima Lowlands area of southwestern Cyprus (Peltenburg *et al.* 1985; Peltenburg *et al. forthcoming*) and earlier work in the North at the site of Ayios Epiktitos-*Vrysi* (Peltenburg 1982). Absolute dates are now available from both Lemba and Kissonerga in the Paphos District; the most relevant to the present research are those from the long-lived site of Kissonerga.

A compilation of absolute chronology is to be found in Held (1989) and in Manning and Swiny (1993, *forthcoming*) where a series of dates is provided for the EBA in Cyprus. The beginnings of the MChalco are fixed to ca. 3600/3500 calBC whereas the end of the period is ca. 2.750/2.350 calBC. This uneasy time span of c.400 years for the beginning of the LChalco causes a certain degree of confusion, particularly in relation to the dating of the Philia culture and the mainstream EBA on the island. However, as already mentioned the Philia Phase is now shown to be contemporary with the LChalco of the South (see Chapter 5, 5.18) and this view is also supported by other scholars (Swiny 1991; Manning and Swiny 1993, *forthcoming*). If the chronology established in the SCE (SCE IV: IA) is brought forward it can be seen that the beginnings of the EBA on the island are also fixed ca. 2.400/2200 BC.

Mellaart (in Peltenburg 1991) proposed a high chronology for the EC on the island based on correlations between EB II Tarsus and Cyprus. However, this chronological scheme does not seem to be valid (Peltenburg 1991). Most absolute dates from mainstream Chalcolithic sites like Erimi-*Pamboula* (Dikaios 1936), Kissonerga-*Mylouthkia* (Peltenburg *forthcoming*), Lemba-*Lakkous* (Peltenburg *et al.* 1985) and Kissonerga-*Mosphilia* (Peltenburg *et al. forthcoming*) indicate that the end of the Chalcolithic and the start of the Bronze Age must be fixed ca. 2300 BC.

The nature of the EBA record, predominantly tomb material from extensively disturbed and looted tombs, has provided a series of relative dates which indicate a *terminus ante quem* for these contexts. According to these and the refinement of relative chronology in ESC (Peltenburg 1989) the end of the EC period can be dated to c. 2000/1900 BC.

The conventional tripartite chronology of the EC period is used in the present research for ease of reference. The earliest EBA tomb groups in the sample (EC I-II) are those of Bellapais-*Vounous* (Stewart 1950). The tombs in Lapithos-*Vrysi tou Barba* seem to be somewhat later in date (Herscher 1978), but Gjerstad dates a few of them to the EC I. The chronology of Lapithos on the basis of the excavated tombs is discussed in the analysis of the cemetery, particularly since the majority of burial groups seem to date to the later part of the EC (EC III-MC). Similarly problematic are the tombs at Vasilia-*Kafkalla* (Hennessy 1988); although initially considered as contemporary to *Vounous*, a number of doubts have been raised as to their date. These tomb groups are now considered as much later, MBA assemblages (Swiny, *pers.comm.*). The graves at the site of Kissonerga-*Mosphilia* provide information with regard to the Chalcolithic on the island, just prior to the emergence of the BA culture. In this respect, they are particularly enlightening with regard to questions of continuity and transition.

5.3 Tomb Groups from EBA Cyprus

As already mentioned, cemeteries comprise the corpus of archaeological evidence for the EBA in Cyprus. The majority of these formal burial sites has been excavated in the northern part of the island, north and south of the Kyrenia Mountain Range and in the Karpass Peninsula. Only the cemetery of Nicosia-*Agia Paraskevi* is situated in the central part of Cyprus.

Most of the tombs on all sites were used extensively for a long period of time, from the Philia/EC I period to the beginnings of MC I-II and even later. They have been repeatedly plundered and badly eroded due to natural disturbance by water activity.

Our knowledge of the EC-MC periods derives predominantly from the material culture that these tombs have yielded. They have constituted an integral part of EBA research on the island. This research has primarily focused on taxonomies and classification of the material, technology and foreign relations. No study of mortuary variability of these cemeteries has as yet emerged and it is hoped that the present thesis fulfils this aim.

The concentration of most tomb groups in the northern part of the island has given rise to several questions related to the collapse of the Chalcolithic culture and the emergence of a "new" culture that bears striking resemblances to the mainland cultures of Anatolia and Syro-Cilicia. It has often been argued that Cyprus must have received a certain population influx of immigrants, or refugees, after the destruction of EB II Tarsus; the issue is discussed in the concluding part of the chapter.

5.4 The Cemetery of Bellapais-*Vounous*: Analysis of Mortuary Variability

The burial ground of Bellapais-*Vounous* is situated in the northern part of the Kyrenia Range and comprises two burial sites, cemetery A and cemetery B (Stewart 1950). The tombs have been excavated on the sloping side of the hill and erosion has

mainly affected cemetery B. Water action has seriously disturbed the tomb contents and extensive looting has affected the whole site.

Bellapais-*Vounous* contains some of the earliest examples of EC funerary deposits and most tombs have indeed been dated by the excavator to the EC I period. They are chamber tombs, containing multiple inhumations and the number of skeletons does not usually exceed three burials per chamber. In comparison to other, later cemeteries of the same period, Bellapais bears well preserved information regarding mortuary practices.

5.5 Data Quality Control Factors

According to the research procedure, a set of DQCF has been developed for the site, in order to tackle the problems of data quality control. These are as follows:

1) All tombs in both cemeteries have suffered severe denudation and their contents including skeletal material are not *in situ*.

2) Measurements of the tombs are the maximum preserved at the time of excavation and should be regarded as indicating relative energy expenditure.

3) All tombs are chamber tombs consisting of chambers and *dromoi*, instead of shafts. Therefore, shaft measurements have been replaced by dromos measurements in the analysis.

4) Extensively looted tombs for which no ground plan or measurements in the text are provided, are not included in the sample.

5) When there is more than one stone blocking the entrance to the chamber, an "x" denotes the existence of a wall sealing the entrance.

6) Fragmentary vessels whose shape, fabric and surface treatment are adequately described in the publication are included in the analysis.

7) Stewart's terminology (Stewart 1950) for vessel typology has been used in this research. However, since it does not always indicate the function of the vessels, more

convenient terms are used to describe the pottery assemblages in the thesis. For instance, "Ear lug pots" (Stewart 1950), are either flasks, or small jars. Since the lugs are not functional, these vessels were probably flasks, and they are recorded as such in the thesis. Similarly, "pots" seem to refer to the same category of vessel, "dish" signifies the platter, and "mug" is a synonym for a cup.

8) Inhumations in the tombs are either multiple successive, or multiple contemporary. This difference is noted when the information is available.

9) Tombs empty of any skeletal remains are not included in the sample.

10) SF numbers follow the registration numbers assigned to finds by the excavator and decimal points are used to discern between finds under the same registration number, or finds which have not been assigned any number at all.

5.6 Chronology and Stratigraphy of Tomb Groups and Patterns of Tomb Use

There are two main burial sites, A and B. There seems to be a temporal difference between the two areas of the cemetery, since in area A all tombs contained exclusively EC I assemblages, whereas in area B the tombs comprised later deposits of the EC II-III periods. In the first case, inhumations were usually single or double-contemporary thus providing reasonable control over the data. In the second instance, inhumations become multiple and successive in several cases.

The stratigraphic relationships between the tombs are usually difficult to establish. However, despite natural and artificial disturbance most tombs comprise closed, single-period deposits. The internal stratigraphy of the tombs has been severely disturbed and, apart from the case of the single/double inhumations in the EC I chambers, it is almost impossible to reconstruct the original position of skeletons and artefacts. Any study of the internal spatial arrangement in the tombs, is for that reason, fruitless.

Patterns of tomb use indicate the extensive use of the cemetery within the time span of the EC. It must be noted that post-EC deposits have not been found in the vicinity of the site. Some tombs may have been cut during the Philia Phase and have been recorded as "Philia/EC I". This information provides evidence for continuity and transition to the EBA on the island, since the *Vounous* burial ground seems to have been used from the Philia to the end of the EC period.

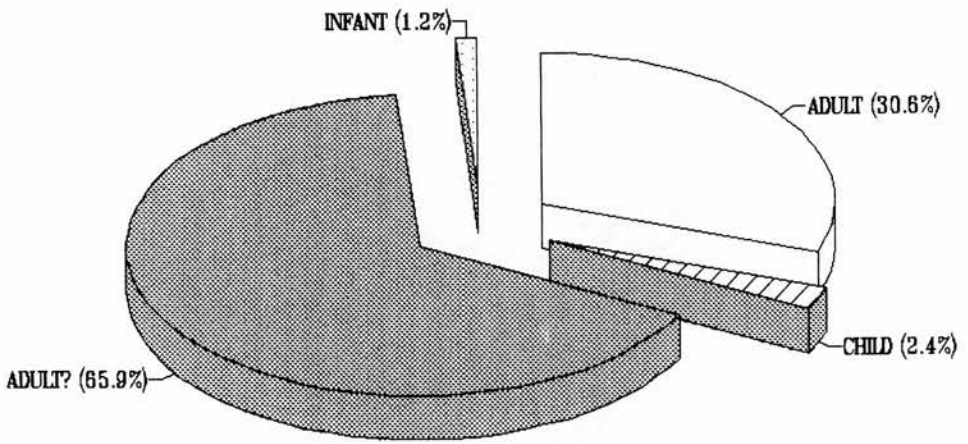
The majority of tombs from the whole cemetery date to the transitional EC II-III phase, c. 2075-2000/1900 BC (11 tombs). However, there are tombs dated to individual phases of the EC and at least two have been reused in the CA I period. The site thus comprises a well dated, formal burial ground, ideal for the study of mortuary remains from the period. As it can be seen in the analysis, the cemetery complex at Bellapais has yielded a prolific record regarding mortuary symbolism and practice, so far unique on the island in these terms.

5.7 Analysis of Mortuary Variability
5.7.1 Biological and Demographic Information

The cemetery has produced a skeletal population sample that has been partly aged and sexed. Bearing in mind that most skeletons excavated by the SCE on the island have been sexed on the basis of their possible artefactual associations, the skeletal data should be regarded and treated with extreme caution. At Bellapais, however, such a bias is not stated as at Lapithos and, therefore, it must be assumed that the skeletons were subject to physical anthropological examination.

The total number of burials uncovered at Bellapais (n = 108) indicates that most of the burials were adults with occasional child (n = 2) and infant inhumations (n = 1) (Fig. 26). The ratio between male (n = 15) and female (n = 12) skeletons seem to be quite well balanced and accordingly there seems to be no problem of a serious misrepresentation of either sex.

Fig. 26 BELLAPAIS-VOUNOUS
AGE REPRESENTATION



The sample is small and biased to treat in quantitative or statistical terms and no significant demographic data can be produced. The only important point seems to be the presence of all ages and both sexes in the cemetery.

In terms of spatial arrangement and demographic information there seems to be no significance to the fact that the only burials sexed in area B of the cemetery are female. The information cannot be considered valid since the majority of skeletons in the latter area have not been sexed.

5.7.2 Treatment of the Deceased and Methods of Disposal

All inhumations in the Bellapais cemetery have been found in articulated positions, with the exception of those who were too disturbed to allow a clearer picture to emerge. Even in such cases, however, articulation of the skeletal members could be observed.

The vast majority of skeletons were in flexed position (n=39), but there were a few individuals deposited in dorsal (n=8) or extended position (n=8) (Fig. 27). Most of the inhumations were multiple contemporary (n=51) or single (n=30) (Fig. 28). Some inhumations were double contemporary (n=8), but there also were instances of successive multiple burials (n=14). One burial (n=1) was characterised as a possible secondary skull interment, however, the context was not conclusive.

Facing and alignment of the individuals was examined in relation to different types of post-mortem treatment. A significant number of single burials (n=12) seem to have had a NW-SE alignment (Fig. 29). Different alignments were also present in individual cases of single inhumations; fewer skeletons (n=7) had a NE-SW alignment while only a couple (n=2) were aligned N-S. Facing was consistent with a preference for an East direction (n=14) (Fig. 30).

Fig. 27 BELLAPAIS-VOUNOUS
Position of Skeletons

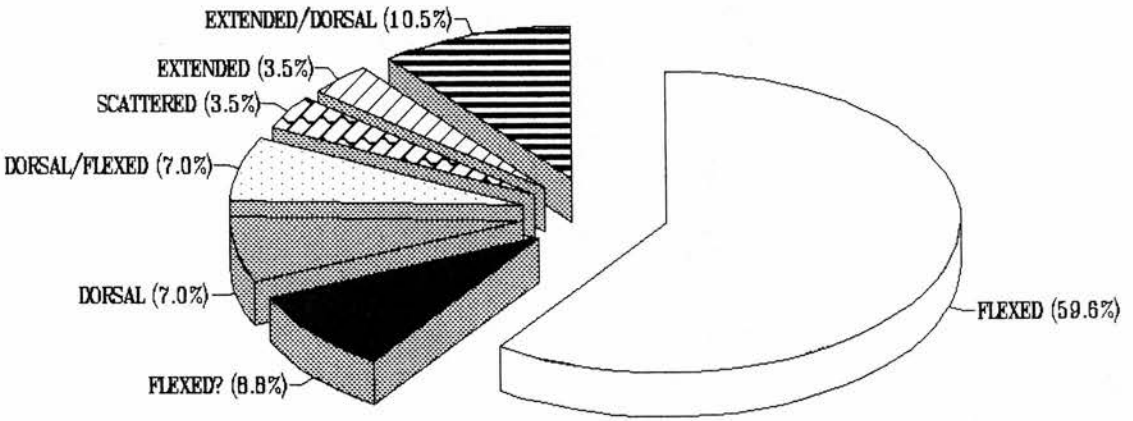


Fig. 28 BELLAPAIS-VOUNOUS
Type of Burial

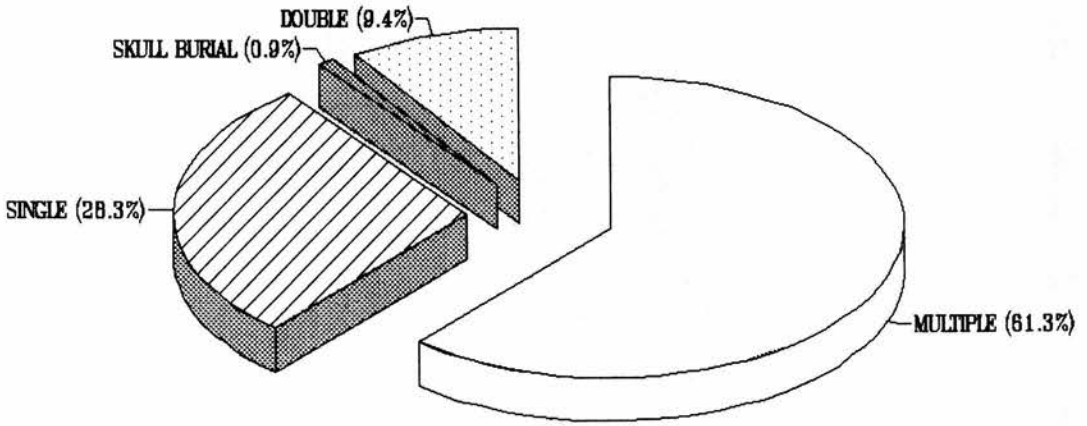


Fig. 29 BELLAPAIS–VOUNOUS
Alignment of Single Burials

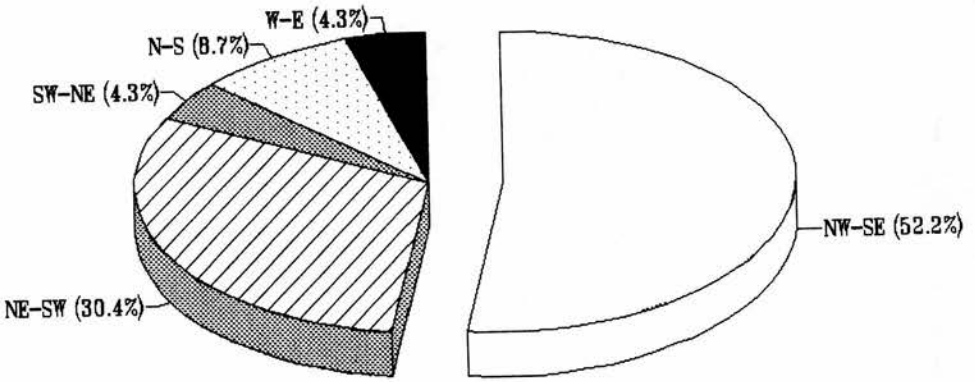
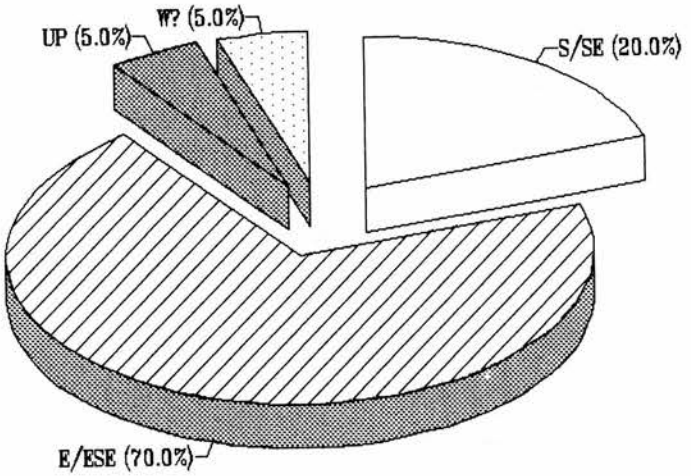


Fig. 30 BELLAPAIS-VOUNOUS
Facing of Single Burials



Double burials (n=8) also presented a certain degree of variation with a general trend towards a N-S alignment (n=6) (Fig. 31). Facing indicated an East direction (n=4) (Fig. 32). Multiple inhumations (n=65) indicated a preference for a general N-S alignment (n=14) of the skeletons and facing East (n=9) (Figs 33, 34). Despite the variations, possibly dictated by the available space in the chamber, preference for a N-S alignment where the deceased individuals were facing E seems to be the norm. No differences based on gender could be observed.

Post-mortem treatment indicates the consolidation of new disposal methods comprising multiple inhumations of articulated individuals with specified alignment. The pattern can already be observed in the MChalco shaft graves of Souskiou-*Vathyrkakas* (Christou 1989) and the LChalco graves at Kissonerga-*Mosphilia* (Peltenburg *et al. forthcoming*; Baxevani and Papailiopoulos 1992). Elements of continuity can thus be postulated on the basis of the Chalcolithic evidence; the appearance of this pattern throughout the EC cemetery at Bellapais heralds the establishment of this post-mortem treatment for the rest of the Bronze Age.

5.7.3 Grave Equipment

The corpus of small finds and pottery retrieved from the Bellapais tombs comprises a major component in the examination of the EC material culture and the analysis of mortuary variability and ritual in the specific cemetery. The tombs were furnished with a variety of metal implements (n=58) (Fig. 35), ceramic finds (n=25) and stone objects (n=10) (Figs 36, 37). Pottery comprised an FW repertoire (RP) characterised by a variety of shapes with elaborate surface treatment (relief, incisions), often considered as non-functional items. Indeed, the relief representations on the pottery vessels and the complexity in shape construction demonstrate a great degree of skill in pottery production, but moreover indicate highly complex forms of mortuary ritual.

Fig. 31 BELLAPAIS–VOUNOUS
Alignment of Double Burials

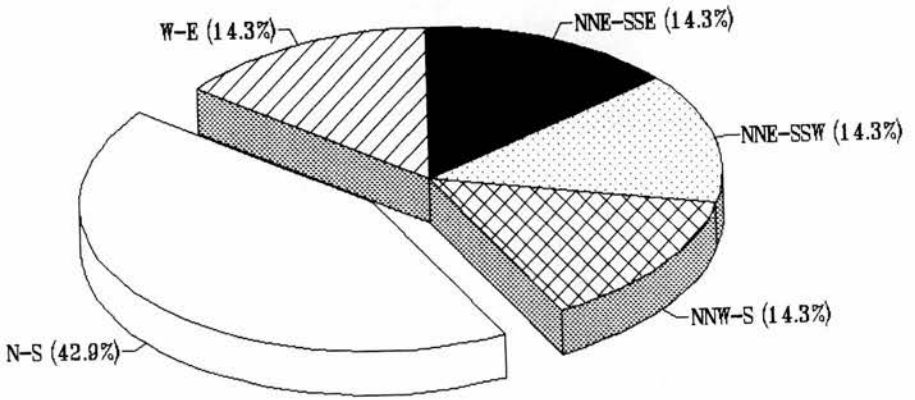


Fig. 32 BELLAPAIS-VOUNOUS
Facing of Double Burials

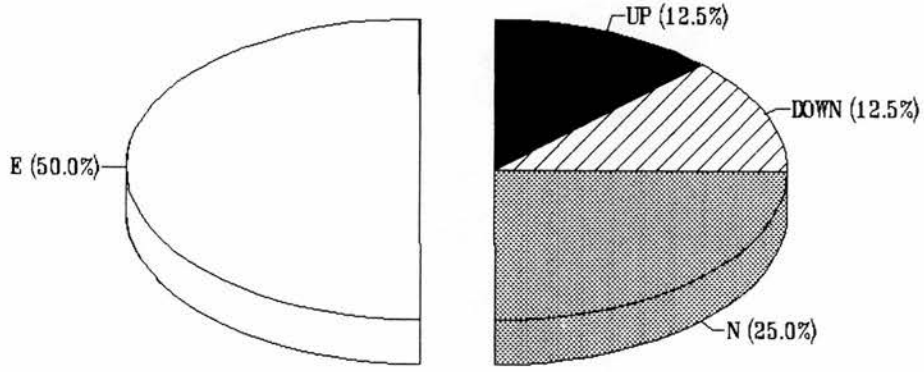


Fig. 33 BELLAPAIS-VOUNOUS
Alignment of Multiple Burials

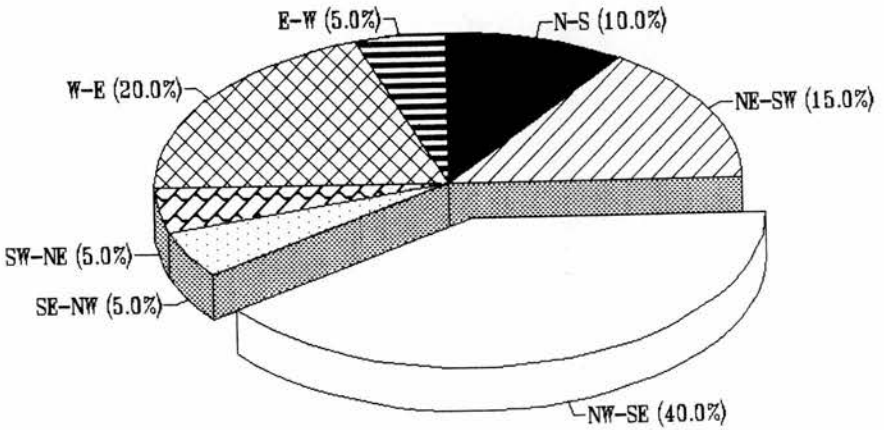


Fig. 34 BELLAPAIS-VOUNOUS
Facing of Multiple Burials

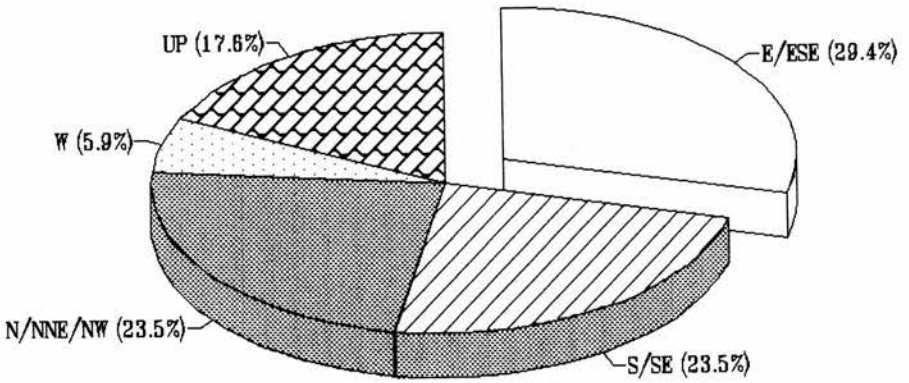


Fig. 35 BELLAPAIS-VOUNOUS
METALWORK FREQUENCIES

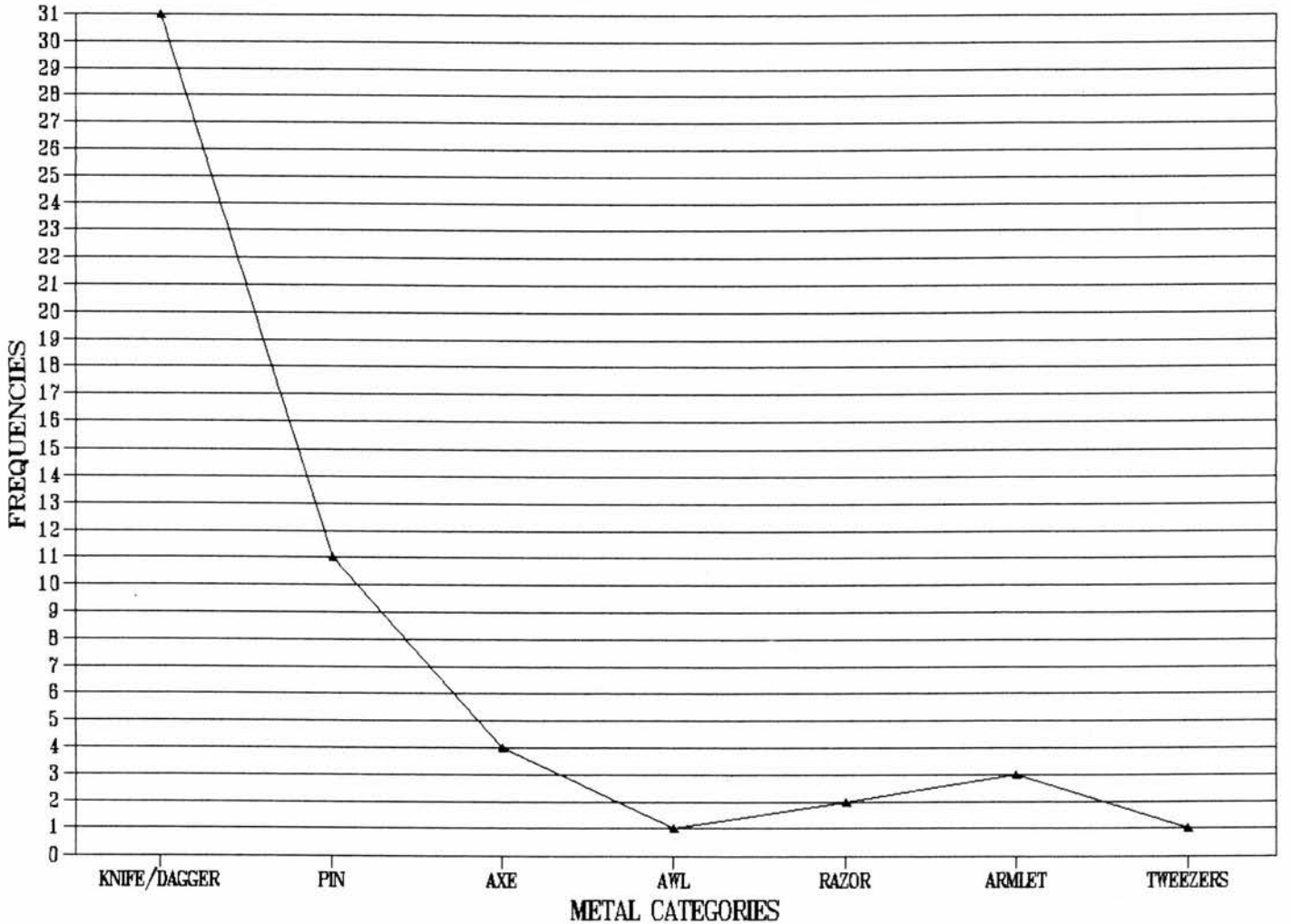


Fig. 36 BELLAPAIS-VOUNOUS
CERAMIC FREQUENCIES

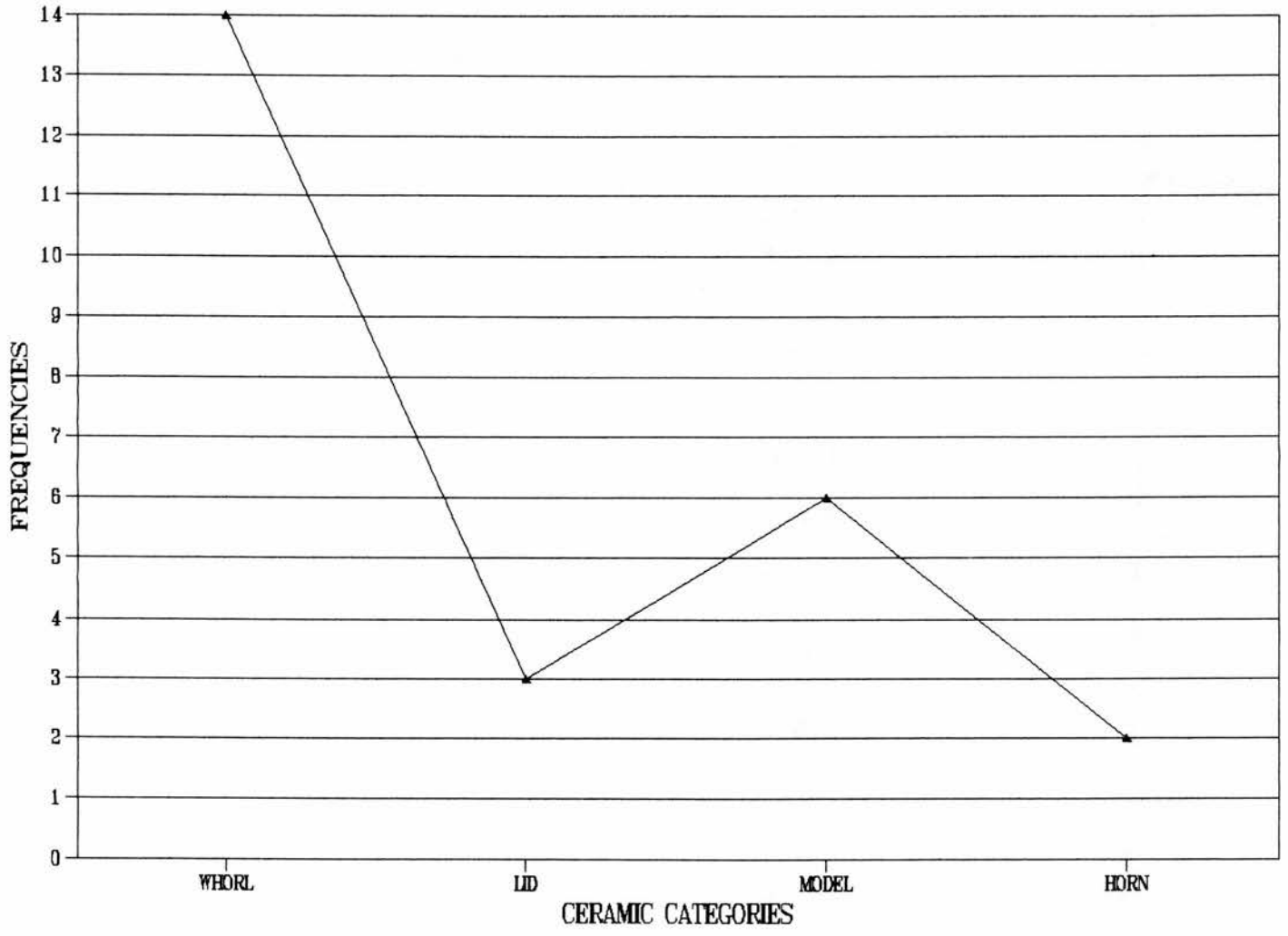
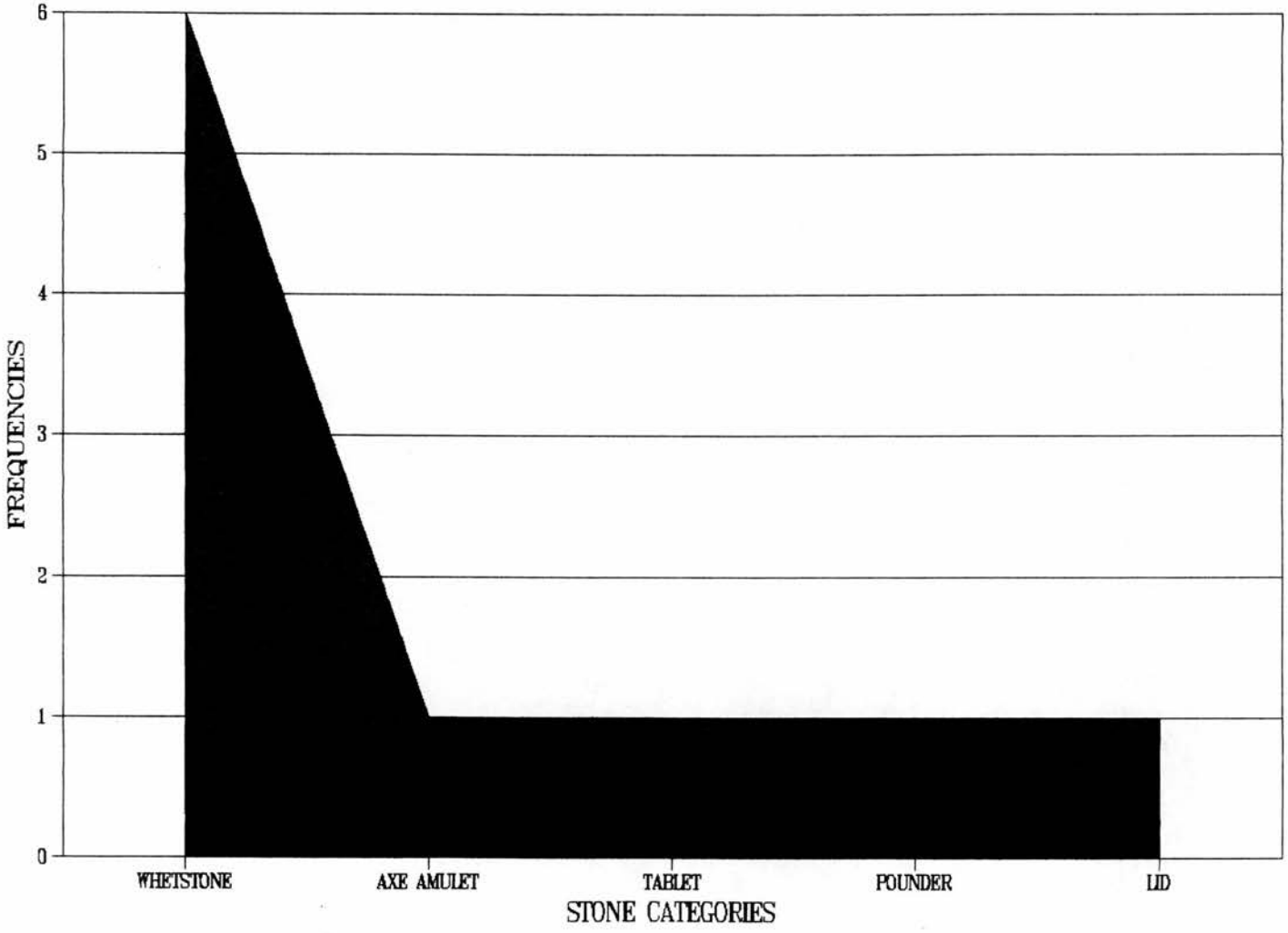


Fig. 37 BELLAPAIS-VOUNOUS
STONE FREQUENCIES



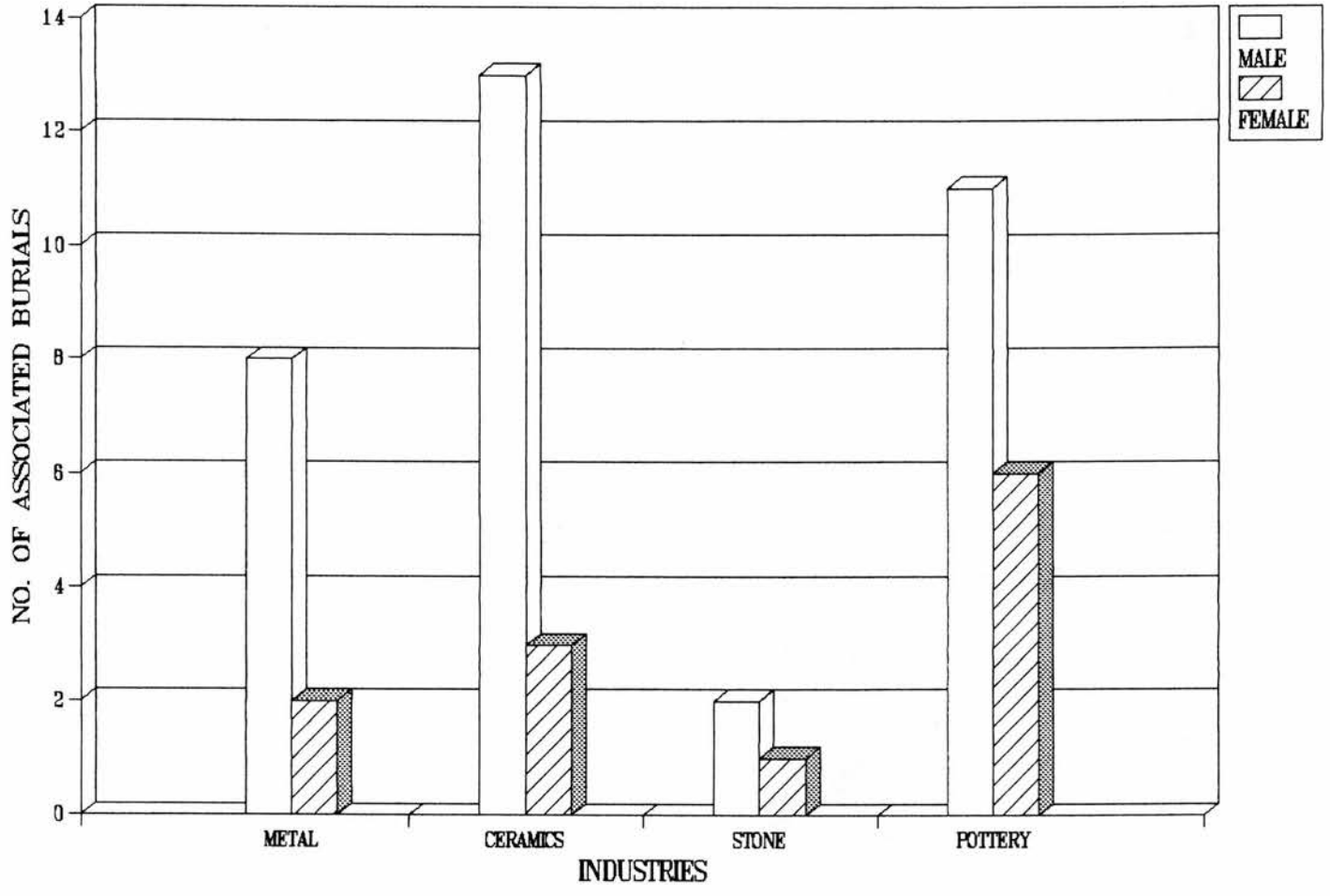
Contemporary material from settlements is not really available for direct comparisons, however, the parallel examination of other EC cemeteries clearly shows that the degree of symbolism and ritual as expressed in the Bellapais pottery was not achieved in other contemporary cemeteries.

The analysis of the grave equipment shows that the majority of small finds were metal items (n=58), usually weapons (n=36). Knives (n=25) comprise the most frequently occurring type of weapon, but other types such as pins (n=11), awls (n=1), tweezers/razors (n=3) and even armlets (n=3) were also found (Fig. 35). The metal occurring in the tombs is pure native copper. Some form of conspicuous consumption has been postulated for the major deposition of metal in these contexts and the issue has often been related to the rise of social stratification and elites on the island (Knapp 1990; Manning 1992).

The examination of metal frequencies in relation to gender merits discussion (Fig. 38). The analysis has shown that at least half of the male individuals (n=8) were buried with some form of metal weapon, usually a knife; the majority, however, were accompanied by ceramic objects (n=13) of which nine (n=9) were spindle whorls, traditionally associated with female burials. In fact, in the excavations on the cemetery of Lapithos-*Vrysi tou Barba*, the excavators based the sexing of the skeletons on this particular association. At Bellapais, it is clearly shown that the majority of male inhumations were equipped with ceramic objects (n=13) rather than metalwork.

The occurrence of a ceramic dagger model (n=1) and a sheath model (n=1) in one of the male chambers is quite revealing since it underlines the importance of the symbolic function of the item (weapon), in contrast to the material (ceramic, not metal). This raises questions with regard to conspicuous consumption and mortuary symbolic expression.

Fig. 38 BELLAPAIS-VOUNOUS
GENDER ASSOCIATIONS



Female skeletons were equipped with the same categories of finds as their male co-members (Fig. 38). Knives, daggers, pins and even razors occur in association with female individuals (n=2) and in fact, one of the female burials (BurNo 97) is so richly equipped with metalwork, that no male parallel is to be found in Bellapais. Also, whetstones are found both with male and female inhumations.

Gender associations in this cemetery clearly point to the great degree of bias that has persisted over the years relating male gender and metal weaponry. Evidently, arguments related to the male idiom should be revised on the basis of the data. It must be noted, however, that the ratios of male/female associations are not the same despite the fact that the mortuary population sample is well balanced with almost equal numbers of male and female skeletons. Whereas at least half of the male burials were associated with metal weapons, the same cannot be said for the female inhumations. Indeed, only a few female skeletons were associated with metalwork with BurNo 97 comprising the "richest" inhumation with regard to both sexes.

On the basis of the latter observation the male-weapon association could be postulated. However, the same pattern of differential treatment with regard to grave furnishings is seen in relation to other categories of finds. Only a few female inhumations were associated with spindle whorls and stone objects, as opposed to the male ones.

Evidently, gender specific treatment is related to the quantity of grave goods, but not to the quality and nature of the equipment. The only gender specific argument substantiated on the basis of the available data is that male individuals customarily received greater quantities of grave equipment than female ones. In rare instances, like BurNo 97, females were treated exclusively and received a variety of grave furnishings that may have outnumbered individual male associations.

The same pattern is observed in terms of pottery deposition in the tombs at Bellapais. The majority (n=12) of male burials were inhumed with ceramic vessels, whereas only half (n=6) of the female skeletons were buried with pottery. All skeletons

of both sexes associated with pottery were equipped with jugs and bowls, whereas there were variable numbers of other types of vessels. The so-called "cult vessels", characteristic of the Bellapais repertoire occur mostly with male burials (n=4); only one (n=1) female inhumation was associated with a "cult vessel". Gender specific patterns of pottery deposition seem to follow the general rules of grave equipment deposition and establish mortuary differentiation on the basis of sex.

Foreign relations evident in these contexts are discussed in the concluding part of the analysis. In this context the ceramic repertoire from Bellapais merits special attention since it constitutes a highly elaborate corpus of pottery. In addition, evidence for a highly structured form of symbolic expression and ritual derives from a study of this material.

5.7.4 Spatial Arrangement

A study of the spatial arrangement of finds and materials does not indicate any differentiation between the main two areas of the cemetery. Most of the tombs in both areas contain metalwork, followed by frequencies of spindle whorls and stone objects.

A different pattern emerges when post-mortem treatment is examined in terms of space. In both areas, multiple inhumations comprise the majority of interments, however, the ratios of single/multiple burials in each area indicate that whereas in area A the ratio is quite balanced (25 single, 38 multiple), in area B (6 single, 27 multiple) it becomes unbalanced, featuring predominantly multiple inhumations. This pattern is probably related to temporal difference between the two areas, whereby area B contains mostly later EC tombs (EC II-III).

In Area A 41 tombs were excavated while in Area B only 14 tombs were investigated. In terms of the spatial distribution of energy flow, both areas show that more than half of the tombs (n=35) had chambers that exceeded 2.00m in length and width, however, the same cannot be said for the *dromoi*. None of the *dromoi* in area B

exceeded 2.00m length or width; again, this variation in energy flow may be related to chronological differences between the two areas and not necessarily to intentional differentiation.

5.7.5 Description of Mortuary Facilities: Tomb Typology and Energy Expenditure Measures

The tombs from both areas are either single or multiple chamber graves. The majority (n=48) were single chamber tombs in both areas. Access to the burial chamber(s) was gained through a *dromos*.

The examination of energy expenditure shows that the most "expensive" tombs are found in area A, at least in terms of *dromoi* measurements. In terms of mortuary architecture the chamber tomb is already known on the island since the LChalco (Kissonerga-*Mosphilia* Period 4) and has been established as a local development. Immediate parallels for this type of mortuary facility are also found during the Philia Phase (e.g Sotira-*Kaminoudhia*).

The preference for single chambered graves is indicative of the early date of these tomb groups and probably hints at aspects regarding social structure and organisation of the living community. This point is discussed further in relation to patterns of mortuary differentiation.

5.8 Patterns of Mortuary Differentiation at Bellapais-*Vounous*

The examination of mortuary variability at the cemetery of Bellapais reveals patterns of mortuary differentiation related to both horizontal and vertical differentiation in the society. In most studies considering the data from Bellapais, the grave equipment is examined in isolation as the most prolific part of the evidence. The amount of symbolism and ritual attested in the iconography and representational art of

the ceramics from the site has given rise to several possible reconstructions of the EC society on the basis of the cemetery data (e.g. Manning 1992, in press; Peltenburg 1993, *forthcoming*). In addition, the wealth of material culture yielded in these contexts has stimulated archaeological thought to such an extent that almost all EC literature is strongly dominated by the finds at Bellapais.

This data is essentially all there is for the early BA on the island. Burial evidence, however, cannot possibly provide all the necessary information for a reliable reconstruction of past social organisation. For reasons, which have been discussed in detail before (Chapter 3), the mortuary evidence from Cyprus can only provide social information to a certain extent. That is with regard to specific aspects of social organisation particularly related to the structure and ideology of the society. It now becomes evident that data has been over-exploited in a desperate effort to extract as much information as possible.

To rectify the situation it is necessary to return back to the raw data. There are several patterns of mortuary differentiation suggested by the present analysis. It must be noted first that it is a happy coincidence that a great number of the skeletal population in the cemetery has been sexed. This provides us with a series of insights we are usually unable to consider when examining multi-stage EBA burial programmes in the East Mediterranean.

On the basis of burial associations it has been possible to demonstrate that, for the most part, mortuary differentiation at Bellapais was expressed in terms of gender distinctions. Male skeletons were distinguished by their association with a greater quantity of grave equipment in contrast to the female ones. The repertoire consisted of metal weapons, spindle whorls, a few stone objects and pottery. A few select females were accompanied by the same grave kit, clearly ruling out the exclusive association, often made, between males and weaponry.

The highly standardised nature of the grave equipment, mortuary architecture and post-mortem treatment points to well executed, formal burial programmes. The nature of the pottery in particular, underlines the symbolic character of these deposits. Jugs with cut-away spouts bearing relief decoration of snakes on their necks and the occurrence of multi-unit vessels with zoomorphic representations on their rims (cult vessels) signifies that pottery deposition in these contexts may be related to mortuary ritual rather than mainstream pottery production.

Many of these vessels are rather difficult to visualise as being functional and/or domestic, and may indeed have been manufactured for tomb use only. The appearance of potter's marks on a great number of jugs with cut-away spouts may be related to pottery manufacture centres, ownership and exchange networks. The individuality of the Bellapais vessels signifies the special character of these objects. It is rather far-fetched to draw conclusions about the sociopolitical format of EC Cypriot communities on the basis of this profound iconography (*contra* Manning 1992, in press and Peltenburg 1993, *forthcoming*). These vessels have to be interpreted in relation to the ideological messages they carry; to what extent these vessels can be considered as bearing messages of power is still unclear.

The third point relates to the existence of elites, increased complexity and social stratification. The analysis of mortuary variability from the Bellapais cemetery shows that there is significant differentiation in terms of grave equipment among the various tomb groups in the cemetery. Greater amounts of furnishings relate to an increased number of inhumations. The majority of graves contain metalwork and other classes of finds, so that the whole cemetery complex must be considered as "rich" in conventional terms although there are tombs which do not contain metalwork at all.

When all aspects of variability are examined, the most significant correlations that emerge are those of gender associations as discussed above and a correlation between energy flow and class of finds. It is also shown that at least half of the tombs did

not contain any metalwork, a fact that indicates unequal access to the specific resource. The last two correlations may be considered as indicative of vertical differentiation and inequality among the mortuary population.

It has been suggested that these tombs may have comprised the burial facilities of families which had access to copper resources and local/foreign exchange networks; as such, they may have constituted the burial places of an elite group. The question must be addressed after the analysis of all the EBA cemeteries has taken place, simply because the evidence from Bellapais alone does not substantiate this view. Issues related to mortuary symbolism and the use of different symbols in earlier periods to signify differentiation, whether vertical or horizontal, must be also addressed before any reconstruction of EC society takes place.

The analysis of variability from this site points to both horizontal and vertical social distinctions among the mortuary population. Gender differentiation can be established with confidence on the basis of the available data and evidence for vertical social differentiation is also present. Sharp, unequal access to resources comprises a compelling indicator of social stratification particularly when associated with the number of inhumed individuals per tomb (ca. 1-2 individuals). However, the evidence shows that even the individuals who did not have access to metalwork were inhumed in the same facilities and received the same post-mortem treatment. Clearly, although different variables are correlated to particular aspects of mortuary differentiation (e.g grave equipment to gender) all or most variables do not point to social stratification; in fact only grave equipment (presence/absence ratios of metalwork) hints at vertical social distinctions.

To interpret the patterns of differentiation from Bellapais it is necessary to consider the number of variables pointing to vertical and/or horizontal social distinctions. After a careful assessment of these variables it becomes evident that social differentiation was not vividly expressed in the *Vounous* tombs. Far from representing a

"two-tier" cemetery (Manning 1992, in press) of poorer and richer burials, the Bellapais assemblage reveals social information that needs to be evaluated in conjuction with what went on before and after. The communal character of the *Vounous* burials points to the use of this cemetery by small social groups, probably family groups, which did not display significant social distinctions in their mortuary domains. The analysis of the LChalco tombs in Kissonerga and later EC tombs from Lapithos and *Aghia Paraskevi* provides a framework for a fairer judgement of the Bellapais data.

5.9 The Cemetery of Lapithos-*Vrysi tou Barba*: Analysis of Mortuary Variability

The site of Lapithos is situated in the northern part of Cyprus. Excavations on the cemetery were conducted by the SCE (SCE IV: IA) and the University Museum, Pennsylvania (Herscher 1978) revealing a number of tomb groups dated to the earlier and the later parts of the Bronze Age. The present sample includes the tombs excavated by the Swedish Expedition since these are the earliest ones on the site. The University Museum tombs all date to the MC period.

The Lapithos tomb groups comprise well equipped assemblages. The amount of furnishings in the burial domains is far greater than the Bellapais funerary complex. Some of the richest tombs on the island (e.g LA 313) have been uncovered at this site. As a general observation it seems that the Lapithos tombs are somewhat later than the Bellapais assemblage and have been used for a longer time span. Before the main analysis the specific set of DQCF for the site is presented.

5.10 Data Quality Control Factors

The publication of the tombs excavated by the SCE in Lapithos comprises a detailed account of the fieldwork conducted in each tomb, information with regard to the tomb features and measurements and a comprehensive catalogue of the finds from each

chamber and the dromoi. Consequently, DQCF are only a few and can be summarised as follows:

1) Tombs which are badly eroded or empty of their skeletal remains are not included in the sample.

2) Tombs which have been extensively reused in subsequent periods are not considered.

3) Decimal points are used as in other instances to distinguish between different small finds which have not been assigned a unique registration number.

4) A great degree of caution should be exercised when dealing with the sexing of the skeletons. It is often stated in the publication that the sexing of any particular skeleton has been based on its artefactual associations. Anthropological data is, therefore, unreliable.

5.11 Chronology and Stratigraphy of Tomb Groups and Patterns of Tomb Use.

The tombs examined in the present research date to the earlier part of the Bronze Age, mainly to EC III (c.2300-2000/1900 BC). Most of them have been used over a period of time, some from the EC I to the MC II period.

The tombs comprise a distinct burial assemblage in terms of mortuary variability in that they demonstrate a number of different features in comparison to the Bellapais assemblage. It seems that the reasons for these differences in mortuary architecture, methods of disposal, patterns of grave equipment deposition and mortuary ritual may be due both to regional and chronological factors.

The whole Lapithos complex presents features which seem to connect it with the ensuing period (MC) rather than the earlier part of the EBA, and thus it may be postulated that this cemetery is representative of the later EBA and the transition to the MC period. Relative chronology established on the basis of the ceramic sequence indicates a later date and it seems that for some of the tombs dated to EC I-III, an even

lower chronology may be suggested. The internal stratigraphy of the tombs has been disturbed by both natural and human causes.

Patterns of tomb use indicate the use of the same tomb facilities for a significant time span and for successive inhumations. As a consequence, individual associations are often difficult to derive; the multi-stage burial programmes further obscure the picture.

5.12 Analysis of Mortuary Variability

5.12.1 Biological and Demographic Information

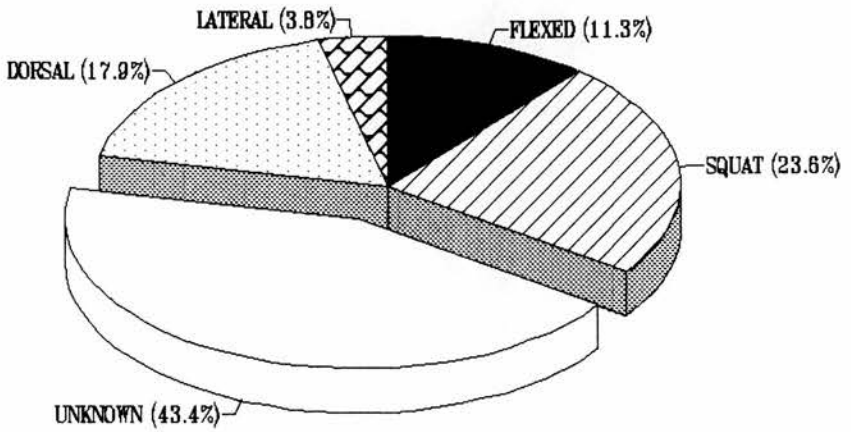
The mortuary population sample consists of 108 inhumations (n=108) the majority of which (n=86) were adult burials. Detailed anthropological work has not taken place and sexing of the skeletons has been based on artefactual associations to a very large extent. There have been six skeletons (n=6) which have been identified as being those of male individuals and another six (n=6) identified as females.

The information is too poor to treat in terms of demography and can only be useful in terms of tentative gender associations. The most important piece of information derives from the fact that only adult burials have been found whereas child/infant burials are absent. There is no reason to believe that children were excluded from formal burial in EC cemeteries since a few have been excavated in Bellapais. The low ratios of child inhumations may be related to lower infant mortality rates. In view of the absence of detailed anthropological data this possibility remains speculative.

5.12.2 Treatment of the Deceased and Methods of Disposal

Almost half of the inhumations (n=48) in the cemetery comprise burials of unknown original position (Fig. 39); they were probably multiple inhumations that were severely disturbed. The majority (n=60) constitute articulated burials, mostly in squatting position (n=25).

Fig. 39 LAPITHOS
Position of Skeletons



Some were buried in dorsal position with their knees bent (n = 19) while another four (n = 4) were lying in unidentified positions. There were some skeletons (n = 12) lying in flexed position; flexed inhumations were lying on their right side in most cases. Squatting skeletons were usually facing the entrance of the chamber.

Information as to facing and alignment is not really available in the publication. A couple of individuals (n = 2) were facing S, another four (n = 4) were facing N and most of the interments in dorsal position were simply facing up to the ceiling of the chamber. An E-W alignment is indicated for only two (n = 2) of the burials, so no pattern can be detected here either.

Methods of disposal are quite different from those seen earlier at Bellapais; the manner of depositing the dead in a squatting position, in particular, is an innovative feature for EBA burials in Cyprus. The latter might also be considered as indicative of a later date for the Lapithos assemblage.

The equal representation of male (n = 6) and female (n = 6) individuals allows for a study of associations between age/sex and grave equipment. Although generalisations cannot be made tentative gender correlates can offer some insights (Figs 40 and 41, see discussion pp. 203-204).

5.12.3 Grave Equipment

The corpus of grave furnishings from the Lapithos tombs constitutes an enormous amount of metalwork (n = 307), spindle whorls (n = 50), stone objects (n = 16), figurines (n = 14), jewellery (n = 18) and organics (n = 1).

Most of the metalwork comprises copper pins (n = 106) and copper knives (n = 42) (Fig. 43). Other types of weapons, such as daggers (n = 21), swords (n = 17) and axes (n = 15) occur, but they are outnumbered by items of more personal nature like tweezers (n = 25), scrapers (n = 24) and spiral rings (n = 16).

Fig. 40 LAPITHOS
GENDER ASSOCIATIONS

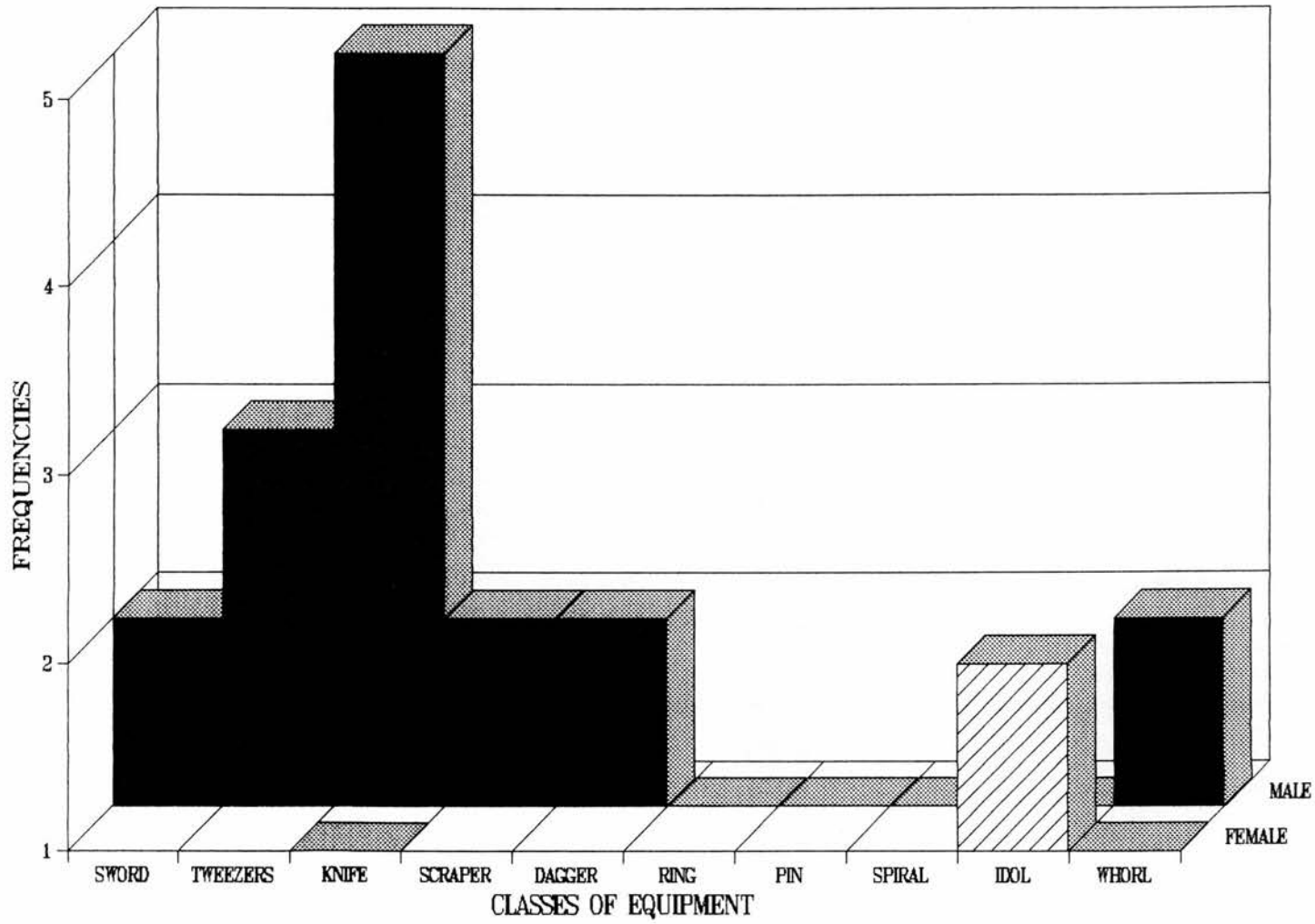


Fig. 41 LAPITHOS
GENDER ASSOCIATIONS

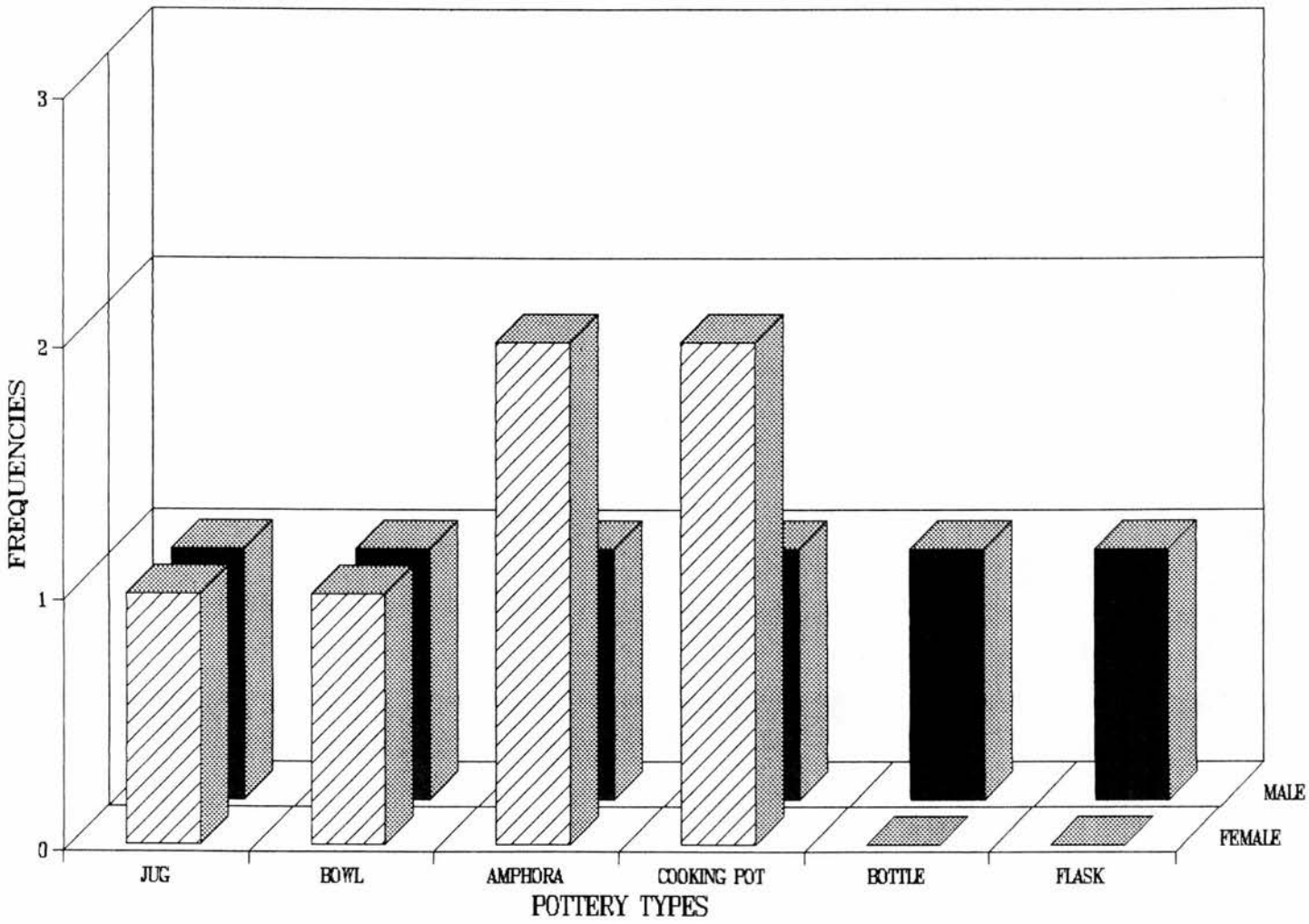


Fig. 42 LAPITHOS
METAL DISTRIBUTION

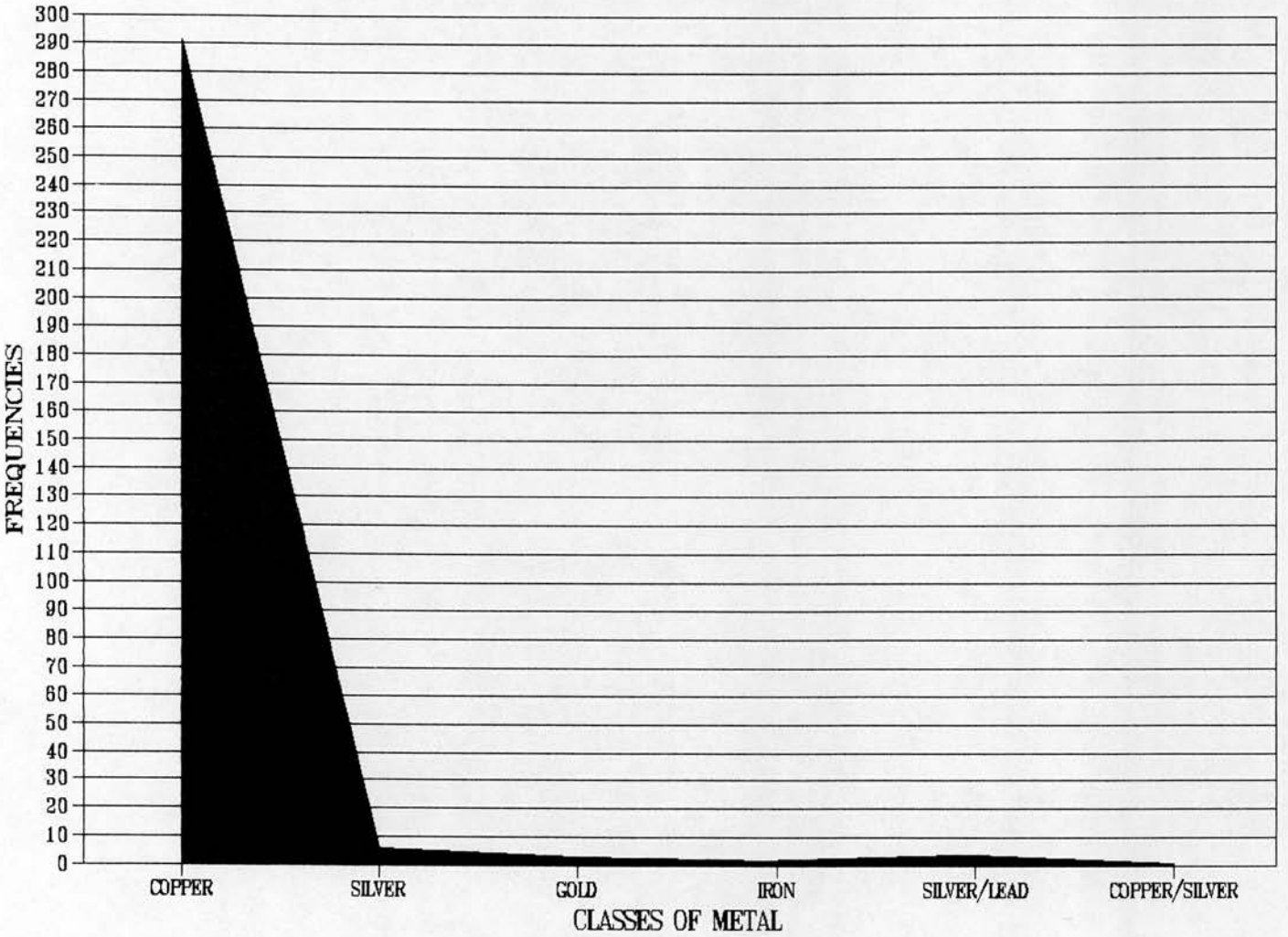
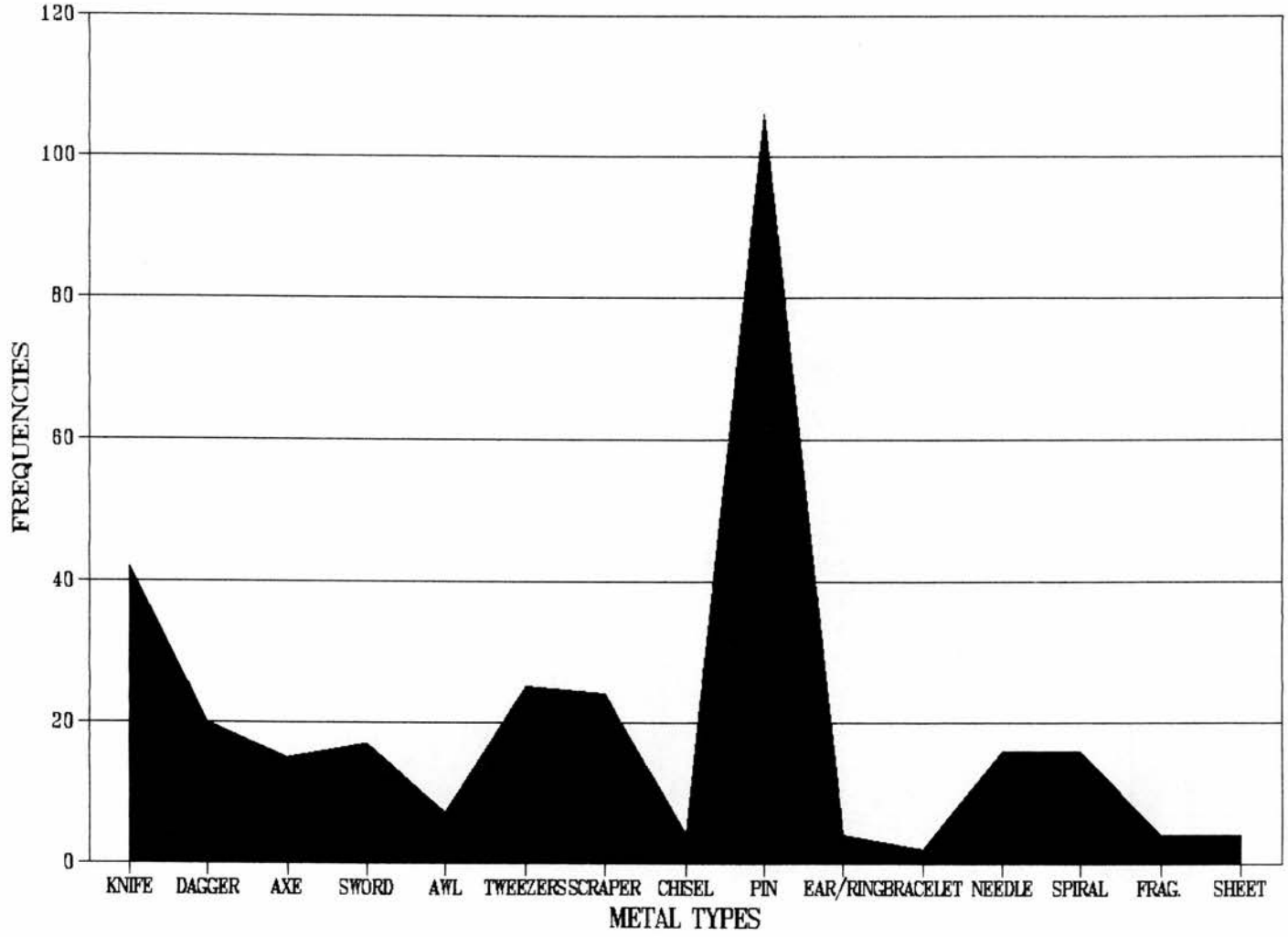


Fig. 43 LAPITHOS
METALWORK FREQUENCIES



This piece of information is important in view of the fact that in the Bellapais assemblage the predominant category of finds were metal weapons. The vast number of pins and items of personal adornment in the Lapithos tombs indicates a certain change in patterns of metal deposition.

Spindle whorls (n = 50) occur in increased numbers and in a wider variety of wares, namely RP, RP/BP and BP, as opposed to Bellapais where the relevant sample comprised only RP whorls. Stone objects (n = 16) are predominantly whetstones (n = 14) probably made of local stone. There seems to be a correlation between the occurrence of whetstones and metalwork.

Figurines (n = 14) comprise a distinct class of finds in the Lapithos tombs. With the exception of one marble figurine (n = 1), they are all "plank idols" executed in RP incised ware. This kind of representative art is vastly different from what was seen in the Bellapais corpus and is probably connected to changing patterns of mortuary symbolism and ritual.

Jewellery (n = 17) constitutes another category where variety in raw material is worth commenting upon. With the exception of one ring-shaped amulet (n = 1), jewellery comprises necklaces (n = 7) and bead groups (n = 9). They are usually made of copper, or a paste of copper and glass; one (n = 1) is manufactured in a paste of copper, silver and lead. Bearing in mind the number of metal sheets (n = 4), spiral rings (n = 16), bracelets (n = 2) and needles (n = 16) uncovered from these contexts, it is evident that items of adornment presented the highest frequencies in these contexts.

Material distribution indicates that metalwork included items in gold (n = 3), silver (n = 6), iron (n = 2) (intrusive) and pastes of silver/lead (n = 4) and copper/silver (n = 1). Copper (n = 291) was the predominant material (Fig. 42).

The corpus of grave equipment demonstrates a considerable variety of objects and materials. Although age/sex data are rather poor, it was considered necessary to look for possible associations between sexes and grave furnishings. Burial 5 is the only single

male inhumation in a safe context (Tomb 301.3). The skeleton was in squatting position facing the entrance and was accompanied by two swords, a couple of tweezers, three knives and one scraper. Another two (n=2) male individuals were associated, one with a knife and the other with a knife, two spiral rings, a pin and a plank idol. At first glance, it would seem that there is great diversity in the items being deposited with males; however, in Tomb 302.1 where three males (n=3) and one female (n=1) were inhumed, the same grave kit of tweezers, scraper, knife and dagger was found along with a couple of spindle whorls. The evidence from the female chambers indicates that females were either not accompanied by finds (Tomb 301.2), or that they were accompanied by ceramic items like spindle whorls or plank idols; nevertheless, one knife (n=1) was found in association with female interment 25 in Tomb 306.1.

The point is that the set of tweezers, scrapers and swords does not occur with female inhumations and since equal numbers of both sexes were excavated, chances of recovery were the same. In comparison to Bellapais where female burials associated with metal weapons were found, the Lapithos grave kit seems to have accompanied only male adults on the site (Fig. 40).

It is rather unfortunate that more anthropological data is not available to allow for a detailed study of associations and substantiate the possible existence of a standard male set (Fig. 40, solid black box) to accompany individuals of this gender. It may be argued, with caution, that in view of the great number of tweezers, scrapers and swords from the site and the number of squatting adults, there is a possible representation of male adult inhumations in tombs of this kind. Nevertheless, the evidence cannot be considered conclusive. What seems to be conclusive is the fact that as in Bellapais, female interments are not usually buried with as many grave goods as their male counterparts and, therefore, differentiation on the basis of gender can be established for the Lapithos assemblage too.

In terms of pottery frequencies, ceramic vessels are found in all the chambers excavated in Lapithos. Jugs (n=42) comprise the major category, followed by bowls (n=39). As in EC II-III *Vounous*, jugs and bowls constitute the most common classes of vessels. Jugs now become ovoid, or pear-shaped, but they still retain plastic decoration. Bowls are predominantly hemispherical, as in EC II-III *Vounous*.

Shapes include amphoras (n=24), bottles (n=12), pyxides (n=3), pithoi (n=2), cult vessels (n=5), hydrias (n=3), askoi (n=4) and vessels (n=3) of a more composite nature (e.g tripod pot). The cult vessels from Lapithos are different from the ones encountered at Bellapais; the same designation is used, however, to indicate their possible function as vessels related to some kind of mortuary ritual. If comparisons can be made, it must be noted that the Bellapais vessels are far more complex in execution than the Lapithos ones, despite the fact that there is at least one Lapithos cult vessel strongly resembling those at Bellapais. The number of cult vessels uncovered from Lapithos is much lower than Bellapais, a fact that further indicates changing patterns of mortuary deposition and ritual.

With regard to gender associations, males seem to be buried with a greater quantity of ceramic vessels than females (Fig. 41). The repertoires for both sexes are the same, except that cooking pots have been found only in association with female skeletons, whereas flasks and bottles occur with male individuals. There is a possibility that different sexes were conferred different pottery types although more data would be desirable to establish a pattern.

Tomb 313, which is the richest and largest tomb from the site comprising a multi-unit burial domain with four chambers, has unfortunately yielded no gender data. It contained multiple interments of adult individuals mostly in squatting position; an infant was also found in one of its chambers.

5.12.4 Spatial Arrangement

Spatial data is not available in the publication of these tomb groups. The location of each tomb is unknown. Therefore, no study of spatial arrangement can be produced. An interesting aspect would be the study of the internal spatial arrangement of skeletons and artefacts in the burial chambers; it must be noted that the distinct change in the positioning of skeletons in the tombs and the overall internal spatial arrangement of skeletons and artefacts points to change in post-mortem treatment patterns as they have been known from Bellapais and other EC burial grounds. It is worth considering this aspect as well in the overall discussion of the cemetery complex.

5.12.5 Description of Mortuary Facilities: Tomb Typology and Energy Expenditure Measures

In terms of energy flow the tombs (n = 18) at Lapithos-*Vrysi tou Barba* can be considered "expensive". The vast majority of them (n = 14) comprise multi-unit facilities with up to four chambers each (e.g. Tomb 313).

These tombs comprise elaborate burial structures measuring predominantly over 2.00m in chamber length and width (n = 16). Dromoi do not usually exceed 2.00m length and width. In general, the tombs are larger that their corresponding ones at Bellapais-*Vounous*, but they were used to accommodate a greater number of individuals.

No correlation between energy expenditure and grave equipment could be established for Lapithos. Simply the majority of tombs contain the majority of finds. It would seem, therefore, that this cemetery also can be considered as a "rich" funeral assemblage. Another innovative feature related to tomb typology is the appearance of the so-called "kidney-shaped" tomb (SCE IV: IA). This type of facility consists of a large chamber, that on ground plan resembles the shape of a kidney. Its first occurrence in Lapithos heralds this type of chamber tomb which appears in its full blown form later in the Bronze Age. A series of internal chamber features, like the benches and the niches in

which burials were deposited comprise entirely new aspects of mortuary architecture and arrangement for earlier BA Cyprus and merit attention.

The spatial information missing for these tombs may be of significance; it is indeed possible that differentiation in these domains may have been expressed in terms of space, although it is widely held that the extra features (benches and niches) simply served to create more space in the chambers for further interments.

In terms of energy flow, no clear pattern of differentiation can be established. The tombs presented minor differences in construction, thus indicating that energy expenditure was not employed to differentiate among the deceased individuals.

5.13 Patterns of Mortuary Differentiation at Lapithos-*Vrysi tou Barba*

The analysis of the Lapithos tombs indicates patterns of differentiation that are predominantly related to horizontal, rather than vertical social distinctions. Differentiation on a gender basis can be established for Lapithos, as for Bellapais, on the grounds of both the quantity and the quality of furnishings interred with each gender.

This pattern of horizontal distinctions is clearer at this site mainly due to the occurrence of the "male set" described earlier, which may comprise a correlate of male inhumations on the site. Whereas in Bellapais, gender differentiation could be postulated on the basis of the quantity of equipment, here the quality and character of the artefacts further distinguishes the sexes. It is interesting to note that weaponry cannot be considered as a male attribute in Lapithos either, since at least one female skeleton (BurNo 25) was found in association with a knife; it may be, therefore, that the study of gender differentiation in East Mediterranean burial domains, and particularly in Cyprus, should be re-orientated towards the examination of other variables that might have served as designating male status. As a rule, it can be maintained that on the basis of the Cypriot data, metal weapons cannot be considered as denoting exclusively male status.

Vertical social differentiation cannot be easily established for Lapithos. Apparently all individuals were not equipped with the same quantity of artefacts. However, patterns of deposition do not indicate major differences among the tomb groups. All tombs were furnished in accordance to the number of individuals they accommodated.

There is some variation regarding individual inhumations; the female burial of Tomb 306.1 was accompanied by two plank idols and a knife, whereas the three females of Tomb 301.2 were not furnished at all. The degree of variation may be misleading due to post-depositional disturbances on the site. It must be borne in mind that associations cannot be regarded as conclusive, but rather tentative indicators of certain trends in mortuary practices.

It can be suggested that unequal treatment of individuals of the same sex can be observed in the Lapithos contexts more clearly than at Bellapais. However, it seems that all members of the community had access to resources. To maintain that variations in the number of objects interred with each individual are indicative of high/low personal statuses, is a rather simplistic manner of interpreting the data. The question raised by Tainter (1978) with regard to the sensitivity of grave furnishings in indicating inequalities in the community, must again be brought into focus.

Our attention must shift to questions of more substantial nature. In Lapithos a number of variables may have been used to denote differentiation in burial contexts. These, in all probability, include post-mortem treatment (squatting vs dorsal position), nature of finds rather than quantity, structure of mortuary facilities and internal arrangement of skeletons and artefacts rather than energy flow, changing patterns of mortuary symbolism and ritual rather than individual associations.

In view of these, a few points relating to the variability attested on the site must be made. First, it is evident that the deceased of the Lapithos community were treated differently according to gender and probably on the basis of other horizontal distinctions,

that it is not possible to detect in the record. Post-mortem treatment comprises one of those undetected distinctions that may not necessarily relate to social stratification.

Second, patterns of mortuary symbolism point to the increased deposition of figurines in these contexts and indicate change in burial ritual. This change may be due to regional and chronological factors but it hints at social change too. Third, the consumption of artefacts of adornment as opposed to weaponry is indicative of changes in patterns of metal deposition. Increased attention should be paid to this changing use of symbols and their relation to the structure of the society.

Finally, mortuary architecture on the site demonstrates a few new features and a preference for multi-unit burial facilities that could accommodate a greater number of individuals. The reasons dictating this development probably relate to the structure of the society rather than social stratification. The total number of tombs (n=18) and skeletons (n=108) in the sample point to an average of ca. 6 individuals per tomb. The corresponding estimate at Bellapais is ca. 1-2 individuals per tomb. The implication is that the Lapithos tombs may be considered as of a more communal character than their Bellapais counterparts. This model would explain the minimisation of social differentiation in these domains and the ideal portrayal of a community without significant social distinctions.

The fact that variability on the site does not seem to be high does not imply that living society was not differentiated, however. All variables indicate that differentiation was minimal in burial contexts. This ideal portrayal of the dead may relate to a kin-based small scale society where egalitarianism was still deeply embedded.

To examine the question of complexity, the mortuary evidence from Lapithos and Bellapais shows that if social differentiation is considered as a correlate of complexity, then either complexity does not increase in the EC, or the mortuary evidence does not reflect the situation in an obvious way. This point is further discussed in the concluding part of the chapter, after the analysis of all the cemeteries is completed.

5.14 The Cemeteries of Vasilia-*Kafkalla* and Nicosia-*Aghia Paraskevi*: Analysis of Mortuary Variability

The cemetery of Vasilia-*Kafkalla* is situated in the northwest part of the Kyrenia Range, west of Lapithos. The tomb groups at the site were partly uncovered by the SCE project on the island, and a small number of them published by Hennessy (1988). The site is rather remote and comprises a very distinct burial group, mainly characterised by its elaborate mortuary architecture. All of the tombs have been severely looted and as a consequence the deposits are extremely disturbed. No anthropological information could be obtained from these contexts.

The whole cemetery complex probably consists of a greater number of tombs, but the ones published and included in this sample are very few (n=4). Doubts have been raised with regard to the chronology of these tombs which might be assigned to the MC period (Swiny *pers.comm.*). The main reason for the inclusion of the Vasilia tombs in the sample is the relative absence of evidence for the earlier part of the Bronze Age. In the context of the present research these tombs are considered to be generally later than the rest of the groups examined.

The site of *Aghia Paraskevi* lies in the central part of the island, a few kilometres outside the capital Nicosia. The site comprises a number of severely disturbed and extensively looted tombs. At the time of publication (Kromholz 1982) they survived to a very fragmentary state, most of them almost completely eroded. Today most of the burial ground lies under the Hilton Hotel and adjacent structures of the modern city. Most of the material uncovered from the site is found in the Cyprus Museum. These were the archives used by Kromholz in order to publish the relevant material.

Very few tombs were successfully identified in the Cyprus Museum archives and these are the ones included in the present research. The selection of the site for examination was made mainly on the basis of regional criteria. This is because it comprises one of those early BA tomb groups situated in the centre of the island and thus provides topographical control over the examination of Cypriot cemeteries. Both sites

are examined together due to the small number of tombs excavated in each of them. The relevant sets of DQCF is described in the following section.

5.15 Data Quality Control Factors

For the tombs at Vasilia the set of DQCF can be summarised as follows:

1) The mortuary sample from the site is very small to treat in any statistical terms. For a number of scholars the Vasilia group should not even be considered (e.g Swiny 1986) in the examination of the EBA in Cyprus. In the present research, the validity of the results of the analysis is considered as relative and treated as such in the general discussion on the rise of complexity on the island.

2) All tombs have been looted and, therefore, the quantity of the grave equipment is not considered as representative of the original furnishings in the tombs. Grave inclusions in these contexts only hint at the quality of the original equipment.

3) Registration numbers of finds are repeated in the publication and, as in the previous cases, the same numbers were retained for cross-reference purposes. Decimal points are used to discern among different finds.

4) Measurements of the tombs were taken from the published drawings and sections.

5) Sherdage is not recorded, since it does not enhance our knowledge of the pottery repertoire of the tombs.

6) All tombs have been dated to the EC III-MC I in the original publication, but given that the chronological argument is still pending this date is not considered.

7) No anthropological data is published. Information as to number, positioning, sex/age of the skeletons is not available.

The set of DQCF for the site of *Aghia Paraskevi* is the following:

1) All graves for which no grave cut is defined are excluded from the research since it is impossible to reconstruct the type of mortuary facility used (e.g AP 2, 8, 12, 14 and 14a).

2) Registration numbers of artefacts are duplicated, however, they are retained to facilitate cross-reference. Decimal points are used to distinguish among finds under the same registration number.

3) The stone described as either "green stone", or "mottled blue stone", in the publication (Kromholz 1982), is in all probability picrolite and recorded as such in the present research.

4) Material from sieving is not included since it comes from the fills of the graves which cannot be considered as "safe" deposits. A note on the type of material is kept for general research purposes and further discussion.

5) Sherdage mended into complete vessels is not included since the provenance of sherds is unknown and may have derived from the fills of the graves.

6) Tomb 1 (Epaminondas str.) is recorded as Unit 1.1 in the sample in order to avoid confusion with Tomb 1 which is the first grave discussed in the publication (see Kromholz 1982).

7) All tombs for which no identification was possible on the basis of the Cyprus Museum registers are not included. Material from these graves is found in the Museum storerooms, however, no ground plans exist and the location of the tombs is virtually unknown. To avoid further bias and confusion it was considered best not to examine these graves.

The difficulties encountered by Kromholz (1982: 1-9) in her study of the material and compiling of a comprehensive catalogue of tombs and finds are discussed in detail in her publication and no more discussion is deemed necessary here. It must be noted that the site is so severely disturbed and eroded that there is a serious possibility that the mortuary architecture consisted of chamber tombs, rather than pit graves as they are

recorded now. Indeed, a closer look at the available drawings indicates that the grave cuts were rather large to be pit graves. In addition, some ground plans seem to indicate the existence of a shaft continuing into what, must have once been, the burial chamber, instead of the main burial pit.

The occurrence of multiple inhumations might also be considered as factor pointing to the use of chamber, rather than pit, tombs. If this is, indeed, the situation, then the shafts must have been completely eroded and this crucial piece of information is unfortunately lost forever.

5.16 Chronology and Stratigraphy of Tomb Groups and Patterns of Tomb Use

For the site of Vasilia, the chronology was established initially on the basis of the ceramic and metal sequences. These were believed to indicate the EC III period. Most of the metal types uncovered have their best parallels in EB IV southern Levant (Swiny 1986) and the ceramic repertoire includes diagnostic Philia/EC shapes (Swiny 1986) such as bottles, jugs and bowls. However, Swiny has repeatedly expressed utmost caution towards the Vasilia material (Swiny 1985: 23), which he considers of a later, MC-LC date. Pending full and final publication the Vasilia tombs are, therefore, somewhat controversial as to their date. Their funerary architecture, sophisticated metalwork and ceramic equipment can be parallelled at the site of Lapithos-*Vrysi tou Barba* for which a lower chronology has been proposed (Chapter 5 *supra*). Due to the small number of excavated and published tombs the evidence cannot be considered conclusive.

The stratigraphy of the tombs has been seriously disturbed by both natural and human factors. As a consequence, much information is missing and the quantity of furnishings produced cannot be considered as representative of the original inclusions. It is, however, indicative of the quality and type of equipment, as well as foreign relations (e.g alabaster vessels in Vasilia Tomb 103).

For the site of *Aghia Paraskevi* MC I/II and III dates have been suggested on the basis of ceramics. A few tombs included in the sample have been dated to the EC with the possibility of reuse during the MC period. The nature of the deposits is so mixed and disturbed that tighter chronological control could not be established. On the basis of the available evidence the tombs indicate a later EC chronology, perhaps contemporary to a certain extent with the Lapithos group. The intra and inter-tomb stratigraphy has been difficult to monitor due to the nature of the deposits and relationships have been impossible to establish. The chronology is based predominantly on the ceramic repertoire.

Patterns of tomb use on both sites indicate the use of the facilities mostly for multiple inhumations. At Vasilia, after the insertion of the skeletons in the burial chambers, a blocking wall was erected to seal the chamber. Information as to how the graves were sealed at *Aghia Paraskevi* is not available. The number of burials in each tomb from either site is virtually unknown and not even a rough estimate can be produced.

Bearing in mind the numerous chronological and stratigraphic problems on these sites, the analysis of these tomb groups is considered as a supplement to our knowledge. Patterns of mortuary differentiation cannot be produced from the analysis of such fragmentary data. Therefore, it was considered best not to discuss such patterns until the end of the chapter, when the information from all the cemeteries is synthesized and discussed in relation to existing arguments on social differentiation and complexity.

5.17 Analysis of Mortuary Variability

5.17.1 Biological and Demographic Information

From the Vasilia-*Kafkalla* cemetery no anthropological data has been produced. Nicosia-*Aghia Paraskevi* has produced a small number of burials for which only positioning and alignment are known on occasion. Gender and age have not been specified.

5.17.2 Treatment of the Deceased and Methods of Disposal

Out of ten *Aghia Paraskevi* tombs (n=10) included in the sample, only four (n=4) produced inhumations. In Tomb 1 the burial was single, in extended position, aligned E-W. Tomb 5 produced another single inhumation in crouched position, aligned N-S and facing E. Finally, in Tomb 13 a double (successive) burial of two disarticulated skeletons was uncovered. The latter raises a number of questions as to post-mortem treatment; it is equally possible that the skeletons were not originally disarticulated, but they were uncovered in such a state due to severe disturbance in the tomb.

It may be noteworthy that the two single burials excavated (Tomb 1 and Tomb 5) were not found associated with any artefacts except for ceramic vessels. Again the evidence cannot be considered conclusive. The meagre information as to post-mortem treatment has parallels in the other EC-early MC cemeteries discussed in the present research.

5.17.3 Grave Equipment

At the site of Vasilia-*Kafkalla* a number of stone (n=4) and metal objects (n=11) were uncovered along with the ceramic furnishings (n=235). The majority of non-ceramic artefacts were made of copper (n=11). By far the most well equipped was Tomb 1 which revealed two picrolite objects, a pounder and a lid and an almost complete male kit like the ones found in the Lapithos tombs. It consisted of one sword (n=1), one dagger (n=1), three armlets (n=3), one razor (n=1), one rivet (n=1) and a couple of toggle pins (n=2).

Pottery comprised jugs, bowls, amphoras, a jar and a platter of RP and WP wares. Although, due to looting and disturbance, the group of artefacts may not be representative of the original grave set, the kit seems to be fairly complete in comparison to similar contexts from Lapithos.

The other Vasilia tombs produced occasional finds, a pair of tweezers in Tomb 2 (n=1), a toggle pin in Tomb 101 (n=1) and two alabaster vessels (a bowl and a jug) in Tomb 103 (n=2). Almost all of the tombs, apart from Tomb 2, yielded considerable numbers of FW pottery comprising one pithos, bottles, bowls, jugs, amphoras, dishes and lamps. There seems to be a conspicuous association between the male kit and bottles/flasks, observed in all the cemeteries that have been examined here. However, no clear pattern of such an association has emerged due to the fragmentary nature of the data.

The ratios between metal and other artefacts in the Aghia Paraskevi tombs are more variable (Fig. 44). The most well equipped grave on the site was Tomb 4 which is dated to the EC period. It contained five copper earrings (n=5), one spindle whorl (n=1) and an amount of picrolite "fish amulets"[14] (n=10) which occur very frequently on the site. It also contained a number of ceramic vessels (n=16), RP I, WP I, BP and RB/B, namely bowls, bottles, jugs , two offering stands, a teapot and a lid. Of the other graves, Tomb 13 dated to the MC III yielded two copper pins (n=2) and four lead hair rings (n=4). In terms of pottery inclusions (n=11) it contained mainly bowls and juglets, a miniature jar and a tankard.

Two other tombs dated to the EC, Tombs 9 and 11. One produced a couple of metal artefacts (a knife and earring) (n=2) and picrolite "fish amulets" (n=6), and the other a mortar, a rubber and a spindle whorl. Pottery (n=17) in Tomb 9 consisted of bowls, a jug , an amphora and an offering stand while Tomb 11 (n=12) also contained a spouted basin.

Due to severe erosion, disturbance and plundering it cannot be certain that Tomb 4 was indeed the "richest" grave uncovered at the site. However, a distinct change in patterns of deposition may be hinted at; two points related to the material culture of the *Aghia Paraskevi* tombs can be made.

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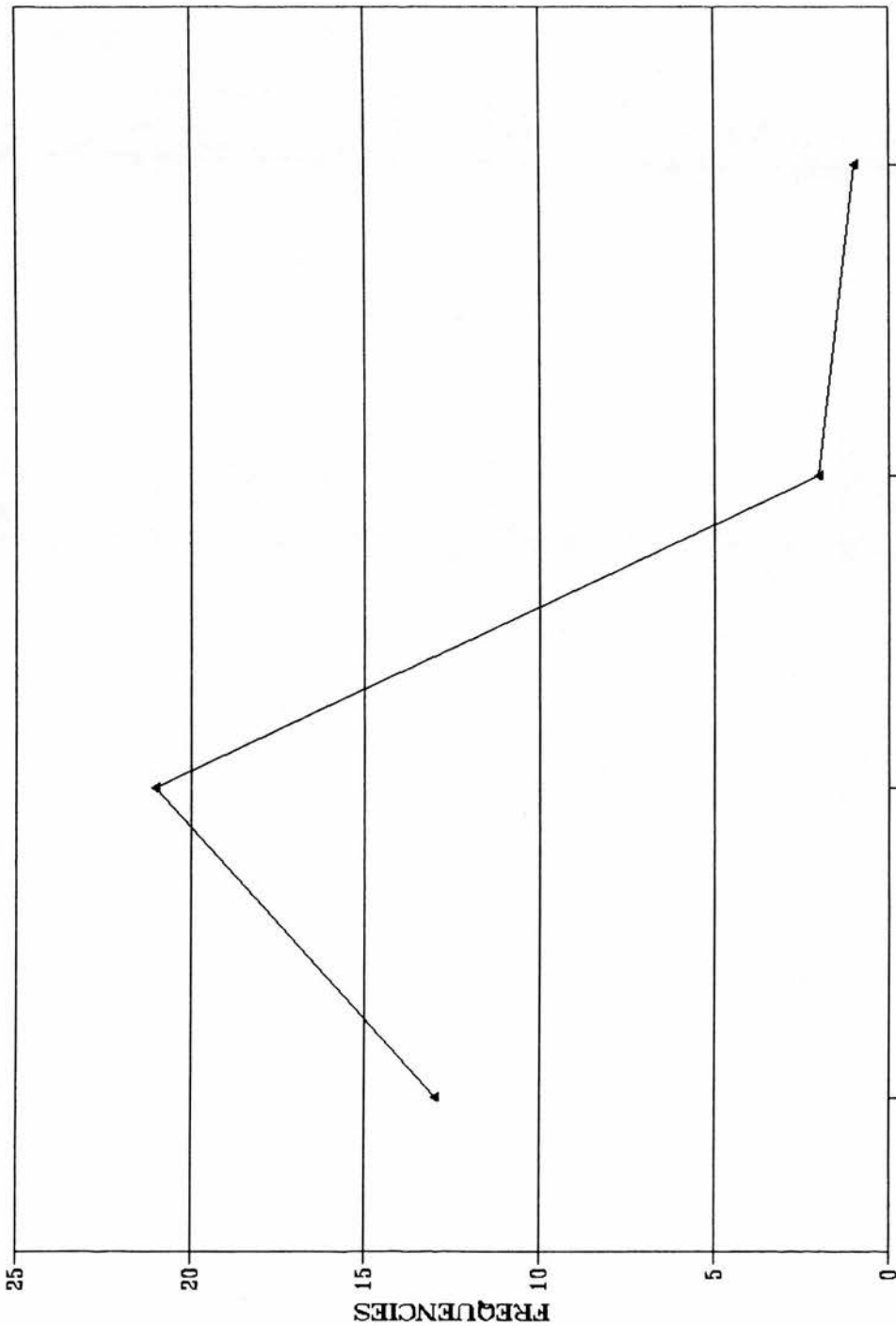
[14]Parallels for this type of amulet come from LChalco Kissonerga.

Fig. 44 NICOSIA-AG.PARASKEVI
INDUSTRY FREQUENCIES



One is that the metal types included in these contexts are predominantly earrings and hair rings, rather than metal weapons. The second is the striking number of picrolite "fish amulets" from the site. This does not seem to have parallels anywhere else on the island, apart from LChalco Kissonerga.

Evidently, these differences may be due to chronological factors. However, regional preferences are suggested by the inclusion of the picrolite amulets. The very continuation of exploitation of picrolite sources is surprising, particularly, if a later EBA date is adopted for the *Aghia Paraskevi* assemblage, in view of the complete cessation of picrolite in mortuary contexts after the end of the Chalcolithic period on the island, with the exception of this site.

In addition, the occurrence of items like hair rings made of solid lead, which is not found naturally on the island, implies foreign relations in a cemetery that has been traditionally considered as "poor". The point merits further discussion since there are, at least, two compelling indicators raising doubts as to the characterisation of the site as "poor". The first is related to the mortuary architecture on the site which on the basis of the evidence is rather doubtful. If some of the graves at Aghia Paraskevi were chambered then energy flow measures for the site must be altered considerably.

Secondly, the amount of grave equipment derived from these contexts is biased to such an extent that a comparison with the "rich" northern tomb groups is one of apples and oranges. It is possible that the tombs at this site originally contained a considerable quantity of material equipment.

5.17.4 Spatial Arrangement

This piece of information is lacking for both cemeteries. No data as to the internal or external spatial arrangement of the tombs has been published. In addition, the sample is so small that any arrangement indicated would be of no significance.

5.17.5 Description of Mortuary Facilities: Tomb Typology and Energy Expenditure Measures.

The chamber tombs at Vasilia-*Kafkalla* comprise some of the most elaborate expressions of funerary architecture on the island. They all consist of large chambers, usually measuring more than 3.00m in chamber length and width, and elongated *dromoi* most of which exceed 7.00m length and 2.00m width. The burial chambers are usually blocked by built walls in the entrance. Much energy has been spent on their construction. When compared with other examples of chambers from the island they clearly constitute a unique phenomenon. The closest parallels are to be found in Lapithos and in later MC tombs in Cyprus.

The most well equipped tomb at the site, Tomb 1, that contained the so-called male kit, is also the largest one in terms of dimensions. More data would be desirable to elucidate the situation and derive a pattern. Nevertheless, the possibility exists that such a correlation may indeed have existed.

At *Aghia Paraskevi* the nature of tomb typology is open to debate due to the eroded nature of the site. In the present research these tombs have been recorded as pit graves; They measure more than 2.00m in width and less than 2.00m in length. Even as chamber tombs they cannot be considered as large as those of Vasilia and they must have accommodated a smaller number of individuals. The largest tomb is Tomb 9 dated to the EC; it measured 2.75 x 2.27 x 1.43m. No correlation seems to be suggested between energy expenditure and grave equipment, but the sample is too small and biased to base any results on. In terms of energy flow, the *Aghia Paraskevi* tombs are generally less expensive than other contemporary groups.

Patterns of mortuary differentiation cannot be detected with reference to the two specific cemeteries. The information they provide serves to highlight some aspects of EC-MC mortuary programmes and as such it is discussed in the concluding part of the chapter.

5.18 The Site of Kissonerga-*Mosphilia*: Analysis of Mortuary Variability

The site of Kissonerga-*Mosphilia*[15] lies in the southwestern part of Cyprus in the Paphos District. It comprises the largest pre-Bronze age site on the island (Peltenburg 1991). Kissonerga has also provided the longest sequence of occupation running from the Late Neolithic period down to the beginning of the EBA.

The most significant post-depositional processes affecting the site have been terracing and extensive plowing. This has seriously affected the latest deposits. Recycling of material and erosion have imposed constraints upon the establishment of stratigraphic relationships among the various units on the site. However, the application of a matrix form of analysis, including the isolation of vertical sets of occupational deposits and the study of the ceramic sequence have provided a close chronological and stratigraphic control that consists of five periods. Relevant to the present research are only three, namely Period 3 (MChalco), Period 4 (LChalco) and Period 5 (EBA). Radiometric dates for Kissonerga indicate a time span from 4500 - 2300 calBC (Peltenburg 1991).

The mortuary evidence from the site is important in terms of issues of continuity and transition from the Chalcolithic period to the Bronze Age. The site constitutes a settlement in which, during the earlier periods, occasional burials were made, but during the LChalco was extensively used as a formal burial ground for a contemporary occupation site (Peltenburg 1985; 1988). It is not surprising, therefore, that the majority of tombs from the site date to Period 4. This major transformation of the site, in the transition from the MChalco to the LChalco, prior to the erection of new habitation units on the site, and the co-existence of both burial and habitation units during the LChalco provides a unique record in pre-BA and EBA in Cyprus, when the limited settlement evidence provides discomfort for researchers.

The main reasons for the selection of the site have been outlined in Chapter 2. Nonetheless, it must be added, that in terms of both regional and chronological factors,

[15]The site has been excavated by the Lemba Archaeological Project (LAP) under the direction of Prof. E.J. Peltenburg. The final publication of the site with contributions by other LAP members is forthcoming.

related to continuity and transition and the coupling of the settlement and mortuary evidence, the site provides an excellent record. The analysis of mortuary variability from the site is followed by an extensive discussion on patterns of mortuary differentiation attested mainly for the LChalco period, and in conjuction with the available settlement evidence.

5.19 Data Quality Control Factors

Since the data comes from a recent, well excavated and reported site there are minor problems related to data quality control. A full catalogue of all the graves and discussion on mortuary practices appears in the final publication of the site (Peltenburg *et al., forthcoming*).

It must be noted that the results presented in this thesis are based on revised (in comparison to Baxevani and Papailiopoulos 1992), yet preliminary data from the site, since data analysis is not yet complete at the time of submission. Issues related to the chronology, stratigraphy, ceramic sequence, anthropological[15] information, faunal and floral data from the tombs are still pending final work. It is, therefore, of importance to note that information may differ slightly between the present research and the final publication.

5.20 Chronology and Stratigraphy of Tomb Groups and Patterns of Tomb Use

Most of the Kissonerga (KM) graves are dated to Period 4 with a few dating to Period 3. There are a couple of tombs dated to the EChalco (e.g. KM 554). The stratigraphy of the graves has been affected by the erosion on the site, largely due to rainfall. The contents are mostly disturbed, or mixed to an extent and skeletal remains

[15]Anthropological data related to age are based on Dr D. Lunt's preliminary work on the dental remains from the tombs.

are usually not well preserved. In some cases preservation has been very good, but this usually refers to Period 4 chamber tombs which are preserved in better condition as a rule. The stratigraphic relationships between the settlement structures and the tombs, and between the tombs themselves have often been somewhat difficult to establish. However, the dates attributed to the graves and their stratigraphy have now been finalised on the basis of both the stratigraphic and the ceramic sequences.

Patterns of tomb use indicate a variety of mortuary practices and changes in these practices during the different periods represented on the site. During the MChalco, the number and extent of habitation units indicates a flourishing population at Kissonerga, however, the burial data do not correspond to such a population.

It has been suggested (Peltenburg 1991) that at least some of the burials may have taken place elsewhere, outside the excavated area of the settlement. This view is further supported by the fact that most of the MChalco graves comprise child burials, rather than adult ones; adults appear in the funerary record of Kissonerga during Period 4.

Patterns of tomb use also indicate that during Periods 3 and 4 multiple inhumation was being practised. Some of the tombs, or chambers, contain single interments. However, multiple contemporary or successive inhumation was widely practised on the site. In many cases, the presence of more than one individual in the grave domain is only indicated by the dental evidence (Peltenburg *pers.comm.*, Lunt *pers.comm.*). Contrary to what was, at the time of their excavation assumed to be the correct number of burials, further laboratory analysis now indicates increased numbers of individuals in some of these contexts. In MChalco grave KM 563, for instance, a typical Type 2 deep shaft grave, in the upper and middle fills, teeth of different individuals were uncovered. The skeletons of two children survive *in situ* in the lower fill, in clear association with their grave goods (Peltenburg 1992a). This pattern of multiple inhumations, of which some may have been completely eroded and subsequently

identified in the laboratory, points to the degree of detail and caution exercised in the excavation of these contexts.

The complex nature of these deposits is further complicated by the evidence for secondary burial being practised on the site. It was considered appropriate to discern between primary and secondary burial modes in the final publication. The information is not yet finalised.

Period 4 and 5 tombs indicate a preference for single burials in chamber tombs and pithos burials - the latter considered intrusive in the site (Peltenburg 1991). To reiterate, the Kissonerga record provides a fine grained chronological and stratigraphic control over the funerary evidence and the necessary time span to monitor transition and change during these formative periods in Cyprus.

5.21 Analysis of Mortuary Variability
5.21.1 Biological and Demographic Information

The skeletal population sample produced by the Kissonerga graves is currently being studied by the LAP specialists. The data used in the present research derive from a preliminary analysis of the dental record by Dr D. Lunt. On the basis of this information, age of the skeletons has been determined, however, sexing of the sample is still pending.

A total of 78 interments were excavated at Kissonerga. Preliminary population statistics (Fig. 50) show that the highest percentage of the deceased were children, 1-10 years old and infants 0-12 months old (Baxevani and Papailiopoulos 1992), a fact that has been repeatedly discussed by Dr Lunt in her reports and recently presented in fuller detail including the dental sample from Lemba-*Lakkous* (Lunt 1993, *forthcoming*). The rest of the population consisted of adolescents (n=6), young adults (n=7), adults (n=5) and mature adults (n=2).

There is a poorer representation of the adult population during the MChalco (Period 3) at Kissonerga and on the basis of this observation Peltenburg has suggested

Fig. 45 KISSONERGA PERIOD 3
Position of Skeletons

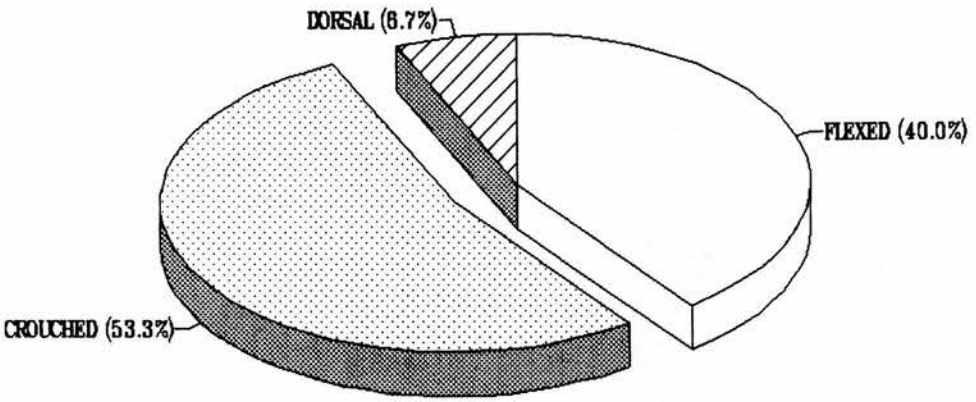


Fig. 46 KISSONERGA PERIOD 3
Type of Burial

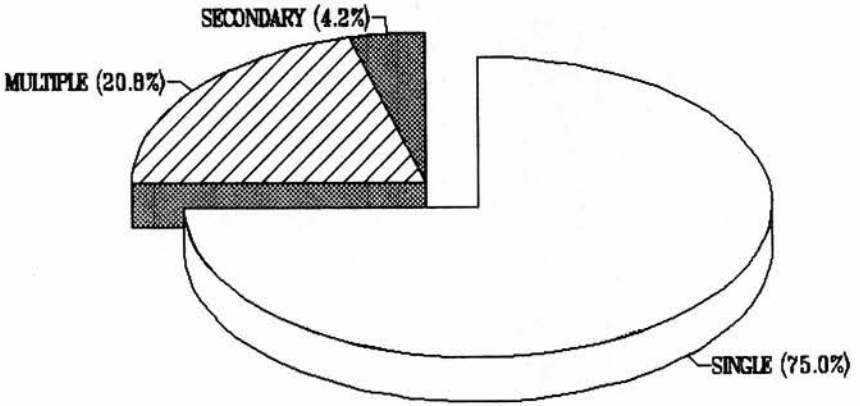


Fig. 47 KISSONERGA PERIODS 4-5
Type of Burial

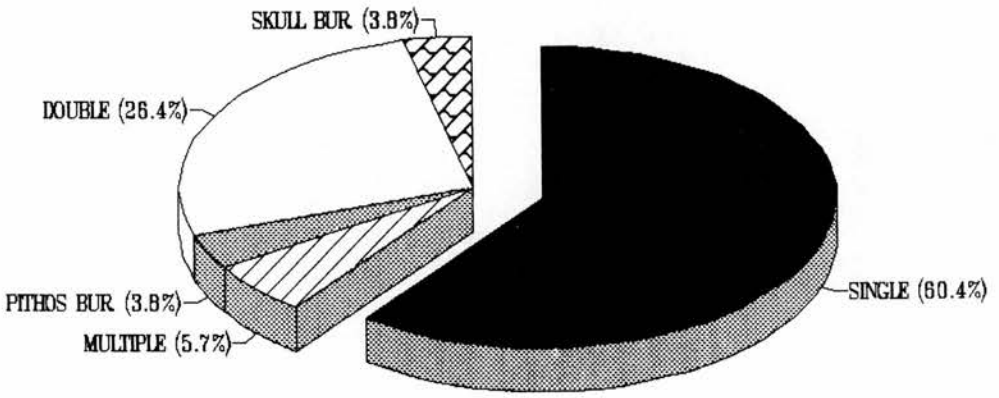


Fig. 48 KISSONERGA PERIODS 4-5
Position of Skeletons

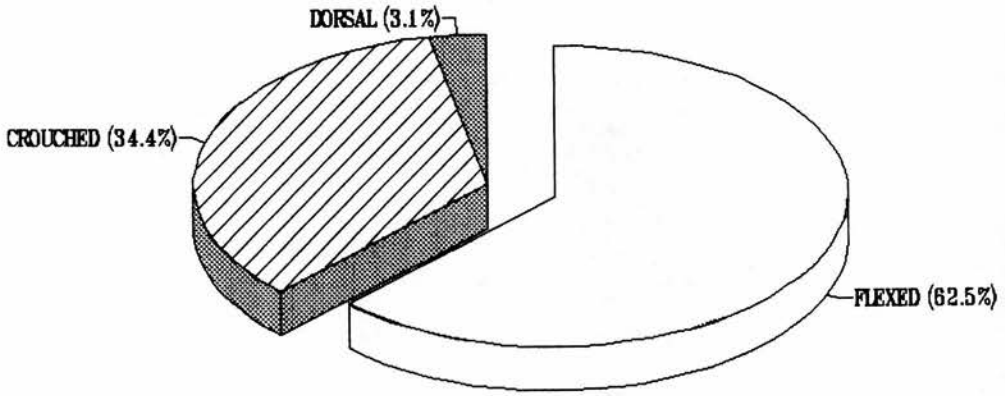


Fig. 49 KISSONERGA PERIODS 4-5
AGE GROUP REPRESENTATION

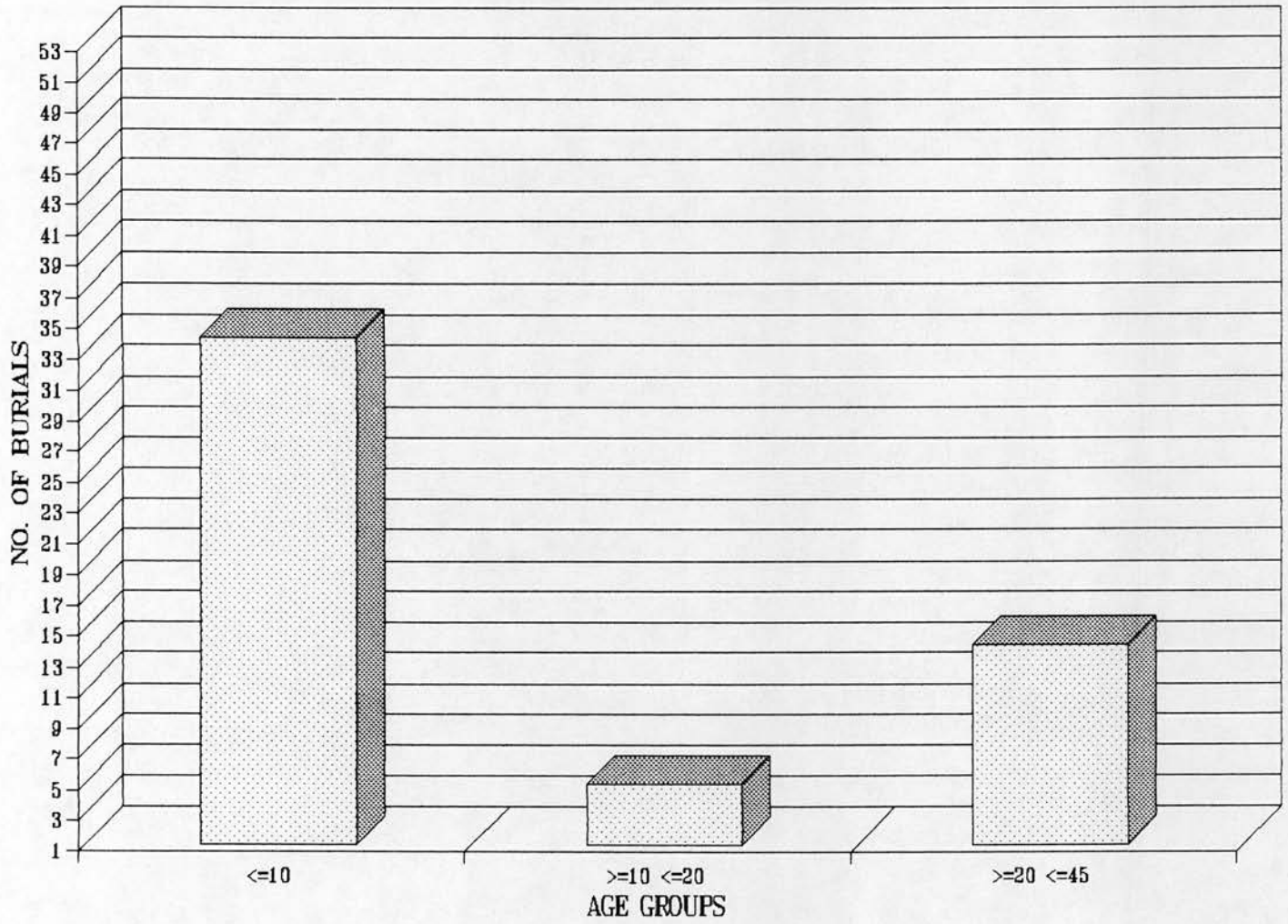


Fig. 50 KISSONERGA
AGE OF INDIVIDUALS

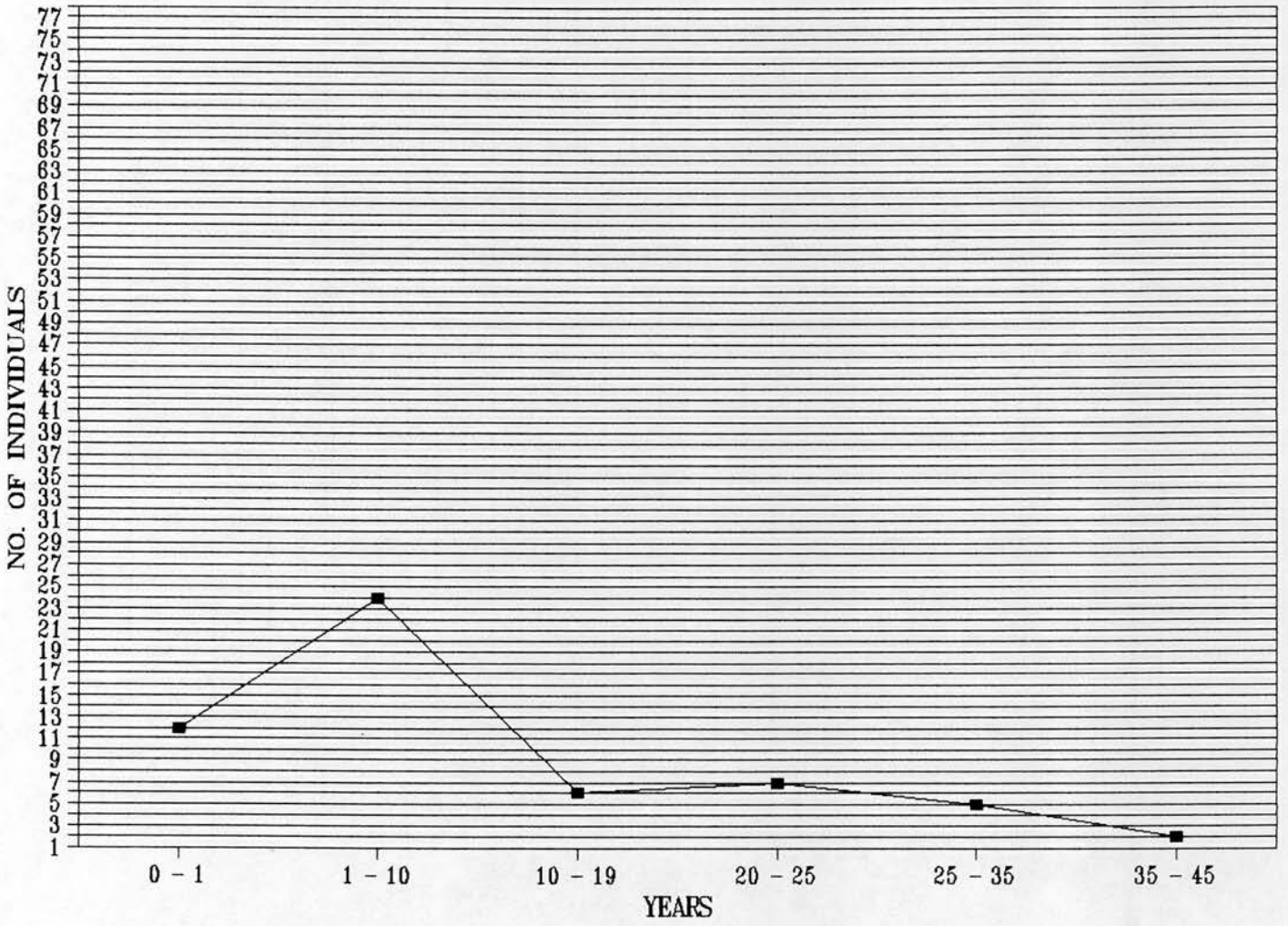
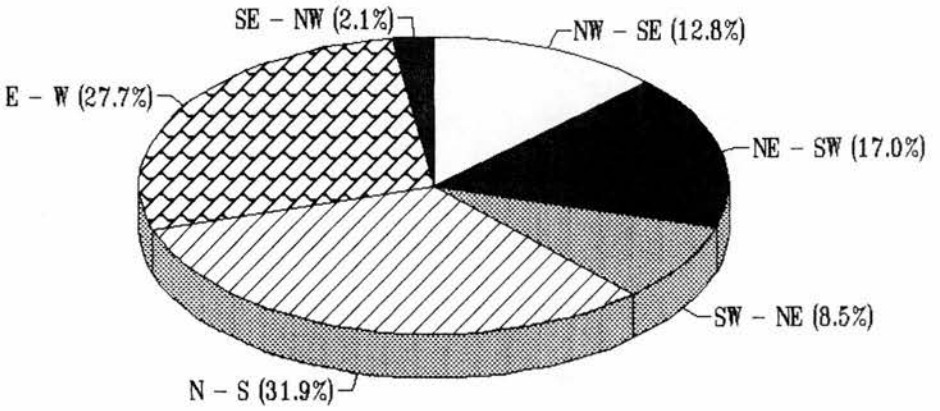


Fig. 51 KISSONERGA
Alignment of Burials



There is a poorer representation of the adult population during the MChalco (Period 3) at Kissonerga and on the basis of this observation Peltenburg has suggested that adults may have been buried elsewhere, outside the main excavation area (1991). This pattern changes in Period 4 (Fig. 49) when the representation of adults is better established and there is a decrease in children's burials.

Dental pathology has been identified for a few of the mature individuals from the site who present extensive periodontal disease and some of them extensive tooth loss. The size of the mortuary population cannot be considered as representative of the population size of Kissonerga (Peltenburg 1991). At any rate it is maintained that the excavated part of the site is not entirely representative (Peltenburg 1991). Ki ssonerga has been a densely inhabited area, particularly during the LChalco with population estimates reaching 1000 individuals (Peltenburg 1991; Manning 1992, in press). Although this may be an inflated number, due to the occupation of only parts of the site at any one time, it remains the largest and most continuously inhabited settlement of the Chalcolithic period. The skeletal sample excavated argues in favour of an increase in population size during Period 4. However, it is still not representative of the living population and we must allow for a considerable number of burials made outside the main excavation area throughout the periods of occupation.

5.21.2 Treatment of the Deceased and Methods of Disposal

The skeletal sample (n=78) has provided information with regard to post-mortem treatment. According to this, the majority of the skeletons (n=46) were in either flexed or crouched position, lying on their right side; there were at least two interments (n=2) in dorsal position.

The norm for alignment seems to have been either a N-S (n=14), or an E-W direction (n=13) (Fig. 51). Significant variation existed in the alignment and facing of the

skeletons. However, no difference existed in the forms of alignment in relation to positioning of the individuals. The only correlation established is between an E-W alignment and grave architecture in the case of chamber tombs and Type 2 graves. This is significant in view of the chronology of chamber tombs and indicates change in the funerary custom in the LChalco period. More problematic is the interpretation of Type 2 graves which also occur in the MChalco period.

Most of the burials comprised single interments (n=51), followed by double successive (n=14) and multiple inhumations (n=8) (Figs 46, 47). The majority of single individuals were inhumed in pit/shaft graves (Types 1, 2 and 5). Five graves (n=5) of the types mentioned above contained multiple interments. In the chamber tombs (Type 3) the slight majority were double and multiple burials.

Other aspects of post-mortem treatment include the evidence for the complete removal of the skeletal remains in order to reuse the space for new interments (Peltenburg 1992a). Secondary inhumation has also taken place in small pits containing a fragmented skull and very few, or no bones. It is not, as yet, clear what the pattern of secondary and partial interments was, particularly since the nature of these deposits was quite confusing (Baxevani 1991). Nevertheless, it seems that we can now discern among primary, secondary and partial inhumation as different post-mortem rules[16].

In terms of chronology a total of 23 tombs attributed to Periods 3a, 3b and transitional 3-4 have produced 24 burials. The majority are single inhumations (n=18) in crouched and flexed positions (n=14) (Fig. 45). Age group representation indicates that these were predominantly children under the age of 10 (n=22).

For periods 4, transitional 4-5 and 5, the total number of tombs is 50 with a total of 53 inhumations. Again most of them comprised single interments (n=32) in flexed and crouched positions (n=32) (Fig. 48). The difference in positioning of the skeletons is apparent between the two main Period Groups, with a preference for more tight,

[16]This piece of information will be available in the final publication of the site (Peltenburg *et al. forthcoming*).

crouched burials in the earlier periods and a more natural, flexed mode for the later inhumations.

Age group representation for Periods 4-5 indicates that the majority (n = 34) were children under the age of 10 (Fig. 49), but a significant number of adults (n = 14) appear now in the record. It must be noted that excavation in the NE of the main area during the more recent seasons (1990-1992) has yielded single adult inhumations dated to Period 3a, a fact that corroborates Peltenburg's argument that during the MChalco adult inhumations were taking place outside the limits of the main excavational area (Peltenburg 1991).

Chamber tombs contained, almost exclusively, adult individuals with the occurrence of a child's skeleton buried with a group of adults in Grave 505 (Peltenburg 1985). It is noteworthy that there is no adult interment in Type 2 graves. Children were inhumed in all types of pit/shaft tombs (Baxevani and Papailiopoulos 1992).

The correlation between age and grave type is notable. There is an association between certain adult inhumations and chamber tombs, when the majority of interments occur in pit graves. There is an emphatic association between certain children and Type 2 tombs during the MChalco, when again most burials are found in simple pits (Baxevani 1991). This pattern is further discussed in this chapter in relation to changing patterns of mortuary ritual and variability on the site.

Post-mortem treatment is a revealing aspect of mortuary variability on the site, particularly when correlated to other variables. It provides information on changing patterns of mortuary ritual from one period to another and demonstrates the use of different burial treatment programmes to differentiate among the deceased population.

5.21.3 Grave Equipment

The examination of the furnishings included in the KM graves follows the chronology of the mortuary contexts and is, therefore, divided into two main Period Groups (Period 3a/3b-4 and Period 4/5). During the MChalco, the main artefact industries in Kissonerga consisted of stone objects (n=24), pottery (n=3) and various classes of organic materials (n=48) such as shell and bone.

The majority of the grave inclusions were made of organic materials, predominantly dentalium shells (n=41) which were deposited in these contexts in vast numbers during Period 3. Peltenburg has repeatedly discussed this association in relation to children's burials (Peltenburg 1987; 1992a). This association is further emphasised by the correlation between the above attributes and grave architecture (Type 2 graves) (Fig. 52). However, the only good example comes from one tomb on the site, Gr.563 (Peltenburg 1992a) where a multiple inhumation of children contained picrolite figurines and dentalium necklaces. Recent investigation in the NE of the main excavation area yielded a number of 3a adult graves with dentalia. Dentalia are not solely associated with child burials. Adults were also inhumed with the same kind of grave goods during this period. The association is noteworthy in terms of its implications for the status of certain children in a Chalcolithic community.

It can be suggested, as a whole, that dentalia as much as picrolite objects, were an integral part of MChalco mortuary ritual, particularly in view of the fact that very few such items have been excavated in non-mortuary contexts (Baxevani and Papailiopoulos 1992) (Fig. 54). This can be regarded as conclusive. Further the association between children and the dentalium/picrolite grave kit suggests at least that certain children were not excluded from formal burial and were ascribed some kind of status in the community.

Other organic items included the occasional occurrences of bone tools (n=2), a needle fragment (n=1) and a toilet shell (n=1) (Gr 554) containing traces of malachite (Peltenburg 1991). Stone objects demonstrated a much greater variety, including ground

Fig. 52 KISSONERGA
TOMB TYPE 2 ARTEFACT FREQUENCIES

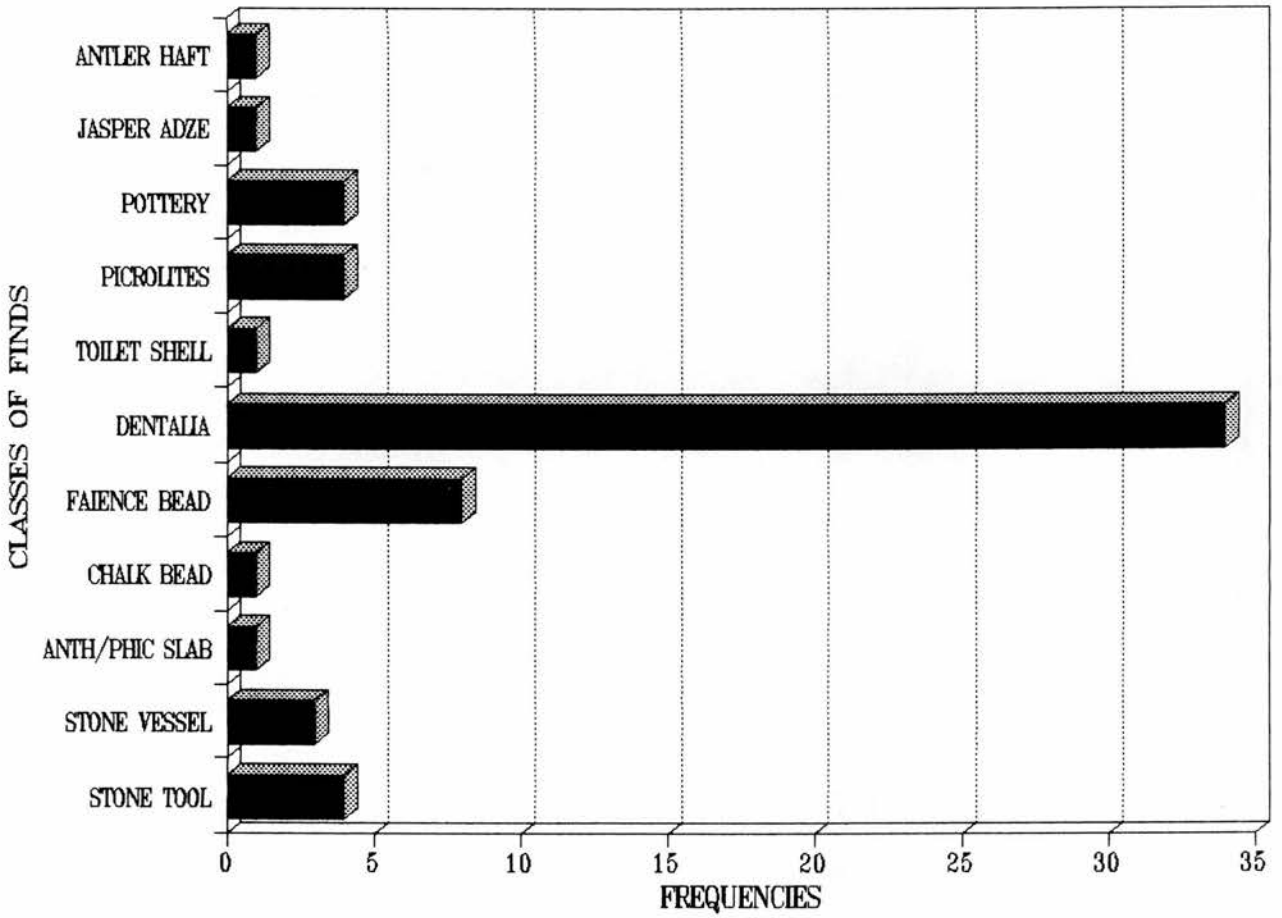


Fig. 53 KISSONERGA
CHAMBER TOMB ARTEFACT FREQUENCIES

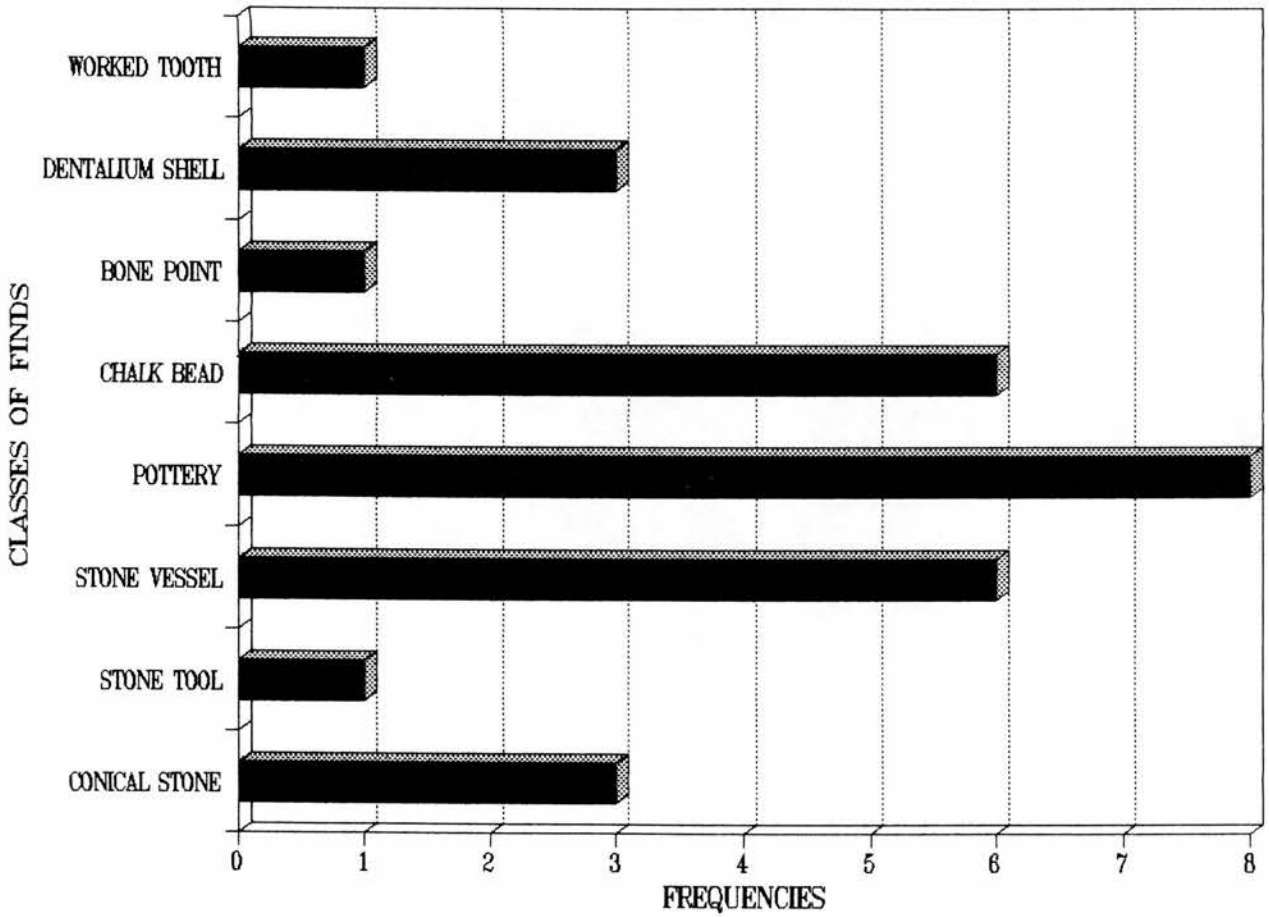
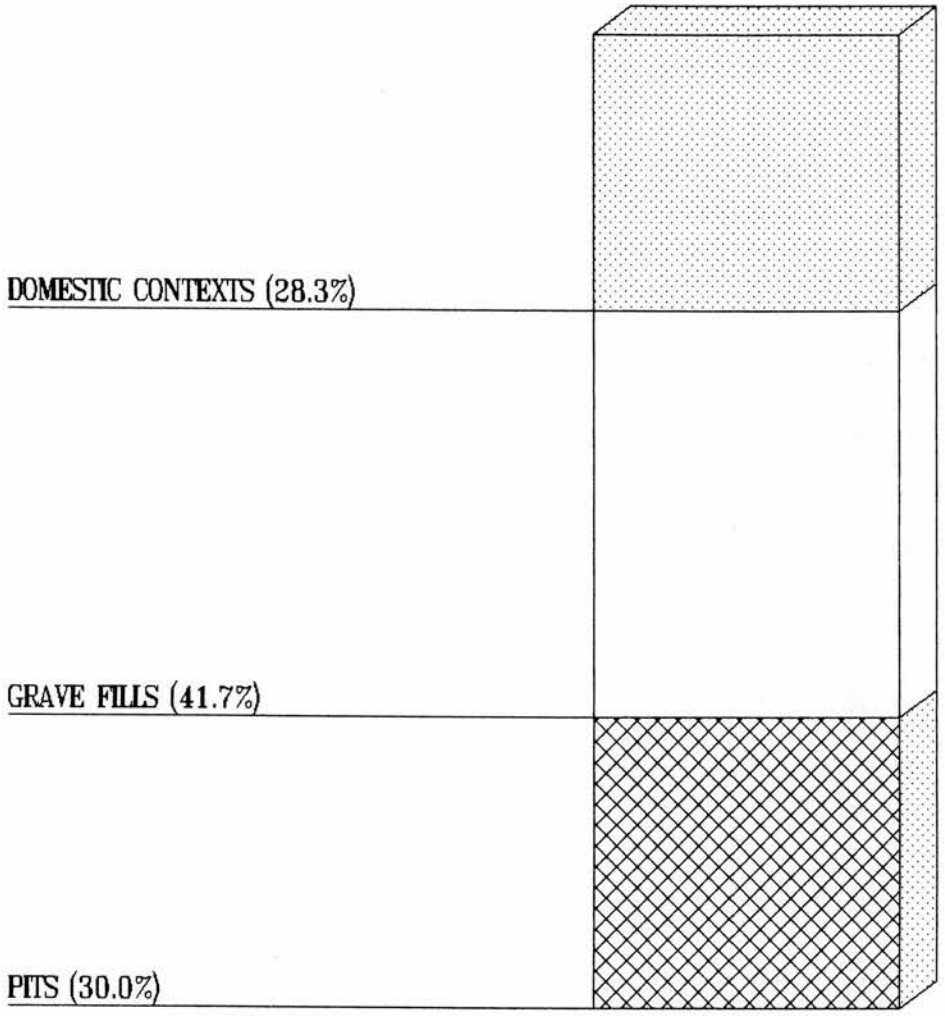


Fig. 54 KISSONERGA
Dentalium Shell & Picrolite Frequencies



stone tools (n=18), figurines (n=1) and pendants (n=5). Almost all Period 3 graves contained at least one stone object, a reflection of a thriving ground stone tool industry on the site during this period.

Material distribution in the grave contexts indicates the predominance of picrolite (n=6) (also Peltenburg 1991). Nevertheless, it should be noted that picrolite objects in these contexts are not equally distributed and the greatest number of them derived from one tomb only, Gr. 563. Diabase (n=4), chalk (n=4), calcarenite (n=5) and sandstone (n=3), as well as bone (n=4), seemed to be frequently included in the grave repertoire, defining picrolite as a less common material that found its way into the mortuary contexts; this was also the case with dentalium shells.

On the basis of this evidence, therefore, it seems that while most of the mortuary population were accompanied by stone objects and occasionally with bone items, there was a minority of inhumations associated with picrolites and dentalia. This pattern raises the question of a distinct differentiation in the sample and has been discussed in relation to relative access to resources (Peltenburg 1991; 1992a).

Otherwise, a fairly unvarying grave good kit is represented in MChalco tombs. Variability is low in this sense. However, there is a sharp distinction between those who had access to resources, and those who had not. The pattern thus appears as a two-tier burial mode and marks social differentiation which, however, merits further discussion (see below).

With the advent of the LChalco period a whole series of changes in the burial record of the site are evident. With regard to the grave equipment, there seems to be a greater variety of artefact industries. The majority of objects are again made of stone (n=24), a fact that demonstrates continuity with the earlier periods. However, pottery (n=7) and jewellery (n=9) appear as the newly preferred categories of grave furnishings. Dentalium shells (n=2) and picrolite artefacts (n=3) almost disappear from the record and are replaced by other categories of equipment.

Stone objects remain quite conservative in type and material. The occurrence of a stone palette (n=1) in Gr.526 bears evidence for continuity in terms of the inclusion of toilet items in funerary contexts, much like the deposition of the toilet shell in MChalco Gr.554. The characteristic conical stones (n=5) from the site make their first appearance in these deposits in a few LChalco tombs.

Pottery is now, increasingly, being deposited in the tombs, including pithoid jars (n=1), small holemouth jars (n=2), bowls (n=3) and flasks (n=2), executed in the new RB/B ware and clearly heralding the vast deposition of sophisticated polished wares in the tomb groups of the Philia/EBA periods. Objects made of organic materials (n=7) continue to be deposited in the LChalco tombs. These occur almost in the same quantities as in the earlier period, apart from the dentalia which have now ceased.

Flint objects (n=3) also appear, including two flakes and one blade. The most indicative occurrence, along with pottery is the deposition of faience beads (n=9) in grave contexts Gr.538 and 546. They bear implications for the foreign relations of Chalcolithic communities, and as such they comprise some of the earliest evidence for imports in the island.

The analysis of the grave equipment in the LChalco contexts at Kissonerga indicates both continuity and change in mortuary symbolic and cultural expression. The change in the nature of grave furnishings is positively correlated with other aspects of LChalco mortuary variability and marks the beginning of a new era, both chronologically and culturally. The deposition of items which greatly differ from the earlier period (Fig. 53) on the site signifies the use of different symbols in mortuary contexts. This pattern of change is discussed in relation to the nature of the equipment and the mode of symbolism attested.

Elements of continuity appear in the sustained inclusion of items of essentially, the same character; ground stone tools appear in both periods on the site and comprise probably the only functional items included in the tombs. Objects manufactured in

organic materials have either a functional (needles), or a symbolic character (pendants) and as such are included in tombs of both periods. Representational art, i.e figurines and pendants, which are clearly of symbolic character, decreases in the LChalco and is replaced by yet another category of functional items, ceramic vessels. It would seem, therefore, that either symbolism decreases in the LChalco, or that functional items acquire a new, symbolic meaning through their deposition in mortuary domains. This change in patterns of deposition of grave equipment may be indicative of new economic and technological parameters affecting the LChalco communities on the island, much like the culmination of picrolite exploitation and technology in MChalco funerary contexts.

The apparent "decrease" in symbolism during the LChalco on the site in fact signifies the symbolisation of a wider range of industries which, due to their functional character, would normally be considered as non-symbolic. However, their very deposition in mortuary contexts denotes that they now acquire a symbolic character dictated by the newly emergent socioeconomic configurations in the community.

5.21.4 Spatial Arrangement

The spatial distribution of graves in Kissonerga during Period 3 indicates that burials were widely distributed throughout the main excavation area. The pattern changes in Period 4 when tombs appear to cluster in the southern part of the site. This is in accord with the general expansion of the settlement towards the south in the LChalco. Otherwise, Period 4 graves are found throughout the excavated part of the site.

The spatial arrangement of tombs indicates that they were clustered around the occupation buildings (Peltenburg, *pers.comm.*) thus denoting a purposeful use of space on the site. Spatial analysis is not yet completed for the site, but it is expected to demonstrate this clustering of tombs around buildings. This information is significant for

a meaningful interpretation of the funerary material and bears direct relevance to the relationships between the living and the dead in the community.

Internal spatial arrangement of the skeletal material and the tomb contents indicates that the grave goods were usually placed near the head and/or the feet of the deceased. Post-depositional processes have affected this pattern. However, deposits with minimal disturbance seem to confirm this picture. Often, the hands were raised near the skull. In some tombs, the skeleton was covered by a stone, often a quern placed on the upper part of the body. This seemed to be the case in some shallow-pit burials.

Some graves contained no furnishings at all, and some, as it has already been mentioned, comprised secondary inhumations. Secondary interments were not usually accompanied by any grave good.

It cannot easily be suggested which mortuary rules dictated these individual patterns of deposition and spatial arrangement within the burial domain. Neither is it easier to understand why some skeletons were re-buried after initial exposure or burial and decomposition. Some aspects of internal spatial arrangement, such as the covering of the skeleton with a stone, or the raised hands, have parallels in Sotira Culture graves (Dikaios 1961).

Dentalium shells are often found near the neck of the deceased and they were probably worn by the individual at the time of inhumation. Figurines are also placed near the head of the deceased, or on top of the chest. Evidently, rules related to the burial ceremony dictated the manner of deposition of the funerary items.

5.21.5 Description of Mortuary Facilities: Tomb Typology and Energy Expenditure Measures

Funerary architecture is quite consistent throughout the Chalcolithic comprising mainly pit/shaft graves. The chambered grave evolves in the LChalco as the Kissonerga evidence reveals with the existence of a considerable number of chamber tombs (n = 14)

dated to Period 4. Pithos burials (n=2) appear in Period 5 and are considered as intrusive (Peltenburg 1991).

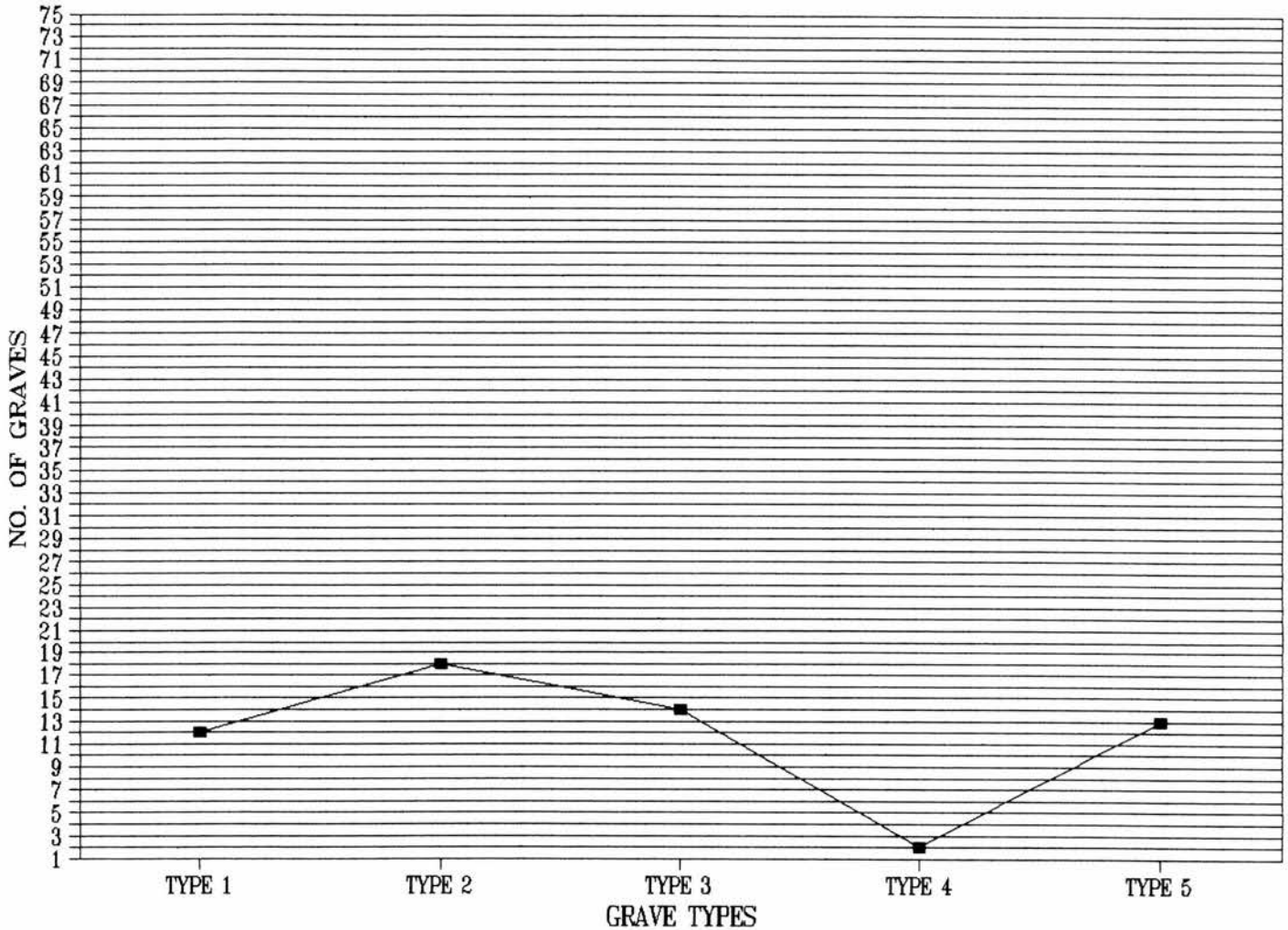
Tomb typology has been based on the series of tomb groups first excavated in Lemba-*Lakkous* (Peltenburg *et al.* 1985). Five tomb categories were discerned and attributed to their respective chronological periods, thus establishing a sequence in the burial architecture of the site (Fig. 55).

Type 1 is a pit grave with no particular features, usually measuring 1m depth. The type occurs throughout the Chalcolithic on the site and indeed the majority of burials are inhumed in this type of tomb. Type 2 constitutes a more elaborate form of a pit grave; it is usually deeper than Type 1 and its characteristic feature is an upper pit or *stomion* on top of the main burial pit that contains the skeletal remains. Capstones often cover the stomion. The type has been found in Lemba (Peltenburg *et al.*, 1985) and also in Souskiou-*Vathyrkakas* (Christou 1989), the most prominent Chalcolithic cemetery complex uncovered on the island. This grave type has often been considered as an incipient form of chamber tomb (Karageorghis 1982), or at least a first step towards the construction of a burial chamber. In fact, the lower pit of the tomb constitutes the burial "chamber" of the facility. For this reason, it was considered best to describe this type as a "shaft grave", in order to distinguish it from the simple pit graves on the site. The type occurs mainly in the LChalco but there are representative examples dated to the earlier period.

Type 3 is the chamber tomb, single or double. It consists of a shaft and the burial chamber(s). It was also encountered in Lemba (Peltenburg *et al.*, 1985), but the most elaborate example was excavated in Kissonerga (Tomb 505), comprising two burial chambers. It appears for the first time in Period 4 and is to become the main expression of the succeeding Bronze Age funerary architecture.

Type 4 is the pithos burial. Two examples have been uncovered in Kissonerga containing the remains of two children respectively. It dates to Period 5.

Fig. 55 KISSONERGA
GRAVE TYPE REPRESENTATION



Finally, Type 5 refers to the shallow-pit burials made on the site. They are usually very disturbed, since they are very near the surface which has been extensively ploughed. These graves are often ill-defined and measurements are often lacking.

Pit graves usually accommodate single inhumations, whereas Type 2 and 3 tombs are designed for a greater number of interments. In terms of energy expenditure, the most "expensive" tombs are the afore-mentioned types. No significant differences in energy flow have been indicated for KM graves of the same type. However, there are significant differences among the various types of facilities used.

Graves like MChalco 563 and LChalco 505 stand out as elaborate expressions of both mortuary architecture and grave contents. They are the two single examples from the site bearing clear evidence for a wealth of burial ceremony and ritual for each of the main two periods. They also sharply contrast with the rest of the graves of the same type, in all aspects of mortuary variability and bear evidence of a high degree of inequality in mortuary treatment.

5.22 Patterns of Mortuary Differentiation at Kissonerga-*Mosphilia*

The analysis of mortuary variability from the site has provided some useful insights into the symbolic mortuary expression of this Chalcolithic community. The patterns that have emerged demonstrate changes in burial practices in the transition from the MChalco to the LChalco period. The settlement record corroborates the funerary evidence to such an extent that it can be safely postulated that significant organisational and structural changes took place in the society from the beginning of the LChalco onwards.

Change could be monitored in the burial record by the examination of variability. During Period 3, one of the most flourishing and formative periods in Cypriot prehistory, mortuary practices reveal symbolic expression in the deposition of dentalia and representational art in burial domains. The fact that children are often associated with

these symbols indicates that differentiation on the basis of age was not the norm in MChalco Kissonerga.

Certain children were assigned some kind of status that was probably shared by the adult population. This evidence points to some kind of inherited or acquired (Pader 1982) status for some children who were conferred a complete set of funereal treatment. Thus, horizontal distinctions on the basis of age are not evident.

What is evident though, is unequal, preferential treatment among the deceased population. The differentiation appears to be clear-cut, between those who had access to special treatment, and those who had not. Marked inequality was displayed in these domains and emphasized to such an extent, that any other horizontal distinctions, related to different post-mortem treatment for instance, seem to "disappear" in the record.

Bearing in mind the energy spent on the construction of the burial facility, the ceremony and the final deposition of these inhumations, it can only be maintained that willful emphasis is granted to the expression of inequality among the members of the community. No effort is made to furnish the tombs in the same way, or treat the deceased individuals spending the same amount of energy. Instead, unequal treatment constitutes the norm. This pattern clearly denotes the existence of a ranking system defined on the basis of access to resources, and not age or gender.

This indicates that MChalco Kissonerga represents a complex society. The question is what degree of complexity is involved. It can be seen that certain individuals had access to resources, and that others had not. How many had such access cannot be estimated easily. The mortuary evidence indicates that only a small number of individuals had this privilege, while the majority did not. This marks a sharp distinction that is not counterbalanced by the existence of a rather extended differentiated group.

During the LChalco period a series of changes in the record indicate the manifestation of a new symbolic expression associated with features that have often been considered as indicative of foreign cultural input. The appearance of the chamber tomb is

one of the most distinctive of these features in Chalcolithic Cyprus. The origins of this new type have been discussed above and it may be safely maintained that the chamber tomb is part of an endogenous evolution of mortuary architecture. The majority of facilities continue to be pit/shaft graves, a fact that emphasizes differentiation between the chamber tomb individuals and the rest of the mortuary population.

The grave equipment associated with the chamber tombs comprises a repertoire of pottery vessels and bead jewellery, and objects made of stone and/or organic material. Foreign relations are indicated in the deposition of faience beads in chamber tombs. Methods of disposal and general post-mortem treatment do not change during the LChalco, a fact that attests to continuity in post-mortem treatment.

The spatial distribution of LChalco graves in the settlement shows an expansion of the burial ground and a possible clustering of the tombs around domestic areas (Peltenburg, *pers.comm.*). A further detailed study of the relation between the Period 4 buildings and their associated graves may prove enlightening (Peltenburg *et al. forthcoming*).

As in the earlier period, differentiation seems to be expressed in terms of energy flow, tomb typology and grave equipment. LChalco chamber tombs, with their associated cultural elements comprise a minor group. On the basis of this evidence there is a explicit differentiation between the chamber tomb individuals and the rest of the population inhumed in pit/shaft graves. Again, bearing in mind the energy spent on the construction of a chamber facility and the amount of burial ceremony involved, it seems that these individuals were deliberately differentiated in the burial domains by the degree of corporate involvement attested.

It is interesting to note the minimal degree of variability with regard to post-mortem treatment. Traditionally, methods of disposal have been considered as indicators of horizontal distinctions in societies, usually demonstrating differentiation on the basis of age/gender or ethnicity. In many cases, as in EB IV southern Levant, post-mortem

treatment is a correlate of social stratification. However, this conclusion was reached after all aspects of variability concurred.

The absence of post-mortem distinctions and differentiation on the grounds of age/sex in LChalco Kissonerga (children were inhumed with adults in chamber tombs) is indicative of minimal horizontal differentiation. Instead, what is clearly emphasized in MChalco deposits is distinction on the basis of energy flow measured in mortuary architecture and grave equipment.

There is no change in that key-pattern of differentiation between the two respective periods, except that the deceased group receiving more "expensive" treatment is now (Period 4) more extended than before, which shows that status duties were conferred to a greater number of individuals. This may point to a shift of emphasis on a communal idiom among the individuals using chamber tomb facilities. It is possible that the presence of an extended social group in MChalco Kissonerga is obscured due to the small size of the MChalco database in comparison to the LChalco one.

What is evident is the key-pattern of social differentiation discussed above. It remains unchanged from the MChalco to the LChalco period and is epitomised in the use of energy expenditure to discern among the mortuary population. Energy expenditure is an established correlate of ranking and social stratification and points to the degree of complexity in a society. This, virtually, remains unchanged from one period to another, except that the settlement record of LChalco Kissonerga provides information with regard to storage facilities and the existence of surplus in Period 4 (Building 3). Taken into consideration, the settlement record of the LChalco corroborates the mortuary evidence and furthermore demonstrates a greater degree of organisational complexity on the site during this period.

The mortuary record, on the other hand, denotes that no major structural changes took place. Symbolic and ritual expression changed and new symbols were introduced. However, they were used to signify the same kind of differentiation, i.e

economic, culminated in the manipulation of labour and energy to produce more "expensive" burial facilities encompassing long-distance trade items (e.g faience).

From the MChalco down to the end of the LChalco period in Kissonerga, the burying group chose to display differentiation in the burial domains by conferring special treatment to specific deceased members of the community. On the basis of the patterns of mortuary differentiation attested in Kissonerga, it cannot be maintained that complexity increased during the LChalco period, although a certain degree of structural change is attested in the burial record of this period.

The settlement record, on the other hand, bears evidence for organisational change related to differentiated sets of socioeconomic relationships among individuals and evident in the existence and manipulation of surpluses on the site (Peltenburg 1991). This is a useful piece of information, particularly since the burial record *per se* does not provide this kind of evidence.

5.23 The Emergence of Complex Society in Cyprus

Detailed studies tackling the issue of social complexity in Cyprus have been published in the last few years (Knapp 1988; 1990, Held 1989; 1992, in press; Manning 1992, in press; Keswani 1989, Toumazou 1987, Peltenburg 1990; 1992, in press) examining the bulk of early prehistoric evidence from the island. It is beyond the scope of this thesis to discuss each proposed model separately. Nonetheless, references to individual scholars are made, while testing the validity of their statements against the mortuary record of early prehistoric Cyprus as examined and presented in this research.

While reading through the literature, there seems to emerge an almost general consensus regarding the rise of complexity in Cyprus. This consensus is defined by a number of parameters that are commonly found in the majority of recent research.

A summary of this set of parameters, refers to a) environmental constraints affecting the rise of complexity in an island society (Held 1989; 1992, in press), b) sociopolitical configurations triggered by the introduction and adaptation of new technological and economic packages (Knapp 1990), c) sociopolitical evolution defined on the basis of a dialectic relationship between all the afore-mentioned constraints and prime-factors, and the internal dynamics of the society itself that demonstrate a marked resistance to complexity (Peltenburg 1992, in press), and d) in relation to the latter point, the manifestation of sociopolitical development in terms of a pattern of fluctuating complexity, with cycles of rise and demise (Manning 1992, in press; Peltenburg 1992, in press).

All these parameters have been considered, by most scholars, to be in operation throughout the earlier part of the BA in Cyprus, characterising sociopolitical development here as a "backwater" in relation to the neighbouring societies in the East Mediterranean.

Another common denominator in the recent literature on Cyprus has been the emergence of elite groups on the island, on the basis of the rise of social inequalities, as they can be detected in the mortuary record and less so in the settlement record. The rise of social inequalities is associated with the beginnings of the EBA in Cyprus (Knapp 1990), although evidence for social differentiation in chronologically earlier sites seems to indicate a tentative higher date for the phenomenon (e.g Kissonerga-*Mosphilia*).

It is suggested that throughout the BA the main functioning entity of the society was the elite group (e.g Keswani 1989; Knapp 1990; Manning 1992, in press for the EC/MC periods, and Keswani 1989; 1989a; 1992, for the MC/LC periods). Dimensions of social hierarchy and the operation of elite groups are discussed for the Iron Age as well (Rupp 1988). As a consequence of this, archaeological literature on Cyprus seems to be overloaded with elite connotations that, to my view, obscure, rather than clarify the situation. It is necessary to expand on the issue, particularly in view of recent research.

First, it must be made clear that the elites of the EC/MC refer to entirely different social groups, than the elites of the LC and/or Iron Age. They both constitute special societal sub-groups. However, the attributes defining the power and the configuration of these groups are quite different for each period. The use of the same term to describe different social configurations obscures the function of these social entities and introduces further bias in the interpretation of the archaeological record.

Second, even for the later BA periods on the island, as recent mortuary studies show (Steel, *pers.comm.*), the rise of well defined hierarchies, or elites has been disputed and several doubts have been raised. For this, and other reasons related to population size and capacity to sustain elites, the use of the term has been evaded in the present research.

Having set the theoretical context for a discussion of the rise of complexity on the island, an effort can be made to monitor this process through its manifestation in the mortuary record. The issue is closely related to the almost exclusive use of mortuary data to detect sociopolitical evolution. With regard to this, it is necessary to point out that the extensive manipulation of Cypriot burial data has led to a vivid, yet inconclusive, reconstruction of prehistoric society in Cyprus, where the validity of the proposed models cannot be tested against a solid archaeological record. This is a problem that prehistoric research on the island would like to bypass, but it cannot. Data from other parts of the archaeological record and from different periods, like ceramics or representational art, or the meagre settlement evidence, are called into assistance; they comprise partial evidence valid in its own merit, but often not compatible with the burial record.

This has led in the interpretation of mortuary data on the basis of corroborative evidence from either other parts of the record, or other periods. Wherever a gap exists, research fills it in with entirely different information in an effort to produce a viable reconstruction. In other words, it is like completing jigsaw A, using parts of jigsaw B.

The examination of mortuary variability from the major EBA cemeteries in Cyprus serves to rectify the situation and demonstrate that with limited data only limited results can be produced. On the basis of this principle, the discussion on the rise of complexity on the island focuses on the following main issues:

a) The display of unequal treatment in specific aspects of mortuary variability as attested in patterns of mortuary differentiation at pre-BA sites.

b) The manifestation of uniformity and standardisation in the execution of burial programs as a means of conspicuous social expression that minimises differentiation in EBA burial domains.

c) The assessment of mortuary symbolism and ritual in the Cypriot contexts and degree of reliability of this information for a meaningful reconstruction of EBA society.

d) Endogenous vs exogenous evolution of the Cypriot BA in relation to the rise of complexity on the island.

e) An evolutionary vs quantum leap trajectory for complexity in early BA Cyprus.

f) Social selection vs adaptation, influence, or emulation determining the trajectory of social complexity on the island.

With regard to the first point, the analysis of variability from the pre- BA Cypriot cemeteries seems to indicate that in specific periods there was a marked manifestation of inequality among the members of the deceased population. The pattern in which this inequality was expressed is one of unequal access to local/foreign resources and differential post-mortem treatment. In the M/LChalco periods, social differentiation entails one more attribute, that of energy expenditure in mortuary architecture. Evidently, in these domains there was a conscious and deliberate display of preferential treatment towards specific members of the community.

During the EBA, this pattern changes to a certain extent. The tomb groups dated to the EC/early MC periods do not display mortuary differentiation to the degree they did before. The Bellapais and Lapithos assemblages manifest a uniformity and a

standardisation in the execution of funerary programs in all aspects of mortuary variability. Particularly in Bellapais, post-mortem treatment, grave inclusions and energy expenditure demonstrate quite a uniform pattern where evidence for differentiation and variability are minimal. The association between certain individuals and copper implements is not explicit in terms of status distinctions since copper inclusions are not positively correlated with other variables to indicate differentiation.

The Lapithos group indicates the existence of different post-mortem treatment for some individuals. However, since no other variables are positively correlated with the different types of post-mortem treatment it is only possible to interpret the evidence on the basis of horizontal, rather than vertical social distinctions.

What can be clearly observed in the EBA domains is a conscious effort to minimise differentiation, as opposed to the earlier periods. This may be a result of conspicuous social expression that minimises inequalities in the funerary contexts. In this case, a meaningful reconstruction of EBA Cypriot society has to be reconsidered in order to accommodate the results of the present analysis. *Contra* Manning (1992, in press), there is no "two-tier" picture of "richer" and "poorer" burials, simply because the so-called "poorer" contexts have been subjected to such long-term plundering and disturbance that we cannot safely assess their original state.

The present analysis shows that there were no marked differences in energy expenditure, grave equipment or post-mortem treatment in these domains. The symbolism encompassed in these contexts changes with the advent of EBA technology and a differentiated economy that now includes cattle and plow agriculture (Held 1992, in press), however, inter and intra-cemetery variability remains low.

On the grounds of these results no rise of any sustained and inheritable power can be substantiated. The whole issue is closely related to an assessment of the reliability of mortuary contexts to provide this kind of information. Mortuary symbolic expression had attained a high degree of expression in EBA Cypriot tombs and particular tomb

groups more vividly demonstrated burial ritual (e.g Bellapais-*Vounous*). The extent of funerary ritual attested in the EBA tomb groups is not directly linked to sociopolitical organisation (elites, power groups with marked economic differences, etc.), but rather to the way the society was structured.

The effort to equip the dead with the same amount and quality of grave symbols and grant them similar post-mortem treatment clearly indicates that the burying group took the labour of portraying the buried in an essentially undifferentiated manner. On the basis of this argument, it is highly unlikely that funerary iconography or any other attributes of burial symbolism can be used to infer specific sociopolitical organisation.

During the M/LChalco period in the SW of the island minor evidence for foreign relations has been yielded. The occurrence of faience beads from a LChalco tomb at Kissonerga marks the beginning of foreign contacts for Cyprus. During the EBA evidence for foreign contact remains minimal and is postulated on the basis of cultural influence and input, rather that imported material.

The main class of material indicating foreign relations is pottery. The Cyrpiot RP has been best parallelled to the EB II Tarsus assemblage (Peltenburg 1991) and the metal types occurring in the EC funerary contexts have been considered as imitating mainland types (for references see Manning 1992, in press). There is a general consensus that some kind of influence, or cultural input has been received by the EBA Cypriot communities from the Anatolian/Cilician part of the mainland. This kind of evidence has also been linked to destructive events on the mainland at the end of EB II and possible immigration to Cyprus. In this sense, the series of new features that appear on the island, including technological innovations (Knapp 1990; Manning 1992, in press) have raised questions with regard to the nature of contacts between the two areas.

In the light of recent evidence and research it seems that elements of continuity from the Cypriot Chalcolithic become more evident. The occurrence of RP pottery as early as the LChalco/Philia on the island and the appearance of the chamber tomb early

in the LChalco (e.g Kissonerga, Philia sites) provides a *terminus ante quem* for the occurrence of the new features, that may well date as early as c.2700 BC, before the destruction of Tarsus and the end of EB II on the mainland. The nature of the contacts is, therefore, more complicated than previously thought and their beginnings may have to be traced much earlier.

The occurrence of RP spindle whorls in stratified Period 4 deposits at Kissonerga (Peltenburg, *pers.comm.*), is indicative of the contemporaneity between the LChalco period and the Philia Phase, and of the more complex exchange network among the communities on the island. It now seems that Philia is a more widespread culture than previously considered, since its features are found throughout the island (Bolger 1991). The implications of this are related to an endogenous evolution of the Cypriot BA, a fact that now becomes accepted by most scholars studying the period.

Although developments in Cyprus may have been further triggered by more substantial, yet still inconclusive, contacts c. 2300 BC, the fact remains that foreign relations become evident soon after the end of the MChalco on the island. If endogenous evolution can be postulated for Cyprus, questions are raised with regard to the trajectory of that evolution, in relation to complexity. Data is still insufficient to make any categorical statements. The evidence for discontinuities and gaps and the problematic Chalco - EBA transition has led scholars (e.g Manning 1992, in press) to infer that some kind of a *quantum leap* process led to marked qualitative change in EBA Cypriot society.

It could be argued that the qualitative changes evident in the record are rather linked to the advent of new technological innovations on the island and the establishment of new economic and subsistence strategies as a result of these innovations. The corpus of data does not indicate any significant sociopolitical development. The society seems to be organised along the same lines putting up strong resistance to any rise of hierarchical and highly complex forms of sociopolitical organisation.

The EC mortuary record bears clear evidence for a low degree of social differentiation and an almost complete absence of foreign relations. The inclusion of new symbols for funerary use, like the extensive deposition of metalwork in the tombs, is not linked to a pattern *of* different *use* of these symbols, like the one attested in EB IV Levantine cemeteries.

On the other hand, restricted access does not seem to fit a well-defined pattern of differentiation in the Cypriot contexts, neither can metalwork be correlated to other aspects of mortuary variability to produce evidence for social stratification. The cross-examination between the Levantine and the Cypriot burial domains demonstrates a vast difference between patterns of metalwork and grave good deposition between the two areas.

Certain EB IV contexts (e.g Jericho) offer positive evidence for mortuary differentiation with cross-correlations between all variables in contrast to EC/early MC contexts which do not disclose any such patterns. It is difficult to envisage any kind of a *quantum leap*, or episode of complexity on the basis of the Cypriot evidence. Besides the fact that at least half of the "discontinuities" in the Cypriot record are due to archaeological bias, the data itself does not point to this direction.

The trajectory of complexity in Cyprus displays minor fluctuations, but it remains evolutionary in essence until MC III/LC I when evidence for organisational and structural change and the international role of Cyprus becomes apparent (also Maguire 1990). To suggest a quantum *leap* for Cyprus, like the one proposed for Crete (Cherry 1985), presupposes that change and development towards more complex forms of organisation can be clearly seen in the record. This is certainly not the case in Cyprus.

If the Cretan model for the occurrence of a *quantum leap* prior to the emergence of a palatial society is accepted, then a standard has been set, and the Cypriot evidence would be expected to produce at least a more easily discernible form of sociopolitical organisation. What we are left with then is questions, rather

than answers, and the knowledge that the trajectory of complexity on the island cannot be adequately described or envisaged until more substantial data is available.

The final point relating to the rise of complex society in early BA Cyprus refers to the mechanisms determining this trajectory. Since it is impossible to adequately describe it, we may attempt to define the factors affecting the process. The mortuary evidence indicates that social parameters have determined the process of complexity on the island. Selective social mechanisms dictated patterns of artefact deposition and mortuary variability in these contexts. This is clearly evident in the process of minimising differentiation in mortuary domains.

It may be suggested that due to the symbolic nature of funerary deposits the portrayal of a society with minimal social differentiation may not represent the real situation on the daily interaction level. This may indeed be the case. However, the conscious effort to eliminate differentiation in these contexts indicates that the ideal structure of the society was perceived as such, i.e with no apparent inequalities. This, in itself, is a compelling indicator of resistance to complexity (see Trigger 1990; Peltenburg 1992, in press; Manning 1992, in press).

Most scholars now tend to agree that one of the main reasons for a "retarded" development in Cyprus is the existence of opposing forces to more complex forms of sociopolitical organisation. This may be linked to Tainter's views (1988) on the rise and collapse of complexity in both ancient and ethnographic societies, where it is maintained that societies do not usually invest in complex forms of organisation unless they can afford it. In other words, no society allows for the emergence of social stratification and hierarchical organisation unless there are revenues for the society itself through that mode of organisation.

Despite the fact that cultural and technological input is being received during the EBA, a tight control over the rise of hierarchies is being exercised, evident in the

standardisation and uniformity of the burial programmes and the low degree of mortuary variability in EBA Cypriot cemeteries.

In view of this, arguments related to the emergence of hereditary elites and "ingredients for further development into entities like polities or states" (Manning 1992, in press) cannot be substantiated. No such ingredients are detected in the record and the traditionally held correlates of social stratification are rather absent in these contexts.

Manning (1992, in press) maintains that "the introduction of prestige and novel items and ideas into an emergent society can lead to rapid social, political and economic transformation through the extension and development of existing divisions" with regard to the Philia/EC period, for which he postulates an "elaboration" of mortuary practices in relation to social competition and cultural contact.

The model is herewith discussed because it is considered representative of the recent trend in Cypriot studies. There are crucial points that have to be clarified. First, the introduction of novel items and ideas in EC society did not lead to any rapid sociopolitical transformation. Although developments in economy and technology can be detected in the record, the same cannot be said for the sociopolitical sphere. Society was probably re-organised to accommodate the new economic parameters. However, the archaeological evidence indicates a persistence of a communal ethos that dictated certain mortuary rules associated with minimal social distinctions.

Second, the evidence does not point to an extension or development of existing social divisions. Instead, there seems to be a regression in the display of social distinctions evident in the low degree of mortuary variability in EC cemeteries. Finally, there is no further "elaboration" of mortuary practices during the EC period. This is an archaeological bias that has obviously affected scholarly thought. Mortuary practices in Cyprus always entailed a high degree of symbolism and ritual, very much like any other funerary context. The absence of substantial settlement evidence has created this bias of "elaborate" burial practices, since there is no other evidence to compare it with.

Social competition, status display and conspicuous consumption must all be re-considered with reference to the Cypriot evidence. On the basis of EC tomb groups as analysed and presented in this research, social competition cannot be easily postulated. Access to local resources such as the copper ores and to foreign contact was clearly not denied to the majority of the mortuary population. There are no grounds, therefore, on which to base such a model of sociopolitical organisation unless research becomes highly speculative.

The main conclusion that derives from the afore-mentioned is that there is a great danger inherent in the selective examination of data for interpretative purposes. The Cypriot evidence is partial because it is almost exclusively mortuary and with this serious constraint in mind, only limited results can be produced. Until more substantial data becomes available for EBA Cyprus an eloquent reconstruction of this "middle-range" society remains pending.

Chapter 6

The Emergence of Complex Society in Crete

Introduction

The present chapter presents the results of the analysis of mortuary variability on three EBA burial sites in Crete in an effort to monitor patterns of mortuary differentiation. The chapter includes a discussion on the sociopolitical developments in Crete during the 3rd millenium BC, data quality control, results of the analysis and an overall discussion of the trajectory of social complexity on the island in the concluding part.

It must be noted that data quality control is of particular importance in this context for a number of reasons which are discussed in the relevant section. Suffice it to say that very little work has been done regarding EBA burial practices in Crete, as opposed to Cyprus and the Levant where recent research has focused on death practices. In the first section of the chapter EBA Cretan society is discussed in relation to current theories and the archaeological record.

6.1 The Background of Sociopolitical Developments in Crete during the EBA

Any account of the cultural and sociopolitical developments in Crete has been heavily influenced by the evolution of a palatial society on the island during the early part

of the MBA. Most scholarly research has looked at EBA developments through the prism of the palaces since the early discoveries of the "Minoan" civilisation (Evans 1921-36).

The bulk of archaeological fieldwork has focused on the excavation of the palatial building complexes at Knossos, Phaistos, Zakros and Mallia and the investigation of other settlement and building agglomerations (e.g Myrtos); such sites have often been interpreted in terms of their relationship to the palaces. As a result, the identification of sites which seem to present architectural similarities with the palaces has increased during recent years.

Although there was a much less structured organisation of regional settlement in the early part of the EBA, the advent of the Prepalatial[16] period was associated with the emergence of other types of sites apart from small village agglomerations, such as the peak sanctuaries situated on hill tops or near the peaks of mountains and characterised by intense ritual activity.

Further confusion has been generated by the fact that settlement patterns during the EBA in Crete indicate a high degree of variability, both in terms of the character of settlements and population size. Crete was apparently well populated during the third millennium BC with settlement distributions and population sizes that were considerable (Castleden 1990: 68; Lewthwaite 1983: 175).

Population sizes for the Early Minoan period (*henceforth* EM) indicate that several settlements were well populated even before they evolved into larger town agglomerations. It is estimated (Castleden 1990: 68) that EM Phaistos reached 300-450 individuals and EM Mallia had ca. 700-1000 inhabitants; similarly, Knossos is estimated to have had twice the population of Mallia during the same period. The early EM settlement at Mochlos is estimated to have had 300-450 inhabitants and it is considered one of the smallest settlements on the north coast of the island.

[16]The Cretan chronological system adopted in this research follows Platon's tripartite scheme (1971: 325). According to this, the Prepalatial period refers to the EM I/II/III and MM IA phases, the Protopalatial refers to the MM IB/II and the Neopalatial refers to the MM III and LM IA/IB phases. This scheme provides a more flexible chronological framework for the purposes of this thesis.

All the afore-mentioned sites had attained these population sizes as early as the EM II period. On the basis of their population capacity hierarchical forms of sociopolitical organisation and social stratification could be sustained. This view, promoted by Whitelaw (1983: 339), offered a plausible model of interpretation for the rise of social inequality, stratification and elites on the island. However, the methodology employed to assess population sizes has been debated (Soles 1988: 50); moreover, the correlation between large population estimates and hierarchical forms of sociopolitical organisation has also been criticised.

Most sites during the Prepalatial period appear to be small-scale village clusters dispersed throughout the island. Some 200 EM II sites have been identified (Cherry 1984: 34) providing a substantial body of settlement data that can be correlated to the contemporary burial evidence. The common architectural features between some EBA settlement agglomerations and the first palaces has led scholars to suggest that some of them may indeed have been proto-palaces or mansions (e.g. Warren 1972: 260-261) of the local elite group/family, thus establishing the indigenous evolution of the palaces. Furthermore, the appearance of such settlements may be regarded as a clear expression of hierarchical social organisation in Prepalatial Crete.

Several counter-arguments served to emphasise that the identification of certain settlements as proto-palaces led to increased confusion as to the attributes of a palace and may indeed further obscure the nature and the function of these early settlement configurations (Soles 1988: 50). The use of the term "palace" is highly confusing and depends upon the idiosyncrasies of each "palatial" society and individual research aims; the archaeological correlates of a "palace" have been defined on the basis of the relevant establishments in the Near East (e.g Mari in Syria). The adoption of this term by Evans (1921-35) in order to describe the Cretan units has only imposed a heavy bias on the interpretation of a small scale insular society like Crete. Indeed, Branigan (1988: 63-65)

expressed his doubts as to whether the first palaces can be considered as encompassing the same functions as those of the Neopalatial period.

A comparative study of settlement patterns and complex forms of sociopolitical organisation during the 4th and the 3rd millenia BC on several Mediterranean islands undertaken by Lewthwaite (1983) aimed at an assessment of the development of Cretan civilisation. The study suggested that the rise of a palatial society in Crete can only be considered as a positive anomaly, which on the basis of present data, cannot be adequately explained. Other studies have attributed the rise of palaces to foreign influence and/or inspiration, or even fashion and emulation following the model of the Near Eastern palace configurations (Cherry 1986: 40-42). The international articulation of Crete in the East Mediterranean exchange network must have been facilitated by this scheme since it allowed Crete to become an active participant, producer and consumer of goods and luxury items.

The subject is still open to debate since the palatial character of Cretan society during the Protopalatial period is difficult to assess due to lack of data. Differences between the Cretan palaces and their Near Eastern counterparts are expected both in terms of scale and nature. Research has argued in favour of an internal development on the grounds of prepalatial evidence. It is now clear that, although palatial society could not have evolved in a sociopolitical vacuum, the necessary preconditions for the independent emergence of a palace-oriented system may not have existed, or that the evidence is still insufficient despite a century of substantial discovery on the island.

Cherry has drawn attention to the fact that clear evidence for established hierarchies and elites during the Prepalatial period is not available. Furthermore, he has argued against "obvious indications of social ranking or stratification" (Cherry 1983: 33). However, a brief survey of all major Prepalatial cemeteries on the island by Soles (1988) seems to provide evidence for the existence of social inequalities and ranking. Again,

Cherry (1983: 40) stresses the fact that archaeological mortuary analysis should proceed beyond the simplistic questions of wealth differences in funerary domains.

After an outline of the generic problems in Cretan archaeology it is necessary to view some of the most influential models proposed for state formation and the rise of complexity in Crete. Although a detailed review of Cretan palaces is well beyond the scope of the present thesis, a survey of the work that has been done to-date helps establish the current state of research on the island and provides the necessary framework for the following analysis of prepalatial cemeteries.

In order to facilitate discussion it was considered best to group the various theoretical issues that relate to different aspects of the palace phenomenon. These can be summarised as follows:

1) The emergence of the palaces as a non-indigenous vs indigenous development on the island.

2) The function and character of the palaces during the Protopalatial and Neopalatial periods.

3) The peer polity interaction model (Renfrew and Wagstaff 1982; Renfrew and Cherry 1986; Cherry 1986) vs the unified state model.

4) The links between the Prepalatial and the Protopalatial period.

There is a more or less general consensus regarding the first issue; the origins of the Cretan palaces must be sought in the formative Prepalatial period, particularly since continuity has been established between the Prepalatial and the Old Palace periods (e.g. Cherry 1986: 21). Although the Prepalatial evidence does not *a priori* provide a clear picture, it has been maintained by most scholars that the foundations of palatial Crete are to be found in the Prepalatial period.

The arguments in favour of an indigenous development are based on the continuity of the material culture and the individual character of the first Cretan palaces. This is only to be expected if one bears in mind the idiosyncrasies of an insular society

like Crete. The fact remains that a few central places, defined as "palaces" or "temples" (Castleden 1990), emerge on Crete at the end of the third millennium BC. Evidence for the emergence of these establishments comes from Mallia, Phaistos and Knossos (Cherry 1986: 21). However, the evidence for the first palaces is very poor; similarly, at Zakros the Neopalatial complex has not yielded evidence for a predecessor. The record becomes even more complicated with the existence of settlements which include central building complexes (e.g. Gournia). It has been suggested that more "palaces" are yet to be discovered (Cherry 1986: 21).

Although old arguments tracing the development of Cretan palaces in the Near East (Evans 1921-35) have long been dismissed, the palaces of Crete are best parallelled in the Asiatic type of palace/temple of Syria-Mesopotamia (Graham 1987). Functional similarities, though still difficult to establish at least for the Proto-palatial period, can be observed in the Neopalatial phase.

The possibility of emulation is still widely discussed for the Cretan case (Cherry 1986: 40-42). However, if emulation becomes accepted as a plausible explanation for the origins of the Cretan palaces then the mechanisms of emulation and the selection of the traits that were emulated need to be explained. Both Renfrew and Cherry (1986: 42) have criticised either school of thought, endogenous or exogenous evolution, as models of sociopolitical development and change. Cherry, in particular, suggests that although Near Eastern elements may have been emulated by the Cretan society as a medium for competitive display, they cannot be considered as the cause of this competition, or of the emergence of a distinct type of sociopolitical organisation. Moreover, he stresses the fact that the rise of palatial society in Crete takes place at a critical moment in the East Mediterranean, marked by the emergence of fully blown urban/palace societies in the region. The question then is raised why Crete only followed this trajectory of sociopolitical development.

At present, the archaeological evidence available does not lend support to either a purely endogenous nor an exogenous model of development. It is clear that the Prepalatial record can provide several useful insights with regard to the evolution of complexity on the island. However, it is highly unlikely that it can provide direct information with regard to the development of the palaces. In the Protopalatial the evidence becomes more substantial in terms of foreign contact and regional interaction. However, a great degree of caution must be exercised when this record is studied; the vast majority of data regarding the palaces derive from the Neopalatial period. The evidence for the first palaces is scanty and obscured by the Neopalatial building phase. In most cases research tends to project the Neopalatial evidence into the earlier period, a fact that Branigan (1988) has attempted to rectify by assessing the function of the first palaces.

The confusion that has penetrated modern research on the island is clearly demonstrated in the vastly opposing views often expressed with regard to the palace phenomenon. Crete must be considered either as an anomaly (Lewthwaite 1983: 179) or as the sole possible candidate in the Aegean for the development of such a form of sociopolitical organisation. Several scholars have adhered to the second possibility. However, no clear suggestion has as yet been made. The issue is further discussed in the concluding part of the chapter.

With regard to the second issue, the function and the character of the Cretan palaces, during the Protopalatial and the Neopalatial periods respectively, has been assessed by Branigan (1988). Substantial evidence as to the layout and function of the first palaces is not available. Therefore, any interpretation of these units is highly speculative and relies heavily on the information there is from the Neopalatial phase.

Although there is little evidence available for most of the activities and roles of the first establishments, the most obvious function was that of storage areas or "depositories" (Branigan 1988: 65) of agricultural produce. This piece of evidence can be

related to similar social and environmental conditions on other Mediterranean islands that led to the creation of storage facilities during the third millennium BC (e.g. Cyprus, Kissonerga Unit 3). Branigan interprets this as "social storage" (1988: 65) accumulated in these units on the basis of a collective consensus and in order to cope with the diversified environmental conditions of the island. The political consequences of such a system of regulation are not discussed in the article but the conclusion culminates in a model of centralised food surpluses that are not yet dominated or monopolised by the palace. The subsequent rise of administration in these establishments removed this activity from the community and isolated it within the palace.

If this were indeed the case, then these centralised units were lacking a number of attributes that are usually associated with the Cretan palatial system. These attributes include ritual activity or the production and consumption of luxury items and raw materials; most important the storage of food surpluses in these establishments has not yet been monopolised by the palace (Branigan 1988: 65). If the Protopalatial configurations are regarded as palaces in embryonic form then a number of similar units in the East Mediterranean provide handsome candidates for palaces; indeed, van Effenterre (1989: 29) has commented upon the presence of such units in LBA Cyprus (e.g. Kalavassos- *Aghios Dhimitrios* Building X, Maroni Building IX) which he considers of palatial character. At a smaller scale Kissonerga Building 3 yields evidence for "social storage" and surplus accumulation (Peltenburg 1991).

Halstead (1988) has also commented upon "social storage" and the development of a redistributive system that provided "tangible benefits for the many and at the same time mobilised resources for the few" (1988: 524). This relief system operates as a manager in order to lower the risk of poor crops and famine in accordance with the mechanisms of a complex society that develops administration and regulatory systems to cope with major crises.

The rapid development of these central units into institutions in the later part of the MBA has puzzled researchers, particularly since Crete alone amongst the islands of the Mediterranean followed this specific trajectory. Some scholars (e.g Branigan 1988) have maintained that some EBA features in Crete may be of relevance to the sociopolitical development of the island, thus proposing an evolutionary trajectory for the rise of complexity and the palaces. Others (e.g Cherry 1983) have suggested a major change in the structure of Cretan society in the EM III period, just prior to the emergence of the first palatial sites. Both approaches are discussed in the concluding part of the chapter when the evidence for the Prepalatial period is also pulled together.

The rise of centralised units and subsequent palaces in Crete has been often treated as a uniform phenomenon (Halstead 1988: 67). The remarkable uniformity in the architectural design of the palaces, their character and multi-functional activities and the so continuity and homogeneity in the Cretan material culture has promoted this line of thought. As a consequence, the rise of complexity on the island has been studied in terms of state formation. The unified state model interprets the evidence in terms of one administrative centre, preferably Knossos, that regulates the other centres and/or is linked to peripheral sites such as rural settlements, peak sanctuaries and nucleated settlements or towns such as Gournia. The peer-polity interaction model (Renfrew and Cherry 1986) seeks to understand the evidence in terms of number of independent and competing polities in Crete, which through their sustained interaction promoted the emergence of a distinct sociopolitical system. Also, aspects of this organisation may have been more or less fostered by an interaction scheme between certain Cretan polities, the Aegean and the Near East.

This model was first proposed by Renfrew (1972) in an effort to explain the evolution of complex societies in the Aegean, including Crete. Subsequent refinement was made by Cherry (1983; 1986) for the Cretan case, summarising the evidence available for the Prepalatial and Protopalatial periods. It is possible that this was the case for the

early, centralised units of the Protopalatial period. The constant interaction between these polities, and between the polities and other societies in the East Mediterranean, promoted this system of sociopolitical organisation and sustained the growth and development of these units (Cherry 1986). The peer polity model offers a more plausible interpretative framework for the emergence of central units on the island and their subsequent development into palaces in the later part of the BA.

The links between the Prepalatial and the Protopalatial period have always been considered problematic. For some scholars the evidence for ranking and complexity during the Prepalatial is compelling and heralds subsequent developments (e.g. Soles 1988). For others it is still scanty and certainly not conclusive as to the rise of palaces (e.g. Cherry 1983). It must be noted that although a number of settlements from that period have been investigated and yielded evidence for a more complex character of settlement agglomerations, Prepalatial society has been foremost regarded as "egalitarian" (Soles 1988: 49).

With regard to these interpretations, the questions raised by research relate primarily to the emergence of social stratification and complexity as the preconditions for the rise of a centralised system of political organisation epitomised in the formation of the palaces. Mortuary evidence has been studied in this respect (e.g. Soles 1988) and burial data has been considered as clearly pointing to the rise of a complex society in Crete in the later part of the EBA.

A few points need to be clarified for the purposes of this research. First, the relation between social stratification/complexity and the palaces is far from clear and highly ambiguous. Many complex societies never proceeded into statehood and, therefore, it must not be taken *a priori* that the degree of complexity in EBA Cretan society holds the key to later developments. Because of the great bias inherent in Cretan archaeology, research needs to disentangle itself from the palatial phenomenon and examine sociopolitical developments in the Prepalatial period in their own terms.

Second, the very fragmentary nature and inadequate publication of the burial evidence, despite the prolific character of the record, renders this data unreliable to a very large extent. In addition, the treatment of the mortuary evidence has been far from systematic for several reasons, the most compelling of which is poor publication standards. As a consequence, the manipulation of burial data to produce conclusive social inferences is not often tangible.

The links between the Prepalatial and the Protopalatial are still rather poorly understood. The main difficulty in handling the EBA material lies in the cumulative nature of the record. Most of the information derived is from the later part of the EBA (EM III/MMI) and consequently the earlier phases are still obscured. Recent research has been undertaken on some EBA sites like Mochlos for instance (Davaras and Soles 1989) aiming at the detailed investigation of the EBA on the island. Other major EBA cemeteries still await publication (e.g Aghia Photia).

The present examination of some EBA burial sites from Crete comprises an effort to gain insights into Prepalatial society. Two parameters are taken into account in this respect: the emergence of centralised storage in the subsequent period (Protopalatial) and the nature of the funerary evidence during the Prepalatial and the Protopalatial periods. Since some of the issues pertaining to the description of the main sociopolitical developments on the island during the third millennium BC are strongly related to the rise of a number of centralised units which have been termed "palaces", the trajectory of Crete towards complexity is discussed in relation to this issue (see 6.19).

6.2 The Chronology of EBA Crete

The relative chronology of EBA Crete has been predominantly based on the tripartite chronological scheme that Evans (1921-36) suggested on the grounds of his extensive fieldwork at Knossos. The chronological scheme suggested by Platon (1972) has

also been used by scholars (e.g. Davaras and Soles 1989). Both chronological systems mostly rely upon pottery sequences and the emergence of palaces on the island.

A summary of the most influential work in terms of Cretan relative and absolute chronology in the EBA is provided in Warren (1980) and Cadogan (1983). Radiocarbon chronology from sites with destruction layers (e.g. Myrtos) has provided some dates. A calibrated C^{14} date from Ledaka Cave (Final Neolithic/EM I) is 3310 BC for the beginning the EM I period (Warren 1980: 497). Calibrated C^{14} dates from Myrtos (EM IIB destruction) indicate a range of 2850 - 2305 BC for the EM II time span; these dates push back the beginnings of the EM II in comparison to Cadogan (1983: 517).

A major difficulty in the Cretan chronology is related to the datable material that still comes from tomb deposits to a very large extent. The execution of multi-stage burial programmes in most Cretan tombs has created a highly cumulative record that is difficult to handle in terms of chronology. For the purposes of the present research the chronology compiled by Warren (1980: 499) for the EBA in Crete is used to provide the necessary chronological background. According to this, the EBA (EM I-III) starts ca. 3500 B.C and ends at ca. 2150 B.C (end of EM III). MM IA period starts at ca. 2150-1930 B.C. ; the first palaces at Knossos and Mallia were built directly over the MM IA deposits (Warren 1980: 492). A number of tomb deposits examined in the thesis date down to the MM IB (ca. 1930-1800 B.C).

The above dates are based on both relative and absolute dating schemes and indicate that calibrated radiocarbon dating provides a higher absolute chronology for the earlier part of the BA in Crete. There is more work to be done with chronological synchronisms and correlations on the island; it is now more clear that regionalism must be taken into account in studies of Cretan chronology.

For this research the chronological question is relevant to the extent that it can provide a diachronic perspective on the EBA-MBA transition on the island and on the developments prior to, or contemporary with, the rise of the palaces. The Prepalatial

period refers to the EBA of the island and covers an extensive time span ca. 3500-1930 BC, while the Protopalatial covers the MBA period of the island and the first "palaces" ca. 1930-1600 B.C.

6.3 Tomb Groups from EBA Crete

The mortuary data from Crete is considered as a valuable source of information with particular regard to social inferences (e.g. Soles 1987). The tomb groups from the island have yielded abundant evidence for research. However, very little has been done in terms of systematic studies of the material and subsequent publications. Although the Cretan material comprises a rich burial record for social studies, several points must be made with regard to this record.

First of all, it must be stated that the material *per se* is abundant and demonstrates variety of burial practices; some of them are related to regional traditions in burial symbolism and ritual and some are related to social differentiation and ranking in Crete. On the grounds of the record, the examination of the mortuary material has been considered most appropriate. However, the publication standards of the tomb groups and organised cemeteries of the island are so poor that there is a generic problem in handling this data. The state of current research indicates that EBA and later cemetery sites are either not, or inadequately, published, or are still being investigated and any information is published in preliminary reports. It is indeed surprising for Crete that no final publication of any cemetery has been produced, except for the older publications of Xanthoudides (1924), Seager (1912) and Hall (1916).

Secondly, the old publications do not provide the necessary information for a comprehensive analysis of mortuary variability on the island. The majority of them comprise catalogues of selected objects uncovered in each cemetery; the total amount of the finds from each site is usually unknown. In numerous cases the context of each find is

not indicated; there is a reference that the specific finds were found in the vicinity of the cemetery. Plans of the tombs or measurements are not often provided.

Anthropological data is completely lacking and scholars have been struggling to assess some very general patterns regarding basic posture of the skeletons (e.g. Branigan 1988). In view of the impoverished nature of the material, studies of mortuary variability are seriously handicapped.

More recent publications (e.g. Mallia) are equally impoverished; they contain catalogues of selected finds and almost no anthropological information. Preliminary reports do not usually provide detailed information for the purposes of systematic research. On top of these problems, the cumulative nature of the Cretan mortuary record, epitomised in the collective and communal nature of EBA burials, augments the bias and creates serious pitfalls.

Due to this situation it is not surprising that no systematic study of mortuary variability has taken place. Almost no burial site in Crete can be considered as an appropriate candidate for an examination of variability, unless access to recently excavated material is gained. In the context of the present research the analysis of three cemetery sites comprises an effort to gain some insights into EBA burial practices and social structure in Crete in the third and earlier second millennia B.C. It must be noted in advance that the results of this analysis in Crete can have minimal statistical significance. The importance of the material lies in the diachronic perspective it can provide with regard to the transition from the Prepalatial to the Protopalatial period. Even this transition is often obscured in the funerary record by the accumulation of multiple burials in the tomb contexts. However, differences between the respective periods can still be monitored at different sites. Regionalism must be taken into account in this respect because it now seems that developments took place in different parts of Crete at different times.

The majority of information comes from central and eastern Crete where most EBA tomb groups have been located and investigated. In the southern part (Mesara Plain) some 78 tomb groups (tholoi) were identified and excavated (Xanthoudides 1924; Branigan 1970; Marinatos 1929; 1931). Some of the Mesara type tombs have been found outside the Mesara Plain in the northern central part of the island. Other major burial sites are located in the eastern part. On Mochlos a major EM I-II cemetery has been excavated (Seager 1912) and investigations have been resumed in recent years (Soles and Davaras 1992) with the aim of assessing the size of the cemetery and fully excavating it. The tomb groups from Gournia (Soles 1988: 51; Fig.2, 53) have yielded important information, while the cemetery of Sphoungaras (Hall 1912) in the Gournia vicinity has yielded a substantial number of pithos burials.

The palatial site of Mallia (Demargne 1945; van Effenterre 1980; Baurain 1987; de Pierpont 1987) includes a number of tomb groups (necropoles) comprising built tombs similar to the ones from Mochlos, ossuaries/charnel houses (charniers) and individual inhumations in *larnakes* (clay coffins), pithoi and shaft graves. Evidence for mortuary ritual is vivid at Mallia. However, the picture is not yet clear. The great mortuary complex of Chrysolakkos at Mallia has been interpreted in several ways (Baurain 1987; de Pierpont 1987) and its function is still a subject of debate. In central Crete, the site of Arkhanes (e.g Sakellarakis 1976) has yielded built tombs like the ones uncovered in Mochlos and Mallia, and Mesara-type tombs. Finally, the cemetery of Aghia Photia in Seteia (Davaras 1972) contains tombs that bear evidence for intense contact with the rest of the Aegean (the Cyclades).

Numerous other individual burial sites and tomb groups are dispersed throughout the island. However, the evidence for west Crete is almost non-existent. The western part of Crete has not been thoroughly investigated and it is only during more recent years that archaeological fieldwork in general has taken place (e.g Tzedakis and Hallager 1987).

At a first glance, the great degree of variability regarding grave architecture and typology, quantity and quality of grave goods and post-mortem treatment seems to point to a high degree of social differentiation and to the existence of social inequality and ranking (Soles 1988) in Prepalatial society. The number of generic biases in the Cretan record have created a series of pitfalls; it is agreed that variation in Cretan mortuary practices is evident and calls for interpretation. However, the degree or the patterns of variation have not been assessed systematically in conjuction with data quality control that would help avoid overrating of the material.

The question is whether after so many years of mortuary theory burial data can still be treated on the very simplistic level of "rich" vs "poor", "royal" vs "non-royal", "palatial" vs "non-palatial". The Cretan record provides an exemplary case of this bias in burial archaeology. It is here intended to establish whether the burial record of Crete can be used at all for social inferences and, if this is indeed the case, to assess the extent of reliable information. It must be stressed that the methodology used so far in this thesis is not appropriate with regard to the Cretan material because of the peculiarities of the record. The differences are mentioned in the examination of each individual site. The major aim here is to avoid the way in which the burial record has been treated so far. Usually tombs have been examined within the setting of the palaces and evidence alleged for social ranking and stratification during the Prepalatial period, that would provide the necessary backstage for the emergence of the palaces (e.g. Soles 1988).

Unconsciously, the palatial bias has been imposed upon the Prepalatial mortuary evidence of the island, almost completely ignoring the constraints of this very poorly examined and very badly published data. It is hoped that the following examination rectifies this situation and sets the basic framework for future research.

6.4 The Cemetery Complex of the Mesara Plain

The Mesara Plain is located in the southern part of the island and comprises one of the best agricultural areas on the island. It is the largest plain in Crete and has been cultivated since ancient times. A substantial number of tomb clusters have been identified in the area of the Mesara Plain and a great number of them have been excavated.

A comprehensive study of the Mesara tholoi and the burial practices attested in them was provided by Branigan (1970). Earlier, Xanthoudides (1924) had published some major Mesara tombs and a number of individual publications in Greek periodicals contained information regarding the excavation of several such tombs. Although, Mesara type tombs have been found outside the Plain proper, the great distribution of these tombs in the Plain led scholars to examine them as a uniform regional phenomenon. These burial sites comprise tomb clusters that may consist of one to three tombs per site. For the purposes of the present research, the whole Mesara complex is treated as one cemetery, dated mainly to the Prepalatial period, although many of those tombs were used during the Protopalatial period too.

6.5 Data Quality Control Factors

Since every Mesara tomb included in this thesis was uncovered in a different village/area in the Plain, it was considered best to assign a unit number to each one of them so as to facilitate handling of the data. This marks a slight change in the methodology used so far, since in every other case the number of the tomb assigned in the publication was also used in the present analysis. The concordance is found in the following table:

Table 3

ME 1 = Koumasa Tholos B

ME 2 = Porti Tholos II

ME 3 = Christos Tholos X

ME 4 = Salame Tholos

ME 5 = Platanos Tholos A

ME 6 = Platanos Tholos B

ME 7 = Aghia Triadha Tholos A

ME 8 = Krasi Tholos

ME 9 = Vorou Tholos A,

ME 10 = Vorou Tholos B,

ME 11 = Pyrgos Tomb.

The set of DQCF for the Mesara complex is the following:

1) As a general rule, only the most well preserved tombs that date to the Prepalatial period have been included in the analysis. Tombs that date to the later, second millennium are not included. Although later material has been found in some of them, date of construction is taken as a *terminus ante quem* to help select the most chronologically relevant tombs and an effort has been made to isolate the earlier material.

2) Since the majority of the tombs were looted extensively, from the LM period onwards, the quantity of grave offerings is not representative of the original inclusions. Also, the fact that only a few selected objects are published renders the quantification of the grave equipment impossible.

3) Throughout the record, pottery is difficult to assign to either a FW or a PW category. The vast majority of EM-MM pottery received some kind of surface treatment, wash, paint or relief decoration (Betancourt 1984). According to the criteria already set

for the FW/PW categories, the Cretan ceramic material almost exclusively belongs to the FW class. In addition, description of the vessels is inadequate in most publications and illustrations are rarely provided. Consequently, it is often impossible to isolate the vessels and assess their quantity or quality.

4) Numerous discrepancies and ambiguities in the publications have reduced the number of tombs in the sample; registration numbers and descriptions of otherwise illustrated objects are often missing. It was considered best not to record these finds/contexts.

5) Decimal points are used to distinguish among different sub-groups of finds under the same registration number.

6) Described and illustrated objects without a registration number are not included.

7) Registration numbers that are repeated for different tombs are kept in the analysis in order to facilitate cross-reference.

8) There is complete lack of anthropological data from these contexts. For the purposes of this research, the observations made by Branigan (1988) regarding possible methods of disposal and post-mortem treatment are taken into account in conjuction with the meagre data from the tombs in the sample.

There are several points related to data quality control with regard to individual Mesara sites/tombs. These are the following:

a) **Koumasa**: Only tholos B is examined from this site since it was more adequately published. Tholoi A, E and built tomb Gamma are not included, although they have yielded an abundance of material, because of very poor publication.

b) **Christos X**: The described and illustrated stone objects from this tomb have no registration number. Normally, they would not be included in the analysis. However, an exception was made in this case. Unique SF numbers have been attributed to each one of those finds following the ones already used in the publication for the metal objects.

c) **Platanos A**: A vast number of objects come from the buildings/annexes surrounding the main tomb. These have not been recorded, since in most cases they are not assigned registration numbers and contextual information is lacking. A note of the presence of these objects has been kept on the individual Grave Sheets used for this research in order to provide a more global picture of the burial domain.

d) **Pyrgos**: The figurines uncovered in this tomb are illustrated in the original publication (Xanthoudides 1924: Pl.14). They have not been assigned registration numbers. Therefore, SF numbers were attributed to them starting from the left of the illustration, to the right. The same procedure is followed for the metal objects (Xanthoudides 1924: Pl.15); the SF numbers of the metal objects follow after the figurines.

e) **Aghia Triadha**: Some of the objects from this tomb are found in the Heraklion Museum without registration numbers. The sequential numbering assigned by Banti in her catalogue of finds (1931: 163-251) is adopted in this research.

An overall assessment of the Mesara sample indicates that in terms of mortuary variability, patterns of mortuary differentiation are difficult or impossible to establish on the basis of the available evidence; usually only one or two variables in each tholos hint at possible social distinctions in the burial domain. What is valid for the whole of the Cretan funerary record, namely that social differentiation is highly obscured by the nature of the publications, is also the case for Mesara. This must be borne in mind in any discussion of the emergence of complex society in Crete.

6.6 Chronology and Stratigraphy of Tomb Groups and Patterns of Tomb Use

The Mesara tombs generally span the whole of the third and earlier second millennium B.C on the island (EM I-MM IB). The tombs were re-used extensively for subsequent inhumations after their initial date of construction.

Inhumations in these tombs have comprised multi-stage burial programmes that are impossible to reconstruct with any degree of confidence. The degree of accumulation, natural disturbance, post-mortem treatment procedures and extensive looting has rendered these contexts difficult to assess in terms of their original condition. They comprise collective tombs used over an extensive period of time to accommodate various types of burials, including secondary inhumations and pithos/larnax burials. Their internal stratigraphy is impossible to reconstruct and any skeletal remains have been completely deprived of their original state and their associated finds. No associations between skeletons and artefacts can be drawn. Moreover, the cumulative nature of the record does not provide tight chronological control over the sample. In essence, all that is known is that the Mesara tombs date mainly to the Prepalatial and the early Protopalatial period, with the majority of them probably dating to the latter (Branigan 1970).

This chronological framework is of crucial importance for the examination of the evidence, since most of the material culture yielded may not, in fact, be representative of the earlier part of the EBA, but of the latter part, i.e just prior, or contemporary with the first "palace" establishments. Their EBA dates of construction have often been considered to correspond to the corpus of finds in these tombs. This, in consequence, has created an exaggerated impression of the "richness" of the Prepalatial material culture; it must be clearly stated that this is not the case and that this overrating of the material accentuates the bias in the record.

Patterns of tomb use indicate the repeated use of these domains for several burial types and the overall number of inhumations in each of them is rarely reported and highly disputed. It has been maintained (Branigan 1988: 44) that these tombs may have been used as depositories of wholly or partly disarticulated skeletons that were inhumed after exposure and partial or final decomposition. Indeed, the state in which the skeletons were

found, in conjuction with a reluctance on behalf of the excavators to provide anthropological information is indicative of the condition of the human remains.

Furthermore, evidence for interference with the bones of the deceased by the burying group has been discussed by Branigan (1988) and points to five different ways in which skeletal remains were handled. These are, clearance of the remains to dumps either within or outside the tomb, in order to accommodate more burials, or as part of mortuary ritual and symbolic expression, fumigation of the bones and the tomb contents, selective removal of certain bones and finally, intentional breaking/chopping of long bones.

There is also evidence that the Mesara tombs encompassed yet another aspect of use, that of mortuary ritual and ceremony related to the cult of the dead and the ancestors. Branigan (1970; 1988) has discussed the possibility of burial ceremonies taking place inside and outside each tomb. Indeed some of the data indicating the interference with the bones of the dead may comprise part of these ritual programmes. Unfortunately, data is too fragmentary to allow a faithful reconstruction of what went on in these domains. However, it seems almost certain that some kind of formal ritual activity associated with the dead and their resting places was enacted by the burying group.

Corroborative evidence, from other sites like Arkhanes and Mochlos for instance (Branigan 1988), indicates that intentional grouping of the skulls comprised a recurring post-mortem activity as early as the EM II. However, since this piece of evidence does not survive in an intact form and the record is considerably transformed due to post-depositional disturbances the possibility can only be suggested.

The most important aspect of tomb use in the Mesara relates to the fact that burials in these tombs were predominantly secondary and that each burial programme involved a much more complex procedure than previously thought (Branigan 1988). In view of this temporal perspective, the Mesara tombs must not be treated as single-event contexts, but as cultural domains where a whole range and variety of mortuary practices

is fossilised. In this sense, it is unfortunate that good publication standards are lacking and only glimpses of this symbolic behaviour can be gained.

The subject of funereal ritual and symbolism, as attested in the Cretan tombs as a whole comprises a fascinating aspect of mortuary variability on the island and is further discussed in the concluding part of the chapter. At present, with regard to the Mesara tombs, it is clear that no tight chronological and stratigraphic controls can be applied to the data. With regard to patterns of tomb use it can be safely maintained that they indicate multi-stage burial programmes.

6.7 Analysis of Mortuary Variability

6.7.1 Biological and Demographic Information

Biological/demographic data is not available for the tomb groups of the Mesara region. Reports rarely refer to the skeletal remains in the tombs and the only conclusion that derives from these contexts is that the total number of deceased individuals usually exceeds a hundred, at least in the larger facilities.

There is no information regarding age and gender distributions. The high degree of interference with the dead further obscures the mortuary population sample. The evidence of the EM II ossuary at Arkhanes (Sakellarakis 1976; Branigan 1988) indicates that children were not excluded from these, primarily, adult domains. It has been suggested (e.g Hood 1971) on the basis of rough population estimates and the archaeological evidence that the Mesara tombs represent extended family/clan facilities designed to accommodate kin groups. The distribution of the tombs themselves can be considered as indicative of the population density in the region during the EBA.

6.7.2 Treatment of the Deceased and Methods of Disposal

Data related to post-mortem treatment is equally scanty for these tombs; further work (Branigan 1988) points to a range of post-mortem treatment programmes in the

Mesara domains. The analysis of the present sample indicates that multiple successive inhumation was practiced in Mesara along with pithos burials deposited inside the tombs.

Burial types vary to such an extent that interpretation is called for. Branigan (1988) suggests that secondary inhumation may have been practised in the majority of cases. However, several articulated inhumations were also uncovered. Our sample shows that the number of contracted and extended articulated skeletons (n=8) is equal to the occasional deposition of skeletons in pithoi (n=8). However, the evidence from all the excavated tombs indicates that the total number of disarticulated inhumations is so high as to render it that disarticulated inhumation was the norm.

Despite the mixed nature of these contexts, it is clear that a lot of energy was spent on varying programmes of post-mortem treatment. Since it is impossible to reconstruct these activities and study them in association with other aspects of mortuary variability, discussion on post-mortem treatment is rather limited. However, important is the occurrence of more than one post-mortem treatment programme in each domain and the frequency of each programme. The latter cannot be assessed with any certainty, but the occurrence and co-existence of different post-mortem treatments in each tomb may be considered as indicative of distinctions in the mortuary domain. Unfortunately, it is impossible to correlate varying methods of disposal to grave equipment or other variables and thus arguments related to horizontal or vertical distinctions cannot be substantiated. What can be said with certainty is that differentiation in these domains was expressed in terms of post-mortem treatment.

The variation is so high and the differentiation between the various post-mortem programmes so emphatic that the Mesara sample calls for interpretation. Apart from the post-mortem programmes that Branigan discerned in these tombs (1988) a number of other considerations must be taken into account. Inhumations outside the main facility (the tholos) take place in the surrounding structures that many of these tombs have as annexes; the deceased individuals are either placed directly on the floor, or in pithoi and

larnakes. It could be suggested that when there was no more space available in the tomb, annexes were built to accommodate the extra burials. However, given the space available in the Plain, these burials could have easily been accommodated in other newly built facilities. The differences between pithos, larnax and floor inhumations is indicative of definite social distinctions in these domains.

Kinship ties may have played an important role in this sense and the emphatic long-term use of these domains rather points to a strong link between the burying group, the ancestors and possible land rights (Goodenough 1965; Pader 1982) in the largest fertile plain of the island. The collective nature of these interments corroborates the argument for the function of these tombs as the burial places of extended family/clan tombs or lineages (e.g. Hood 1971: 140). Elsewhere (Chapter 4) in this thesis a correlation between a collective mode of interment and increasing complexity could be established. The collective idiom as expressed in the Mesara tombs, in conjuction with attested patterns of mortuary differentiation, are discussed in more detail in the concluding part of the chapter in an effort to monitor the trajectory of complexity on the island.

Patterns of mortuary differentiation based on post-mortem treatment indicate highly structured burial programmes in Mesara, which clearly demonstrate differentiation among the mortuary population and a substantial amount of energy labour towards mortuary symbolic and ritual expression. These patterns are also discussed in the concluding part of the chapter when all aspects of mortuary variability have been examined.

6.7.3 Grave Equipment

Much of the equipment in the Mesara tombs has been looted over the years and consequently the quantity of furnishings in these domains is not representative of the

original inclusions. It still provides some useful insights regarding grave good deposition patterns and range of material.

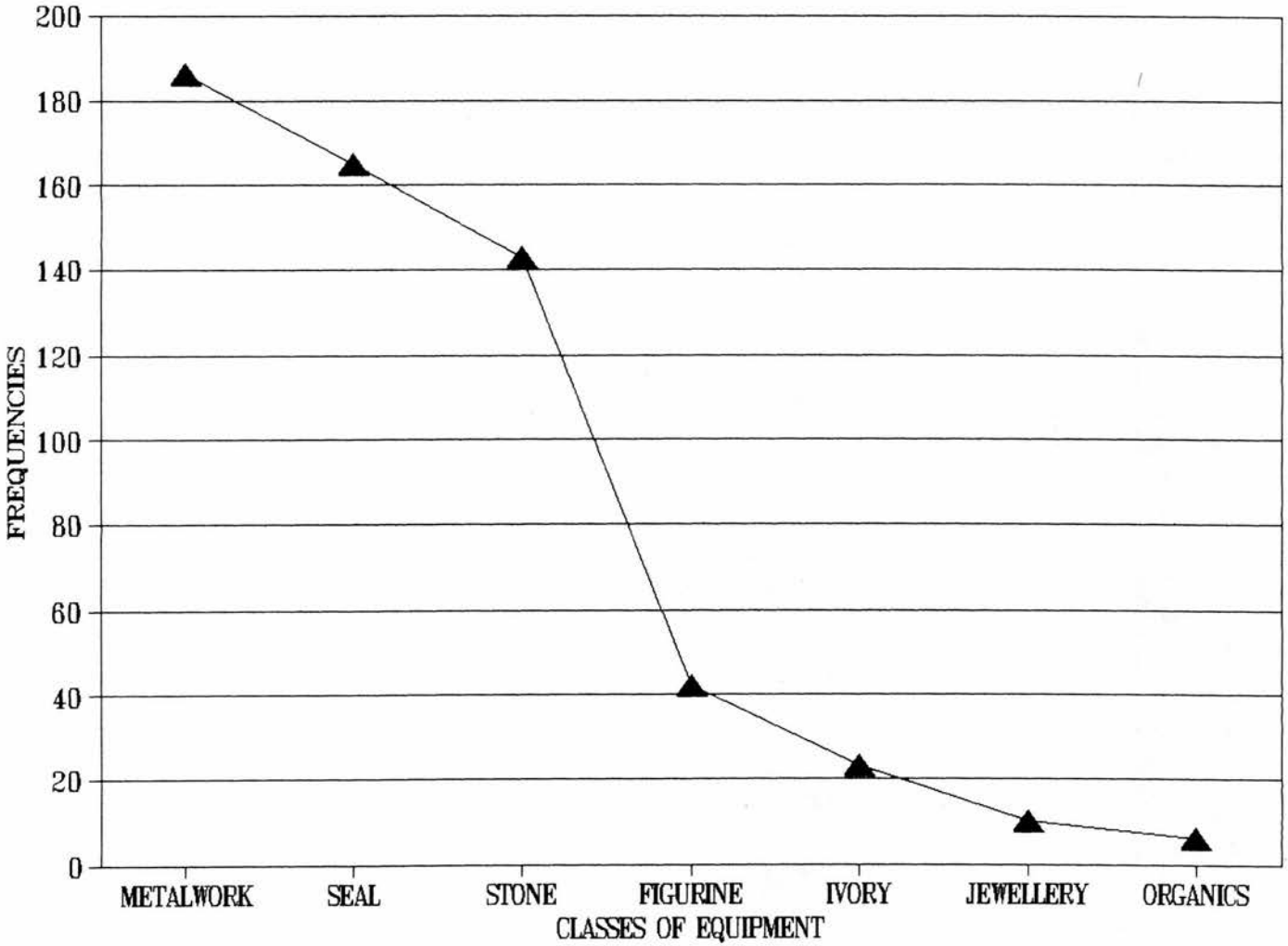
The main categories of finds are pottery, figurines, stone objects, ivory objects, metalwork, seals, jewellery, some ceramic objects and items made of organic materials (Fig. 56). The analysis indicates that the predominant category of equipment is metalwork (n = 185), followed by seals (n = 165) and stone objects (n = 143). Metalwork has been studied in more detail by Branigan (1968), seals by Blasingham (1983) and ivories by Krzyszkowska (1983). A few articles with regard to ivories have been published more recently establishing the predominant use of boar's tusk, instead of ivory, during the Prepalatial period in Crete. It is now known that all the early ivory items were in fact made of boar's tusk (Grammenou, *pers. comm.*).

With regard to figurines (n = 42), the majority of those uncovered in the Mesara tombs were Cretan of the well known Prepalatial types (Petsofas, Porti, Aghios Onoufrios types). Some figurines were imports from the Cyclades, or local types (Koumasa type) imitating Cycladic originals. Others were either Egyptian or egyptianising. The one in the present sample was made of alabaster but there are examples executed in local limestone. A number of these objects are unidentified as to type. The original publications do not often provide detailed descriptions or illustrations of these examples.

These were manufactured from both local and foreign raw materials. Alabaster and ivory were used for the manufacture of certain figurines, but the vast majority were executed in local material like limestone, steatite or schist. The Cycladic imports were made of marble.

Amulets and pendants were often deposited in these contexts. The amulets were often zoomorphic (e.g ox, ape) or depicting parts of the human body (e.g leg amulets). Pendants and amulets were executed mostly in local raw materials like figurines, but similar to the latter were some made of foreign material (faience).

Fig. 56 MESARA
GRAVE EQUIPMENT FREQUENCIES



Stone objects comprised a substantial category of grave furnishings in these tombs. They present a wide variety of types and materials, mostly local. The stone types can be discerned in five basic categories: a) stone vessels (bowls, kernoi, cups, jugs, bottles, ladles, pyxides, basins, perfume jars, mortars, teapots, chalices, pithoi, rhyta), b) stone weapons (blades, knives, whetstones), c) jewellery items (rings, palettes, beads), d) stone tools (pestles, polishers) and e) miscellaneous stone objects (e.g. pommels, pyramidal objects, tablets, cylinders, other unidentified objects). The stone vessels are various bowl types including the so-called "Bird Nest Vases" and some more composite forms like the kernoi.

The range of raw stone materials includes local stones like steatite, limestone, sandstone, slate and breccia as well as foreign stones like chalcedony, marble, rock crystal, obsidian and alabaster. Specific materials were used for the manufacture of specific stone types, such as weapons for instance, which were almost exclusively made of obsidian, with the occasional use of flint. Similarly, precious stones were used for the manufacture of objects of primarily non-functional character.

On the basis of this evidence it can be said that the stone industry was thriving in EBA Crete and the degree of craft specialisation and distribution of raw materials indicates that this must have been a well-organised industry. Since stone objects were consumed in these domains in large amounts the increasing demand for stone objects must have provided a powerful stimulus for increasing production.

Ivories (n=23) comprised another recurring category of furnishings, although they were not as common as the stone artefacts. The number of ivory seals from Mesara was indeed great and Crete still stands as an area unique in the Aegean with such quantities of ivory objects (Krzyszkowska 1983). The most common types executed in ivory/boar's tusk, were seals and pendants. Other types included amulets, pommels, beads, plaques, and leg models like the stone ones discussed earlier.

Seals (n = 165) comprise the other predominant category of ivory items. They were deposited in the tombs in large quantities and thus, definitely, formed part of the grave assemblage (Blasingham 1983: 11). The interpretation of seals in these contexts has been quite problematic. Blasingham's work (1983) on the Mesara seals and their motifs shows that they must be regarded as indicating some kind of political office or social rank, given the possibility that the Mesara tombs represent the property of kin-groups. For Blasingham (1983: 19) the evidence of seals in these tombs is indicative of a certain transformation in the Mesara community demonstrating the transition from the localised lineage/clan to stratification and ownership at the end of the Prepalatial period.

The seal repertoire includes various types zoomorphic, geometric, miscellaneous types and scarabs. Some of the seals were imports from the Near East like the Babylonian cylinder seal made of heamatite and uncovered in one of the Mesara tombs (ME 6, SFNo 1098). Scarabs were also either Egyptian in origin or egyptianising. Apart from ivory, a range of material includes bone, steatite, crystal, terracotta and some pastes.

Both ivory amulets and pendants depict various animals, mostly birds, but also oxen, dogs, apes, elephants and others. Some of these species did not exist on the island, but their representations are found in stone and ivory. Ivory plaques and other similar items probably comprised decorative parts of furniture as inlays. It is not clear whether furniture made of perishable material (e.g wood) was included in the grave equipment, but since it would not survive, the inlays may be the only evidence for it.

Metalwork (n = 186) constitutes the majority of the funerary equipment in these contexts. There is a wide variety of metal items that can be classified as three main categories: a) items of personal adornment (n = 58), b) weaponry (n = 98), and c) tools (n = 15). There is a clear correlation between class of metal and type of object. Thus, gold and silver are exclusively used for the manufacture of jewellery and ornaments, whereas copper is used for weaponry and tools.

This distinction is indicative of a high degree of craft specialisation attained during the Prepalatial on the island with regard to metal production. It must be noted that metal sources are not generally present on the island, with the possible exception of some copper ores that might have covered some of the demand (Branigan 1968). At any rate it is important to realise that metals were predominantly imported to the island and this has wider implications for metal circulation and trade during the EBA in Crete.

Again, it is noteworthy that a large number of metal objects are items of personal adornment, like the ivory objects. The examination of the rest of the industries present in these tombs shows that at least half of the grave equipment in these tombs was non-functional. The character of the grave inclusions, in relation to mortuary variability, is discussed in the concluding part of the chapter.

Jewellery (n = 10), in the form of necklaces, rings, earrings and beads, that probably once formed whole necklaces, is present in considerable amounts. Jewells are not made of metal only, but also of other local (steatite) and foreign materials (faience, ivory, carnelian). Organics (n = 6) include necklaces and beads made of shell, or simple unworked shells deposited in the burial domain. A couple of ceramic items namely whorls and a few clay beads, were also found.

The pottery from the tomb contexts of Mesara survives in fragmentary form mostly. It comprises the largest corpus of material from the tombs and it is especially useful because it bears evidence for diachronic change. The pottery corpus consists of coarse storage vessels and finer vessels. They all bear some kind of surface treatment and therefore the majority belong to the FW category.

A study of the Prepalatial pottery in Cretan tombs by Walberg (1987) indicates that the same pottery types appear in all the collective tombs of the island during this period. Her observations on the pottery from these contexts can be summarised as follows: In the early Prepalatial the most commonly occurring types are large, coarse storage vessels and small closed vessels like suspension pots and pyxides. In the EM II

there appears to be a change from the previous forms to medium-sized vessels like jugs, cups and plates which continue to the end of the Prepalatial. Some of these vessels have parallels in contemporary sanctuaries and thus may have constituted part of mortuary ritual programmes held both inside and outside the main burial facility. The vessels deposited in the tombs were not specifically made for funerary use with the exception of a few types (e.g. zoomorphic/anthropomorphic askoi).

On the basis of the grave equipment from the Mesara tombs some observations can be made:

1) The number of grave inclusions- given that all the tombs were plundered severely - corroborates the evidence for a great number of inhumations in each domain.

2) The range of artefacts and raw materials, and their purposefully selected use, indicates a high degree of craft specialisation achieved in Mesara.

3) Evidence for imports and artefacts of foreign inspiration is indicative of the extent of foreign relations during the Prepalatial and the Protopalatial period. Most of the material points to more substantial exchange during the latter period.

4) The combined grave equipment and contextual information bears evidence for a high degree of mortuary symbolic and ritual expression in these contexts. The function of the grave objects as symbols in the funerary domain - given the fact that they bear a number of other attributes, either as items of foreign exchange or prestige goods - is highly obscured in the tombs. However, we must allow for this difficulty since it is almost impossible to isolate "the sacred from the profane...the economic from the symbolic" (Boyd 1992: 31) in any mortuary context.

5) The character of the grave furnishings can be best described as individualistic since it predominantly demonstrates items of personal adornment. Grave equipment in these contexts must, therefore, be interpreted in this sense, bearing in mind the intention of the burying group to represent its deceased members with a very personal grave kit; the seals also corroborate this argument.

6.7.4 Spatial Arrangement

The spatial distribution of the Mesara type tombs in Crete indicates that these tombs had a wider distribution than previously thought. They are mainly considered as a local phenomenon both regionally and temporally.

Small clusters of 1-3 tombs dispersed all around the Mesara Plain is the usual pattern. This clustering of the tombs has been considered as further pointing to their communal character and to a kinship-based society (e.g. Hood 1971). It is presumed that each tomb cluster served the family/ies of a near-by village.

The internal spatial arrangement of skeletons and artefacts has not survived post-depositional disturbance and is impossible to reconstruct. Bearing in mind that the evidence hints at a substantial degree of ceremonial expression in these contexts, a study of internal arrangement would almost certainly be revealing for an essential reconstruction of mortuary programmes. The present sample is not meaningful with regard to spatial arrangement. It only corroborates the evidence for a wider spatial distribution of the specific tomb type and deliberate re-arrangement and interference with the bones of the deceased.

6.7.5 Description of Mortuary Facilities: Tomb Typology and Energy Expenditure Measures

The tombs of Mesara have a very distinct architecture. They are circular in shape and entirely stone built. Since their roofs do not survive the first excavators tried to reconstruct the type of roofing used for those facilities. Initially, they were conceived as tholos structures or "beehive" tombs with a vaulted roof (Xanthoudides 1924), but later it was suggested that they might have had flat roofs. The term "tholos" has pertained for years in the archaeological literature of Crete, but in the present research these tombs are described as Mesara type tombs. There are no distinct variations within this typology,

simply some of these tombs were larger in diameter than others and some had annexes built adjacent to them, whereas others had not.

On the basis of the available evidence it is clear that the dimensions of each of these tombs and the presence of annexes was related to the number of inhumations per tomb. Reasons related to social structure and ritual expression probably dictated the number of inhumations in each tomb and its surrounding annexes and the function of these annexes as both burial domains and funerary cult places (Branigan 1971; 1987).

It is also evident that all such tombs required a substantial amount of labour towards their construction. The largest in the sample is ME 5 (Platanos Tholos A) and the smallest is ME 8 (Krasi Tholos). These measures, however, cannot be used to detect mortuary differentiation, since they cannot be meaningfully correlated to other variables in the analysis. Even arbitrarily examined, no correlations between energy expenditure and grave equipment or other variables have been produced. Simply, the largest tombs accommodated more individuals and contained the majority of the equipment.

It is reasonable, therefore, to consider them as relatively "expensive" tombs that required corporate participation for their construction. This observation corroborates the argument for collective expression and indicates minimisation of differentiation with regard to this aspect of mortuary variability.

6.8 Patterns of Mortuary Differentiation in Mesara

Data quality control for the Mesara Plain established the view that, in fact, very little can be said and done with regard to the particular tomb groups in terms of mortuary variability. Bearing in mind the fact that the evidence as a whole and the particular sample cannot be manipulated to produce meaningful results, the discussion on mortuary differentiation has to focus on alternative issues that may be more useful in terms of interpretation.

In view of these obstacles in relation to the reconstruction of social structure and differentiation the following points are discussed:

a) The architecture of the Mesara tombs

b) The nature of grave inclusions

c) The mode of interment

With regard to the first point, the architecture of the Mesara tombs is quite uniform. Patterns of social differentiation on the basis of energy expenditure towards the construction of these facilities are impossible to detect due to the clear correlation between number of inhumations and size of tomb. If these tombs were the burial places of extended family groups/clans, the existence of certain lineages of greater size may be inferred. It is reasonable to suggest that, on the basis of energy expenditure and size of tombs the larger facilities represent the tombs of larger size lineages. The size of these social groups was, therefore, variable bearing wider implications with regard to social distinctions, stratification and complexity.

Grave inclusions point to a certain degree of differentiation among individuals. Despite the fact that most of the equipment has been plundered over the years it is clear that some interments were not accompanied by grave goods (e.g. the ones in pithoi), or were accompanied by less finds in comparison to the ones laid on the floor of the main facility (e.g inhumations in *larnakes*). This is one aspect of differentiation related to the interments in individual tomb contexts. The examination of differentiation on an inter-site level, i.e. among the tholoi clusters, shows that the larger facilities contained the majority of grave furnishings. This observation, in conjuction with the energy expenditure variable, may indicate that the larger size lineages had more frequent access to resources. It can be inferred that wealth differentials existed among the various social groups/lineages of variable size in the Mesara Plain. In this respect patterns of mortuary differentiation detected in the parallel examination of these tomb clusters show that vertical social distinctions existed among the various social groups. If parallels from the

ethnographic record are drawn (Tainter 1978: 121) and societies do not usually signify social distinctions by the amount of grave equipment, then Mesara presents us with a good case of how alternative questions can be asked.

Modes of interment epitomise differentiation among the deceased individuals. The lack of anthropological data from these tombs does not allow a more detailed study of possible age and gender distinctions. However, the variety in types of interment (articulated vs disarticulated, inhumations on floors vs inhumations in vessels) - to mention but the most conspicuous ones - also indicates a certain degree of social differentiation.

It may be suggested that different burial modes were conferred on individuals of different status in the Mesara Plain. The burial type and the associated grave equipment often points to areas outside Crete, like Anatolia (pithos burials), the Aegean (Cycladic figurines) and Egypt and the Near East (seals and scarabs). However, the Mesara evidence is not sufficient to indicate the burial of "foreigners" in these tombs. The possibility for the burial of "outsiders" in the Mesara tombs exists. The evidence for exclusively pithos cemeteries in the eastern part of the island (Hall 1916 for Sphoungaras; Seager 1912 for Pachyammos) in conjuction with the presence of individual pithos burials within the tholos facility is quite problematic. We cannot be certain whether different burial modes represent higher/lower status in vertical terms, or different status associated with different regional or even ethnic divisions.

The fact remains that each Mesara tomb demonstrates a range of distinct burial customs, particularly in terms of interment programmes. The burial domain cannot be characterised as uniform in this sense since it does not disclose a standard norm in mortuary programmes.

This co-existence of different burial programmes, the most prominent of which is the remarkable display of both the collective and the single idiom, comprises a point of departure for a meaningful discussion on EBA Cretan society. Nowhere else in the East

Mediterranean record has this pattern of intra and inter-site variability been so exceptionally emphasised as in Crete, thus marking the island as an exemplary case-study in cemetery variability. Temporal changes may have played an important role in this respect, particularly in these cumulative contexts where a number of generations have inhumed their dead. However, the extent of overlap among the various burial types is such that variation has to be explained using other than temporal criteria.

To reiterate, the Mesara cemetery complex reveals a number of patterns of mortuary differentiation, the most emphasised of which is variation in post-mortem treatment and mode of interment. The grave equipment bears evidence for some degree of foreign contact and exchange, intensified during the Protopalatial period and for a high degree of craft specialisation. On the grounds of the evidence available it may be suggested that certain social/family groups may have enjoyed a higher economic status in the Mesara Plain due to their population size, that permitted information and energy flows to be manipulated and exchanged more easily. Whether these groups can be characterised as the managerial elites of the fertile Plain of Mesara, or whether they were in competing terms is difficult to assess. However, the evidence for social differentiation among these extended groups points to social competition epitomised in the consumption of goods in their burial domains.

The most compelling evidence for the emergence of social hierarchies in Mesara is the presence of large scale collective interments. These tombs were not "egalitarian". They accommodated large size societal groups that could have easily sustained hierarchical mechanisms in the society. In this respect and with reference to the transition from a communal to a collective idiom from the EB I to the EB II-III tombs of the southern Levant (Chapter 4), Mesara bears comparable evidence for a correlate of increasing complexity, that of collective interment.

6.9 The Cemetery Complex of Mallia: Analysis of Mortuary Variability

The palatial site of Mallia lies in the north-central part of Crete, a few kilometres away from Knossos. The investigation of the so-called "necropoles" is important in view of the possible associations that can be made between the palatial unit and the cemeteries on the site. The discovery of Prepalatial and Protopalatial tomb deposits indicates that Mallia has been a long-lived site with remarkable continuity.

The current research on the site has given rise to a number of re-interpretations and re-definitions of both the older and the new material and it is certain that, as research progresses, more enlightening information will become available. Preliminary publications of the mortuary material (Demargne 1945; Baurain 1987; de Pierpont 1987; Sturmer 1987) have provided the basis for the present analysis. As a consequence, and despite being the most recently investigated and published site in the Cretan sample, the Mallia material encompasses all the shortcomings of preliminary reports and renders the data unreliable to a very large extent.

On top of these difficulties, the degree of disturbance and plundering of the site and the evidence for multi-stage burial programmes provide a sample that cannot be stratigraphically and chronologically controlled. The set of DQCF on the site is discussed in the following section. However, it is noted here that the sample is even more unreliable than that of the Mesara Plain, also due to the fact that only selected objects from these contexts have been published.

The anthropological information is so poor that not even general observations like the ones in Mesara can be made. Nonetheless, several insights can be gained with regard to modes of interment, burial architecture, range and quality of grave equipment. Since the Mallia tombs are also transitional from the Prepalatial to the Protopalatial it is important to try and monitor changes in burial practices between the two respective periods where possible.

6.10 Data Quality Control Factors

The set of DQCF for this particular site refers mainly to the funerary structures that have not been examined in the present research. In addition, concordance is provided to facilitate the identification between the unit numbers used in this research and the Mallia publication numbers. The concordance is as follows:

Table 4

MA 1 = Mallia Premier Charnier

MA 2 = Mallia Second Charnier

MA 3 = Chrysollakos Ossuary

MA 4 = Pierres Meulieres

MA 5 = Tombe a puits No 1

MA 6 = Tombe Triangulaire No 1

MA 7 = Maison de Morts.

The following tombs have not been included in this research:

a) Tombe Triangulaire No 2, since the publication contains very little information and the tomb only yielded one clay lamp,

b) Les Terrasses Occidentales, because they constitute dispersed funerary material that cannot be used in this analysis,

c) La Tholos, mainly because MM III intrusion elements are very evident,

d) Fosse aux Trompettes, due to extensive lack of information in the publication, and finally

e) L'Ilot de Christ, since the only information available refers to the typology of pithoi used for the MM I interments and the general description of pottery wares.

The treatment of pottery from the site in relation to DQCF is slightly different from the previous sites. The preliminary reports for the Mallia necropoles provide a

selective discussion of pottery manufacture techniques, wares and shapes and particular vessels that merit special attention. The whole corpus from Mallia seems to belong predominantly to the FW category and, therefore, a list of shapes and types of vessels has been kept in order to indicate the range of ceramics uncovered in the Mallia complexes. Since numbers of vessels are not provided the pottery cannot be treated quantitatively.

6.11 Chronology and Stratigraphy of Tomb Groups and Patterns of Tomb Use

The main period of use for the Mallia mortuary complex is the MM period. It is evident though that the site was used as a formal burial ground since the EBA. The continuity in the use of the site as a cemetery for a considerable period of time has increased the problems associated with post-depositional site formation processes, disturbance and looting. On one hand, this is an example of a multi-period cemetery site associated with settlement data, while on the other, the cumulative nature of these deposits renders their meaningful analysis extremely difficult.

The chronological and stratigraphic problems related to the nature of these deposits make it impossible to achieve a greater degree of chronological precision other than refer to the conventional tripartite scheme of EBA-MBA Cretan chronology. Most of the deposits have been dated on the basis of the ceramic sequences they have yielded and other associated finds. Stylistic variation has almost always been considered as indicative of a different chronology. The chronology of the Mallia funerary structures must still be regarded as preliminary, at least until more data becomes available. The stratigraphy of the tombs has been so severely disturbed that it is impossible to examine the finds and the pottery in any other way than on stylistic grounds.

Patterns of tomb use indicate the extensive use of the cemetery in a variety of ways, for primary and secondary interments in pithoi, larnakes (mainly in the later part of the BA), rock shelters and built tombs. It is obvious that the deceased at Mallia were

buried in different ways and that some kind of mortuary ritual was involved in this process. The number of secondary interments is indicative of the character of this particular site and in this respect Baurain's suggestion (1987: 67) to regard all the Mallia tombs as collective (fosses collectives), instead of defining them as "charnel houses", "ossuaries" or even "depositories" shows how problematic these facilities have been for scholars.

Tomb use has been discussed in terms of social structure and ethnic origin. It is evident, that on the basis of the available data, patterns of tomb use remain highly elusive and that only glimpses of the activities that took place in the area can be gained. Most characteristic of the problem is the identification of the Chrysolakkos edifice as an ossuary. Scholars are still puzzled as to the use of this vast structure as a tomb, a depository that was somehow related to funerary cult and ritual (Baurain 1987: 69-71), or even as a domestic quarter that was occasionally used for some burials (de Pierpont 1987: 90-93). The function of this vast edifice, which yielded an enormous amount of finds, including the famous "bee pendant", is still open to discussion. The Chrysolakkos deposit is further discussed in the following analysis; this brief discussion on the function of the edifice, however, serves to highlight the problems surrounding the complex character of the site.

The fact remains that Mallia consists of a number of burial sites/areas which were extensively used for inhumations throughout the BA. In addition, a variety of burial facilities, including rock shelters, ossuaries, built tombs, pithoi and *larnakes* were employed to accommodate the deceased. There is a temporal issue here, since the continued use of the cemetery over a relatively long period allowed for the cumulative manifestation of a number of mortuary practices. However, a certain degree of contemporaneous use can be postulated for several of those facilities. The tombs examined in this research mainly date to the transitional EM III-MM I, just before, or possibly synchronous with the first building phase of the palace complex at Mallia. In this

respect, the examination of the tomb groups from the site is of paramount importance since it can provide some insights to the nature of the developing Cretan society. It is unfortunate that data is not available in a fully published form that would facilitate an analysis of mortuary variability.

With regard to the following analysis, it must be noted that the majority of information concerning the grave equipment has derived from the excavation of the Chrysolakkos edifice. This bias is discussed in the relevant section with regard to the nature of the grave inclusions and the presence/absence ratios.

6.12 Analysis of Mortuary Variability

6.12.1 Biological and Demographic Information

The skeletal remains were in a poor state of preservation - accentuated by the accumulation of multiple burials in every tomb. It still remains unclear whether there ever were any direct, primary interments, or a secondary deposition of skeletons in a collective domain.

Scholars (e.g Baurain 1987) have suggested that some of the burial facilities on the site may have been used for a preliminary treatment of the deceased who were, at a subsequent stage, moved and re-interred in secondary deposits. Anthropological information is almost completely lacking for Mallia. Any attempt to reconstruct the demographic size of the community is doomed to failure. Baurain (1987: 68) writes: "..les donees les plus elementaires qui permettraient d'evaluer le volume de la population maliote font defaut". Accordingly, the only discussion that can be made is with regard to post-mortem treatment and methods of disposal.

6.12.2 Treatment of the Deceased and Methods of Disposal

Only one burial is documented in detail, an articulated adult skeleton facing W in a cist grave. The rest of the inhumations are distinguished by burial type. The majority

(n = 6) comprise multiple successive inhumations, probably secondary, while there are at least three (n = 3) in pithoi within the tomb domain and two (n = 2) in a pithos and a cist respectively. Apart from the burials identified in pithoi and cists, the rest comprise a vast number of unidentified burials as to posture; they have been treated as burial groups (n = 12) as opposed to individual inhumations.

A variety of methods of disposal are suggested by the synchronous use of individual cists, pithoi and direct on-the-floor interments. Better preservation of the single cist and pithos burials may suggest that primary interments took place in these facilities, as opposed to the floor interments which may easily have been secondary. The issue here is differential post-mortem treatment and whether it can be linked to social differentiation. Despite the fact that this particular variable points to some kind of differentiation it would be difficult to assert a single variable can indicate social differentiation (*contra* Soles 1988: 51). It should be borne in mind that both post-mortem treatments were present in the same mortuary domain, a fact that instantly minimises the degree of differentiation.

The secondary treatment of the deceased is corroborated by the Mesara evidence and indicates a high amount of time and labour spent over funeral procedures. The successive nature of these interments also points to continuity in the burial tradition as manifested in the long-term use of specific burial grounds.

A comparison with the Mesara post-mortem treatments shows that the same kind of ritual interference with the bones of the deceased also took place at Mallia. Secondary interment implies disarticulation of the skeletons and subsequent collection for re-burial. If, indeed, the mortuary edifices at Mallia had specialised functions - some for the preliminary treatment of the corpse and others as the final depositories - (Baurain 1987) then the practice of disarticulation must have been quite extensive and more formally organised than in Mesara. Nevertheless, it must be stressed that on the basis of the

evidence available the attribution of specialised functions to some of the Mallia structures is highly speculative.

Removal of bones and clearance of specific parts of the tomb in order to insert subsequent burials took place at Mallia. In many instances the bones are pushed into the inner parts of the burial chambers to accommodate new interments. The Mallia tombs bear evidence for multi-phase burial programmes involving disarticulation and secondary burial. Some of the skeletons may have received primary burial in individual cists and pithoi. However, the majority were buried over a longer period of time as in Mesara. There is at least one child buried in these domains, in a pithos, indicating that children were also accommodated in these facilities. Despite the absence of detailed anthropological information it seems that this was predominantly an adult cemetery.

6.12.3 Grave Equipment

Artefact distribution indicates that metal items (n=22) comprised the majority, followed by the stone objects (n=15). However, most of the metal objects were uncovered in the Chrysolakkos edifice and thus the sample is biased. The fact that parallels for a massive deposition of metalwork in tomb contexts comes from both Mesara and Mochlos (see below) serves to rectify the situation and show that metalwork was indeed deposited in mortuary contexts regardless of Chrysolakkos and its special function.

Material distribution for stone shows that the majority of stone vessels (n=9) were made of steatite, while there were at least one alabaster vessel (n=1), one made of rock crystal (n=1) and a marble lid (n=1). In metalwork (n=22) there are almost equal amounts of bronze/copper (n=11) and gold (n=12). There is the distinct possibility that goldwork exceeded the number of copper/bronze pieces since the gold objects were recorded as groups of rosettes, beads, foils, and inlays, and assigned one SF number. It is

evident that gold was used for the manufacture of specific items, namely jewellery (beads, pendants) and inlays (rosettes, leaves, foils, lotuses) on clothing or furniture, i.e items of personal adornment. Copper/bronze was used for the manufacture of more utilitarian items, like instruments, tools and weapons.

Representational art consists of terracotta statuettes (n=4) of which only fragments survive. They are both anthropomorphic (male statuette) and zoomorphic (bird, horse, sheep). Seals (n=3) include one made of terracotta (n=1), one of steatite (n=1) and a hemi-cylinder ivory seal from MA 3 (Chrysolakkos) bearing hieroglyphs (SF 1442), which is unique in Crete, along with SF 1067 from ME 5 (Platanos Tholos A).

As mentioned before, most of the goldwork was found in MA 3. It is interesting to note the limited presence of ivories and weaponry in this context, as well as seals. De Pierpont (1987: 93) contemplates this absence when he attempts to offer a new interpretation for Chrysolakkos. Despite the fact that Chrysolakkos has been looted and the presence/absence ratios are not expected to be representative of the original inclusions, this observation may indeed be important for the interpretation of the building. No matter how significant the apparent absence of seals and weapons may actually be for an understanding of the function of MA 3, we must be cautious. Due to poor publication the presence or absence ratios of particular grave furnishings is uncertain in most Cretan tombs.

To conclude, grave equipment does not comprise a sensitive indicator of social distinctions at Mallia. The differentiation between the single cist/pithos burials, which were not accompanied by grave goods and the floor interments may not signify wealth differentials. Since all inhumations were finally inserted in the burial chambers, it may well be that all grave inclusions were intended for all the deceased in the tomb. Scholars (e.g Hertz 1960) have often maintained that death is the object of collective representation; at Mallia, where the predominant mode of interment is collective the need for an interpretation that encompasses this aspect is even more compelling.

6.12.4 Spatial Arrangement

The spatial arrangement of the Mallia facilities is difficult to examine on the basis of the data available. It seems that there was a natural progression from rock shelters to built tombs, and later on to pithos and cist burials, which were selected or constructed according to the needs of the community.

It is evident that formal disposal areas were created at Mallia to accommodate the burials of the earlier part of the BA. It has been suggested by scholars (e.g. Baurain 1987: 64) that the sea was the actual "domaine des morts" for most of the population. This implies that the surviving tombs may be the burial places of socially differentiated groups of people, royalty and/or nobles etc. The excavators of the site (e.g Demargne 1945) have maintained that the different types of tombs were used by different social groups. If this indeed were the case, then the spatial arrangement of the tomb types would be expected to reveal such a pattern.

Two things are immediately visible: a) that the burial sites are in close proximity to the palace (ca. 500m), and b) that they are near the seashore. Accordingly, the natural rock crevices which exist near the shore were initially used for burial (EM II). Contemporary with these was the first built tomb (ossuaire Renaudin); the later part of the EBA (EM III-MM II) was the major period of construction of the built tombs.

The spatial variable does not corroborate the argument for the existence of special social groups on the site. All tombs are near the shoreline and it seems to be a matter of land configuration where they were located. There is also a temporal issue with regard to the use of different facilities in different phases of the EBA. Therefore, spatial arrangement cannot be considered as an indicator of differentiation on the site.

6.12.5 Description of Mortuary Facilities: Tomb Typology and Energy Expenditure Measures

There are three main types of tombs at Mallia: a) rock shelters (type 7), b) the intermediate chamber/built tombs (type 4/5), and c) the built tombs (type 5). There is some chronological difference to be discerned among the various tomb types. However, their use overlaps in time to a considerable degree.

During the EM II period the facilities used were mainly rock crevices. Later on (EM III-MM I) the built tombs appear on the site; with the advent of the Protopolatial period the pithos burials are introduced. There is tighter chronological control over the appearance of jar burials; they do not appear earlier than the MM I period. The built tombs, however, make their very first appearance in the EM II. Clearly, some people continued to bury their dead in the natural rock fissures, while others preferred to construct more permanent structures for their deceased. What reasons dictated this practice is still to be discussed. The emergence of elite groups, willing to establish and display their status, may have been one reason, or the segmentation of a community that buried their dead in the appropriate facilities for each group.

Parallels for the construction of large built tombs exist in other burial sites in the island. Mochlos (Seager 1912) and Gournia (Soles 1988) are two known examples. The distinction between grave types at Gournia is also so sharp that it calls for some kind of social interpretation.

At Mallia the majority of tombs (n=7) do not exceed 3.00x3.00m, a number (n=4) are larger. Chrysolakkos stands out as the only mortuary structure that is larger than anything known so far, measuring 38.80x29.80m. It is obvious that the construction of built facilities required collective effort and labour. Both the energy variable and the grave equipment indicate that these tombs were certainly "expensive" to construct and furnish. If post-mortem treatment is also taken into account, the existence of a social group that received status duties may be indicated. The size of this group remains elusive, but on the basis of the numbers of inhumed individuals it was rather extended.

6.13 Patterns of Mortuary Differentiation at Mallia

A few observations can be made with regard to patterns of social differentiation in the Mallia tombs:

a) The cemeteries most likely served as the formal burial ground of a wealthy community that was flourishing in the area before the construction of the first palace. The degree of energy expenditure attested in mortuary architecture, grave equipment and post-mortem treatment (3 out of 5 variables) is unique in the burial record of the EBA East Mediterranean.

b) The variation in burial practices within the cemetery itself, evident in the funerary architecture and post-mortem treatment, indicates that some kind of social differentiation requiring different burial traditions existed at Mallia. The parallel study of both the cemetery and the palatial unit by the first excavators led to the immediate characterisation of the cemetery as a "royal" one and the identification of Chrysolakkos as "seigneurial", or "princier" tomb (Soles 1988: 57). Ranking can be inferred by the study of the evidence (Soles 1988) on the basis of differentiation in post-mortem treatment, tomb typology and quantity-quality of grave furnishings. However, since none of these variables are reliable for Mallia, any model of social ranking and stratification remains elusive.

c) Individual artefacts, like the diadems, the seals and the exquisite goldwork in the tombs, as well as the amount of imported raw materials and finished objects is indicative of an extended network of demand for foreign commodities. The local craftsmanship also shows a high degree of specialised skill in the production of such artefacts. It must be borne in mind that these activities are still outside the palace mechanism that later on will regulate the manufacture and circulation of these luxury items.

d) Finally, the parallels from the tombs at Gournia and Mochlos corroborate the Mallia evidence to such an extent that the burial record of Crete must be considered as

manifesting an accumulation and display of wealth, yet unparalleled anywhere else in the East Mediterranean. These tombs have been correctly described as "collective" but not "communal" (Soles 1988: 59). Like Mesara, Mallia witnesses the emergence of differentiated social groups in the EM II-III that practice collective interment in elaborate built tombs. Comparative evidence comes from EB II-III southern Levant where the emergence of urbanism can be associated with the practice of collective interment in built tombs (e.g Bab edh Dhra).

It may be reasonable to suggest the rise of differentiated social groups on the island during this period. The collective character of these cemeteries minimises differentiation among the deceased individuals in each tomb, but wealth differentials can be seen among the various tomb groups. Unlike Mesara where this aspect of differentiation is evident, at Mallia the preliminary character of published data does not allow a clear pattern to emerge. The occurrence of seals and diadems in these contexts may signal the consolidation of private ownership, stratification and hierarchies in the Protopalatial period. The beginnings of this process may be traced in the Prepalatial Mallia tombs. However, these contexts are highly obscured by the Protopalatial deposits.

On the basis of the present evidence the collective mode of interment comprises the most reasonable way to assess the data. If the comparative evidence from the southern Levant is taken into account, then evidence for increasing complexity is present in some Cretan sites since the EM II-III periods.

6.14 The Cemetery of Mochlos: Analysis of Mortuary Variability

The small island of Mochlos, off the north coast of Crete, was first investigated by the American School of Classical Studies at Athens in 1908, under the direction of R.B. Seager. The initial discovery and investigation of the settlement led to the discovery of a cemetery of 23 tombs.

The main cemetery areas are the Northwest Slope (NW) and the Main Slope (MS) as designated in the final publication (Seager 1912). The NW group of tombs consisted of six built tombs (ossuaries/burial chambers) of considerable dimensions, whereas the MS group comprised smaller tombs of varying typology, i.e small built tombs, cist graves, rock shelters and burial pithoi which, however, dated to the MM III-LM I periods.

The importance of the cemetery lies in the fact that it dates almost entirely to the EBA and was excavated and published in a comprehensive way. It comprises one of the very few EBA burial sites on the island where some kind of analysis can be conducted. Excavations on Mochlos were resumed in 1989 (Davaras and Soles 1992).

6.15 Data Quality Control Factors

The sample drawn from the Mochlos publication contains the EBA tombs from both areas of the cemetery. Data quality was enhanced by the following factors:

1) The latin letters referring to the tombs have been replaced by numeric designation for ease of reference (e.g. MO II = MO 2).

2) Tombs which were completely destroyed/plundered or belonged to MM-LM periods have not been examined.

3) Tombs which were originally cut or constructed during the EBA but were later re-used for subsequent interments are included in the present analysis mainly because Seager managed to isolate the earlier deposits.

4) The quantification of the grave goods has minimal statistical significance since Seager presented a selective publication of finds from each tomb.

5) The terminology is slightly changed; where "stone pot" is replaced by "stone vessel", and the term "cover" is replaced by the term "lid".

6) Finds are assigned sequential numbers from the beginning of the publication catalogue. All finds have been recorded with a note of their date. Therefore, cross-reference between the publication and the present research is possible.

6.16 Chronology and Stratigraphy of Tomb Groups and Patterns of Tomb Use

The chronology of the cemetery was established after the study of the stone and metalwork that was uncovered in the Mochlos tombs. Most of the tombs belong to the EM II-III periods, some were built or used in the MM and the LM periods.

The publication text provides a selective catalogue of finds from each tomb and their dates. Thus, in some instances where both earlier and later deposits co-exist in one tomb it is easy to isolate the earlier groups of artefacts. The stratigraphy of the tombs is greatly disturbed both by natural causes and human agency. All tombs were repeatedly denuded throughout the years and half-destroyed. The steep declivity of the slope on which the tombs were constructed accelarated denudation and scattering of their contents. According to the excavator: "it was necessary to clear the entire hillside, the soil of which was found to be filled with objects from tombs which had otherwise disappeared" (Seager 1912: 13). Due to this, it is impossible to study the spatial arrangement of the burial facilities in the cemetery, or the internal arrangement of their contents.

However, Seager made some useful observations with regard to methods of disposal. These observations are discussed in the analysis of the tomb groups from the island in the following pages. Patterns of tomb use indicate the use of these facilities throughout the EBA for collective burial. It was clear that the burials were successive, too, and that the cemetery was in use throughout the BA. The burial pithoi uncovered in the cemetery and dated to the MM III-LM I contained the remains of children, so Seager suggested that the later BA adult cemetery must be elsewhere.

The information yielded with regard to burial practices in Mochlos tallies with the evidence from Mallia. There are only two rock shelters in Mochlos, however, their co-existence with the elaborate built tombs and the smaller built or cist graves is reminiscent of the Mallia cemetery.

6.17 Analysis of Mortuary Variability
6.17.1 Biological and Demographic Information

Since anthropological information is not provided for these contexts data concerning posture and number of skeletons is lacking. The fact that in some cases up to c.30 skulls were counted in one tomb indicates that the cemetery was used for a considerable number of deceased individuals. Information on age and gender is also missing. Individual associations between artefacts and skeletons cannot be derived due to the collective character of the interments.

6.17.2 Treatment of the Deceased and Methods of Disposal

The information on methods of disposal and post-mortem treatment is based on Seager's observations. It appears that the inhumations were multiple and successive over a long period of time. It is almost certain that each tomb contained a number of bodies which had received some post-mortem treatment and that all the interments are secondary.

Seager (1912: 15) notes intentional re-arrangement of the skeletons so that in many small built tombs the skulls are all heaped up in a pile at one end of the tomb, separately from the rest of the bones. In addition, the small built tombs and the cist graves seem not to have been roofed. It appears that the small built tombs were used for small groups of deceased individuals which were intentionally arranged in the burial domain.

The large built tombs contain collective inhumations with the bones often piled up at one end of the burial chamber. It is important to note that the large tombs were all abandoned by the end of the EM period thus fixing the date of their contents with safety.

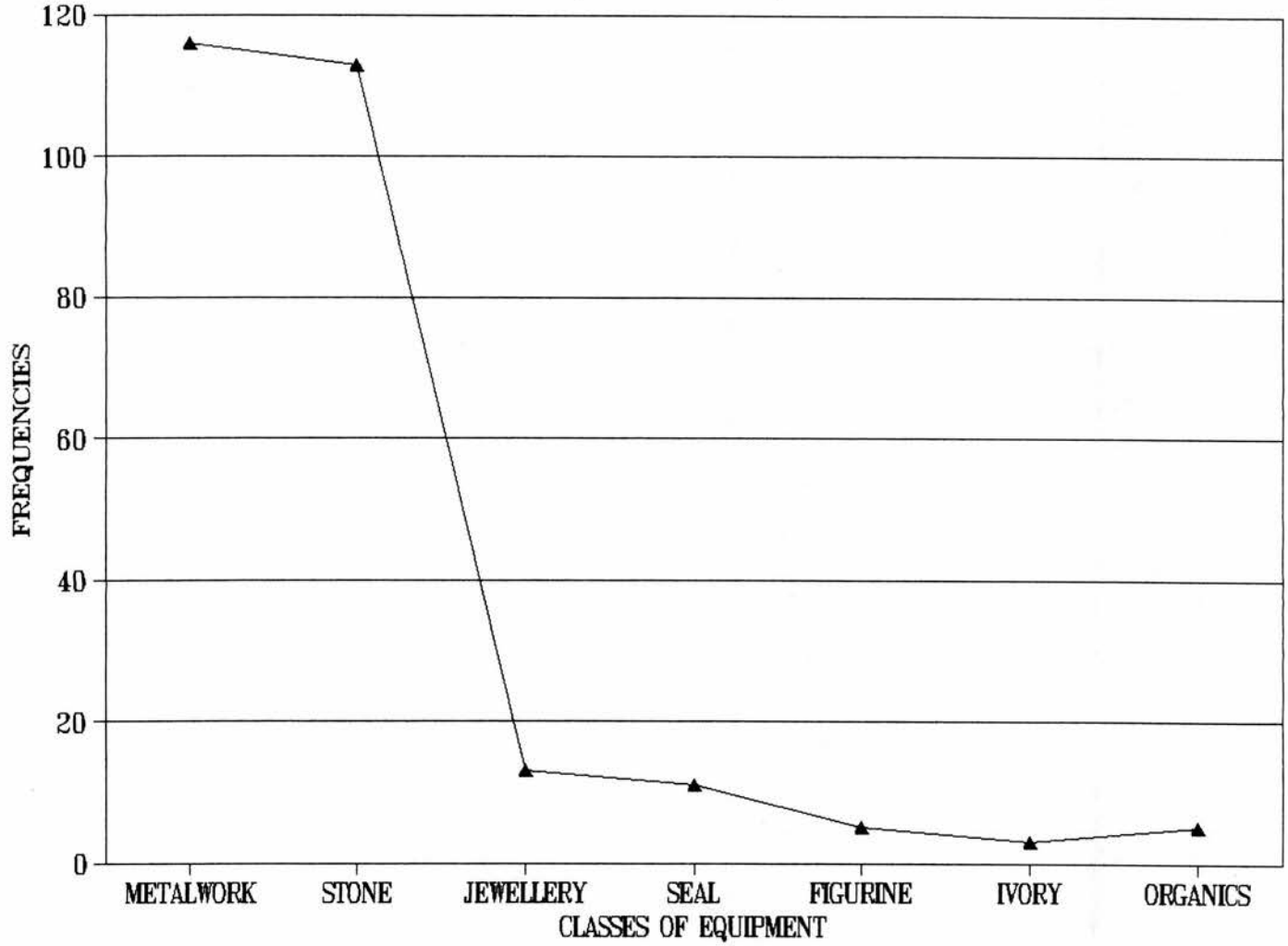
In the present sample, there are ten (n = 10) burial groups of which 2 (n = 2) may have been single inhumations. The situation is similar to that of Mallia and Gournia (Soles 1988). The amount of energy spent on post-mortem treatment indicates that burial was at least a two-stage operation that required time for the bodies to disintegrate. This variable cannot be statistically measured since no detailed information exists. However, it can be used to discuss energy expenditure towards post-mortem treatment and cultural/symbolic reasons dictating such a pattern.

6.17.3 Grave Equipment

The quantity (n = 266) and quality of grave goods in the tombs of Mochlos is almost unparalleled anywhere else in EBA Crete apart from the site of Mallia. The majority of artefacts were made of metal (n = 116), followed by stonework (n = 113). There also was jewellery (n = 13), seals (n = 11), figurines (n = 5), and a few ivories (n = 3) and objects of organic material (n = 5) (Fig. 57).

A wide range and variety of raw materials were used to manufacture these items. Jewellery (n = 13) comprised beads predominantly of a composite nature, i.e composed of materials like amethyst, gold, crystal, carnelian, shell, faience and stone. They were all combined on a single necklace or bead string. Individual beads made of these materials and others, e.g. chalcedony (n = 1) probably belonged to complete necklaces. Metalwork (n = 116) is of exquisite character and comprises either weapons and tool implements or items of personal adornment. Copper/bronze (n = 36) was used for the manufacture of weapons and implements, like knives, spearheads, daggers and cutters. There was also a

Fig. 57 MOCHLOS
GRAVE EQUIPMENT FREQUENCIES



There was also a copper/bronze ring, some depilatory pincers, a bowl, a miniature lion and a couple of votive double axes.

Goldwork (n=72), which comprises the majority of metal artefacts, consisted of necklaces and bead strings, diadems, pins, armlets, various bands, ornaments used as inlays and miniature animal and human masks. There was a small amount of silver (n=3) uncovered, mainly a silver cup, an ear pick and a couple of miniature balls that were probably pendants. Lead (n=5) also came to light in the form of two votive double axes associated with two buckle shaped objects and an unidentified object that was rodent-shaped.

Seals (n=11) mostly dated to the MM period (MM I-LM I) and thus cannot be used in this analysis. Most of them were manufactured in steatite (n=5), but there were two made of silver (n=2) - including a Babylonian cylinder seal - , some made of ivory (n=2), and two of chalcedony (n=2).

The next most substantial category of finds were the stone vessels and furniture (n=113). They comprised various kinds of bowls, jugs and lids, a couple of colour tables and a pierced pebble pendant. Stone vessels were manufactured predominantly in steatite (n=45), the favourite Cretan stone for the EBA, followed by high marble frequencies (n=40). Alabaster (n=15) comprised a category of fine vessels that also included a Cycladic import (n=1), a vessel made of local alabaster (MO 6-SF 106) and a sword pommel. Finally, there were a few vessels of unidentified stone (n=5).

The representational art (n=5) included some terracotta figurines (n=3) representing a painted bull, a female figurine and a human head, a pigeon made of chalcedony (n=1) and a limestone pyxis (n=1). Organic materials (n=5) included some small shell objects (n=4) and a bone amulet (n=1). Finally, the ivories (n=3) comprised some inlays, a cylinder and an unidentified object.

The grave equipment bears evidence for long-distance exchange networks that resulted in the acquisition of rare raw materials. It also corroborates the Mallia evidence for a high standard of Cretan craftsmanship during the EBA. The accumulation of such a quantity of artefacts certainly took place over the years and it is impossible to discern whether some of the deceased individuals received more grave goods than others. The quantitative differences between various tombs are probably related to the number of the deceased individuals per tomb.

What is compelling is the character of these objects, with particular reference to the goldwork. It has been maintained that the golden diadems represent high status prestige objects which perhaps should be interpreted as authority symbols (Soles 1988: 57). Indeed, the only other burial site where diadems were found is Mallia, clearly associated with the palatial complex. A comparison with other cemeteries outside Crete, shows that the immediate parallels are to be found in the Royal Cemetery at Ur (Woolley 1963). The numerous inlays that may have been used on furniture or clothing, the disks, strips, foils and other ornaments comprised items of adornment as do the pins, the bands and the pendants. The fact that all this metalwork cannot be directly associated with the occupants of each tomb, as it was at Ur, makes it difficult to determine whether these were indeed personal belongings, or offerings of the burying group to their dead.

Status-duty relationships are clearly indicated in the amount of energy and time spent on the burial of these people. However, post-mortem treatment seems to corroborate the argument of collective offerings on behalf of the living community. It is important to underline this difference: the inhumations at the Royal Cemetery of Ur were primary, intact and clearly associated with their grave goods; the inhumations at Mochlos are secondary, disturbed and disassociated from their grave goods. The similarities with Ur can be summarised in the acquisition of exotic materials, the fine craftsmanship, the conspicuous consumption of wealth, display of status and monumental funerary architecture.

The adoption of symbols of authority like the diadems in the EBA Cretan context may only be considered as a material correlate of increasing complexity, whether it reflects emulation, or actual political authority. The reality of a wealthy record in Crete, in combination with the rise of the palatial centres has persistently kept this bias of "royal tombs" on the island; however, on the basis of the data available, given the practice of collective interment that minimises social differentiation in the mortuary domains, it is reasonable to suggest that the occurrence of authority paraphernalia may reflect emulation rather than actual sociopolitical authority. The archaeological correlates of a palatial/urban society and authority are not evident in the Prepalatial record of Crete; but the correlates of social stratification and increasing complexity are far more obvious.

6.17.4 Spatial Arrangement

There are two levels of discussion with regard to spatial arrangement and mortuary differentiation. The first is the location of the various tomb types in the cemetery. The NW group of tombs is clearly differentiated from the MS group of graves. On the NW slope only the six large built tombs, or ossuaries are found. These are large structures with doorways and well-built jambs. Two of them contained the richest deposits, another two contained fewer objects, but of very fine quality, while the rest were plundered during the MBA. The MS group contained smaller, well-built, rectangular tombs without entrances. They are never roofed and contain objects of the same quality with the NW tombs.

Evidently, mortuary differentiation is expressed in terms of tomb location. The wealthier facilities are those of the NW, whereas the "poorer" ones are to be found on the Main Slope. The second level, concerns the internal re-arrangement of skeletons and finds within the burial domain. On this level, both tomb groups are similar since

secondary burial seems to have been the standard post-mortem procedure for all dead individuals in Mochlos.

The spatial variable in Mochlos vividly demonstrates mortuary differentiation in the Mochlos cemetery. The differences in grave equipment, funerary architecture and tomb location indicate that these were determined by the intention of the burying group to distinguish among social groups. Differentiation among specific individuals is not evident due to the collective nature of these deposits, but distinctions on a group level show that all segments of the society did not receive equal treatment.

6.17.5 Description of Mortuary Facilities: Tomb Typology and Measures of Energy Expenditure

Tomb typology has already been discussed earlier in this chapter. The sample of Mochlos tombs examined in this research (n=8) includes the whole range of tomb types apart from the rock shelters on the site. Half of the tombs (n=4) have dimensions that do not exceed 3.00m length. These are mainly the MS group of tombs that are usually 2.00x1.00m.

The NW built tombs are larger and certainly exceed 3.00m length. It is obvious that these were the facilities where most labour was spent toward their construction. The energy variable, therefore, points to distinct differentiation on that level.

6.18 Patterns of Mortuary Differentiation at Mochlos

The cemetery bears evidence for mortuary differentiation that was conspicuously displayed by means of a number of variables. It was shown how tomb location and energy expenditure in tomb construction was used to discern between the burials of the NW and the MS group.

Post-mortem treatment and quality of grave equipment did not signal this pattern of differentiation. Moreover, energy expenditure in the acquisition of foreign materials was attested in both areas of the cemetery, while the quantity of the equipment in each tomb context is not a reliable variable to measure wealth differences. As a rule, the MS tombs were smaller than the NW counterparts and could not possibly contain the same number of skeletons and amount of artefacts. However, this points to wealth differentials both on the grounds of quantity of furnishings and burial architecture (energy expenditure).

There are at least three variables pointing to differentiation in the burial domain. Another two variables level that differentiation (post-mortem treatment and quality of equipment). The pattern is far too complicated to interpret in simple terms, such as clear-cut divisions between "rich" and "poor" areas in the cemetery.

Mochlos bears evidence for a wealthy community like the one at Mallia, that had engaged in long-distance trade. The degree of craftsmanship is indicative of flourishing industries on the island as early as the EM II and the deliberate expenditure of these items in funerary contexts may be considered indicative of conspicuous consumption and status display.

Social differentiation and ranking can be postulated on the grounds of this evidence, but no clear hierarchical pattern emerges. To suggest that these tombs were the burial facilities of "royals" or "nobles" is to stretch the data too far. Social stratification in Mochlos is not as clear as we would like it to be for Crete and this constraint serves to control the palatial bias so often discussed in this chapter.

The information derived from the analysis of Mochlos, and the other Cretan cemeteries, becomes intelligible when the evidence is pulled together and studied in relation to other EBA tomb groups in the East Mediterranean.

6.19 The Emergence of Complex Society in Crete

The evolution of complex society in Crete is a compound subject for discussion because of the palatial interpretations that the archaeology of the island had to bear. In view of this it was considered best to break the subject into a number of issues that can be discussed in relation to the rise of complexity.

The first question is whether the EBA mortuary record of the island bears any hard evidence for social stratification that could support an interpretation of a "palace"-based society. The answer is in the negative. The burial evidence reflects an advanced, ranked society that had achieved a high degree of complexity, but had not proceeded into statehood. To argue the opposite is to assume *a priori* that mortuary differentiation is a direct correlate of a state society. In addition, the compelling evidence for a collective burial idiom, although a material correlate of increased complexity, does not corroborate the rise of a palatial society.

The second question is whether the settlement record provides evidence for such a development. The answer is again in the negative. The settlement agglomerations of EBA Crete, as briefly discussed in the earlier part of this chapter, do not herald such configurations. In a number of cases the putative population of settlements of EBA Crete are not very different from their Neolithic counterparts (compare Whitelaw 1983: 337-339 and Broodbank and Strasser 1991: 240). Either centuries of archaeological research on the island have failed to provide the link between the Prepalatial and the Protopalatial, or archaeologists have failed to read the record.

This problem raises another issue. The trajectory of social complexity on Crete has been considered as either an evolutionary one (Branigan 1988) or a *quantum leap* process (Cherry 1983). Clearly, if we regard the early MBA central units as palaces, then we have to accept a rapid transformation of Cretan society at the end of the EM period, through which a palatial society was born. Palaces require *quantum* leap processes because palatial sociopolitical organisation is a positive anomaly for small scale societies

(also Lewthwaite 1983). If, however, the "palaces" are re-defined on the basis of their real and evident function during the Protopalatial period, then the trajectory seems to be rather evolutionary. What we are dealing with is collective central units designed to accommodate social storage and regulate social wealth. If we approach the subject from this angle the archaeological record of both the Prepalatial and the Protopalatial periods becomes far more intelligible.

The EBA settlement record corroborates the argument for the rise of collective storage units and provides the link between the two periods. Myrtos (Warren 1972; Tenwolde 1992) is a fine example of a Prepalatial settlement where communal storage is the main activity. It may be regarded as a "proto-palace", in the sense that it was a predecessor of the larger central units that were built in Knossos and Mallia in the Protopalatial period. The Prepalatial settlement record, therefore, indeed heralds the developments of the Protopalatial period if we eliminate the conventional "palace" bias.

Similarly, the burial record demonstrates controlled mortuary differentiation. Despite a vivid manifestation of wealth there is constant control over the demonstration of inequalities in the burial domain through the collective nature of mortuary deposits. Status display in these contexts perhaps hints at managerial elites which might have played a significant role in the acquisition, circulation and distribution of social wealth. However, sociopolitical control and authority are not evident. The formation of such interest groups as regulatory mechanisms for social wealth led to the central unit configurations of the Protopalatial period. An evolutionary trend can be seen in such a trajectory of development.

Indeed, only Crete could be the appropriate candidate for such an evolution in the Aegean. Despite the relatively small size of each settlement, Crete due to its size, is the only island of the Aegean that shares common features with the mainland, such as extensive fertile areas for cultivation for instance. Well populated in the EBA, Crete witnessed the rise of social groups that embarked on international exchange as early as

the EM II period. Entrepreneurship must have played an important role before the emergence of the Cretan palaces as the sole regulators of such transactions.

The notion of a collective management of wealth must have been the product of social selection. The society clearly invested in a model of social organisation that was extremely productive for all segments of the society. The homogeneity of the Cretan record attests to the success of this model. This combination of private entrepreneurship and collective management led Crete to cross the threshold of complexity and create the preconditions necessary for the birth of a palatial society in the later BA. The collective idiom attested in both the mortuary and settlement record of the Protopalatial period suggests a model of sociopolitical organisation that fits the data available. Until more data becomes published the evidence from Crete will remain open to debate.

Chapter 7

A Cross-cultural Synthesis

In the concluding sections of the previous chapters discussion of individual patterns of mortuary differentiation and the trajectories of social complexity in each of the three areas examined provided both a temporal and regional perspective of EBA societal configurations of the East Mediterranean basin. In the following pages it becomes apparent how these perspectives provide some useful insights into the way these societies were organised.

For the purposes of the cross-cultural synthesis the EBA is divided into three conventional phases, the early, the middle, and the late EBA. The early EBA refers to ca. 3500-2700 BC, the middle EBA to ca. 2700-2300 BC, and the late EBA to ca. 2300-1800 BC. In each of the three areas this chronological division may encompass more than one period (see Chronological Chart).

7.1 The early EBA (3500-2700 BC)

The early EBA in the southern Levant includes the EB I and the EB II period. In Cyprus, this phase mainly refers to the MChalco period, while in Crete the early EBA refers to the EM I period. A cross-cultural synthesis of the sociopolitical developments in each area indicates that this is a formative phase.

The early EBA in the southern Levant is a phase of major change in social and political formation. This change is evident in the mortuary record of the area. The EB I

period at some sites with good stratigraphic control has yielded evidence for the use of communal chamber tombs which accommodated a small number of, possibly, kin individuals (see Chapter 4, 4.17.1). Some of these individuals comprised secondary, disarticulated burials. With the advent of the urban EB II period, however, a marked change in the burial idiom, which continues into the succeeding EB III period, becomes attested. Chamber tombs acquire considerable dimensions (see Chapter 4, 4.12.5), and even monumental built tombs are used at some sites (see Chapter 4, 4.17.5) to accommodate an enormous number of skeletons. These multiple, successive burial programmes have been characterised by the author as collective interments, in order to distinguish from the small communal tomb groups of the EB I period. Grave inclusions do not point to major social distinctions in the mortuary domains of either the EB I or the EB II-III periods, but methods of disposal and tomb architecture attest to a distinct change in the execution of mortuary programmes between the respective periods.

In view of the manifestation of small scale urbanism in the southern Levant during the EB II-III periods, when most tells yield evidence for an urban occupation, the practice of collective interment becomes an established correlate of increasing sociopolitical integration and complexity for some Levantine sites.

MChalco Cyprus has provided evidence for an expanded settlement pattern compared to earlier periods. Burial programmes indicate the predominant use of pit graves to accommodate single inhumations, but also the use of more elaborate shaft graves for multiple, contemporary interments of a small number of individuals (see Chapter 5, 5.22). Grave inclusions attest to marked social differentiation in mortuary domains through the manifestation of unequal access to resources (Chapter5, 5.21.3). There seems to be a dual pattern of both single and communal interments within the boundaries of settlement sites (e.g. Kissonerga). However, there is also evidence for the use of formal cemetery grounds where a communal mode of interment is the norm (e.g. Souskiou-*Vathyrkakas*). This variability between intra-mural and extra-mural, cemetery

burials, and the dual pattern of single and communal modes of interment corroborates the evidence for the existence of small village clusters of variable size and organisation. This variation in burial programmes points to a loosely integrated society where different communities exhibit different patterns of mortuary ritual. In comparison to the early EBA southern Levant, where formal cemetery burial of communal or collective nature is the norm, Cyprus seems to oscillate between a standardisation in the execution of burial programmes and an individualistic manifestation of social inequalities in the burial domains. This marked display of inequality evident in most aspects of mortuary variability points to a low degree of social cohesion in certain Cypriot communities where individual tomb groups indicate sharp differentiations. This is a piece of evidence that contrasts with the contemporary Levant where a greater degree of social cohesion in urban communities is associated with the manifestation of minimal differentiation in the EB II-III burial domains.

The early EBA in Crete (EM I) has yielded evidence for a number of settlement sites where a communal mode of production and social storage were practised (Chapter 6, 6.1). Death practices indicate the use of both rock shelters and elaborate built tombs for burial. Some of the EM I rock shelters were already in use in the FN period to accommodate variable numbers of individuals (e.g. Skaphidia). Built tombs which accommodate multiple, successive inhumations appear in various parts of the island (e.g. Mesara Plain, Mochlos). In both cases - cave facilities and built tombs - a formal cemetery ground is used for the inhumations of the deceased members of the Cretan communities. The collective mode of interment in the built tombs points to the existence of extended social groups on the island, perhaps similar to the EB II-III urban groups of the southern Levant, but of different nature. Differences in mortuary architecture and death ritual in both areas attest to marked regionalism. However, this regionalism does not seem to present an obstacle to social and political integration as perhaps it did in Cyprus.

To summarise, the early EBA in both the southern Levant and Crete is a phase of emergent social and political integration and increasing complexity. This development is evident in the burial records of both areas through the identification of the following correlates: a) use of formal disposal areas, b) collective mode of interment, c) intentional display of minimal social differentiation in the burial domains, d) formality and standardisation of burial programmes. These correlates indicate a "demise" in individualism and point to a greater degree of collective expression as a result of increasing sociopolitical cohesion. In Cyprus, the conflicting evidence for both a presence and an absence of these correlates at different sites points to variable degrees of sociopolitical integration among the Cypriot communities. Deliberate resistance to sociopolitical integration and complexity by some Cypriot communities may have resulted in the manifestation of these two opposing sets of mortuary practices, that of communal burial in formal disposal areas and that of single intra-mural inhumations in the settlements. The co-existence of both sets is indicative of variable degrees of resistance to complexity from site to site within the same period in Cyprus.

7.2 The middle EBA (2700-2300 BC)

The middle EBA in the southern Levant (EB III) is an established urban phase for most sites in the area. Collective inhumations in mortuary facilities of considerable dimensions continue to be the norm in accordance with the urban character of the sociopolitical organisation (e.g. Jericho, Bab edh Dhra). Cemeteries become even more extensive and grave inclusions increase in relation to the number of the inhumed individuals per tomb (Chapter 4, 4.24). In Crete (EM II), built tombs with collective interments also become the norm (e.g. Mochlos, Mallia, Gournia, Mesara Plain). As in the southern Levant, the nature of grave furnishings yields evidence for increased foreign relations and craft specialisation. In other words, the correlates of increasing complexity

are even more emphasised during this phase both in the southern Levant and Crete. In Crete, however, there is ample evidence for considerable variation in several aspects of mortuary variability such as funerary architecture, methods of disposal and grave furnishings (Chapter 6).

For Cyprus (LChalco/Philia) this is a period of qualitative change. Changing patterns of mortuary ritual and symbolism in burial practices indicate the replacement of old symbols by new ones to signify social differentiation. The chamber tomb is introduced as the new element in tomb architecture (e.g. Kissonerga). Chamber tombs contain either single or multiple inhumations associated with different sets of grave inclusions than those of the earlier periods (Chapter 5, 5.21.3). It is of note that the chamber tombs are used for a certain segment of the population and that the majority of the deceased are still inhumed in pit graves. Although some of the chamber tombs contained more than one skeleton, it is clear that most of these domains accommodated single inhumations. The notion of the communal tomb is only emerging at the end of this period in Cyprus (Philia tombs). In LChalco period chamber tombs are still confined in the settlement. However, the evidence from Kissonerga-*Mosphilia* hints at the use of the site as a cemetery during the LChalco period. In addition, formal Philia phase cemeteries appear on the island (e.g. Sotira-*Kaminoudhia*). Although the chamber tomb was designed to accommodate an increased number of individuals, its use in Kissonerga seems to signify differential status in relation to the pit burials at the site, rather than major structural change in the sociopolitical format of the community.

In other words, the evolution of the chamber tomb and its associated grave kit is used as a means to display social distinctions, rather than minimise them in a communal context. However, the increased number of chamber tomb burials in formal disposal grounds points to an idiosyncratic expression of a communal idiom by the social groups using these facilities. The key point is that by ca. 2400 BC, Cyprus only begins to display the archaeological correlates of increasing social integration and complexity. Apparently,

the intentional manifestation of social inequalities in the burial contexts continues to provide a mechanism of opposition to communal expression and social cohesion.

To reiterate, the middle EBA is characterised by an even greater divergence in the trajectories of sociopolitical complexity in each of the three areas examined. For the southern Levant this phase marks the establishment of greater social and political cohesion epitomised in the urban settlement configurations of the area and associated with the formality and standardisation of collective burial programmes (Chapter 4.24). Intra-cemetery variability is minimal in terms of tomb architecture, methods of disposal and grave equipment. In Crete, the collective mode of interment and the use of formal disposal areas point to greater levels of social integration, but intra and inter-cemetery variability is higher than in the Levant (Chapter 6). In this respect, social cohesion in Crete is filtered through the operation of specific social, possibly elite, groups. The presence of these social groups must have functioned as a disrupting mechanism to greater social and political integration. Apparently, the absence of any discernible form of sociopolitical organisation in Crete during this phase is due to the existence and operation of such social groups. Finally, Cyprus manifests very low levels of social integration. Social differentiation in the burial domains continues to be displayed as in the early EBA, and the existence of sharply differentiated social groups can be postulated for both periods (Chapter 5.23).

To summarise, the middle EBA indicates higher levels of sociopolitical integration in the southern Levant and increased complexity in sociopolitical organisation. In Crete, increasing complexity is associated with lower levels of sociopolitical integration in comparison to EB III urban Levant. A higher degree of social differentiation in the burial domains of the island points to a non-urban, yet highly complex Cretan society. In Cyprus, vertical social distinctions in the burial domains point to increasing complexity, but low integration, which seems to function as a counter-mechanism to more complex forms of sociopolitical organisation.

7.3 The late EBA (2300-1800 BC)

The later part of the EBA includes several periods in Crete (EM III-MM I) and Cyprus (EC I-EC III/MC I), and the southern Levant (EB IV-MB I/IIa). For the latter area, only the EB IV period is discussed. It is of note that while for both Crete and Cyprus this is a phase of increasing sociopolitical complexity, for the Levant it is a period of decreasing urbanism and complexity.

The late EBA in the southern Levant is characterised by a demise in urban occupation. Recent evidence indicates that change in settlement and subsistence patterns may not necessarily imply lower levels of complexity, but rather a fluctuation in the trajectory of sociopolitical development in the area. The burial record demonstrates a number of distinct changes in most aspects of mortuary variability. Collective interments are replaced by single inhumations and there is a clear distinction between articulated and disarticulated skeletons (e.g. Jericho). The nature and the quantity of grave inclusions undergoes a series of changes, too (Chapter 4).

Tomb architecture does not change since chamber tombs are still used. However, there is evidence for social differentiation on the basis of different chamber tomb types (e.g. Jericho, Tell Ajjul). Contrary to what was seen before, mortuary differentiation is vividly displayed in the EB IV domains. On the basis of the correlates of increasing social integration and complexity established for the southern Levant, it becomes immediately apparent that the replacement of the earlier collective mode of interment by a single-burial idiom comprises one significant indicator of sociopolitical change. Another indicator of this process is the increased manifestation of social differentiation in these contexts. On the other hand, formal disposal areas are still used for burial during the EB IV, and the execution of burial programmes is still formal and highly standardised.

The presence/absence of the correlates of social integration and complexity in EB IV burial contexts indicates that while there is a regression in urbanism (absence of collective interments, maximisation of social differentiation), this is not necessarily the

case for complexity. Rather, there is a qualitative change in the nature of complexity. The evidence for high levels of mortuary variability indicates low levels of social integration and points to the fragmentation of what was before an urban society. However, the degree of social differentiation in burial domains indicates that the society was complex, if not urban. This is an important point in view of recent evidence which shows that change in the subsistence and settlement patterns during the EB IV period led to the formation of complex pastoralist and rural communities in the area. The burial evidence corroborates the evidence for the existence of distinct social groups that deliberately differentiated themselves from each other in their respective tomb groups. On the grounds of such evidence, and in conjuction with settlement and subsistence data, it may be suggested that the trajectory of complexity in the EB IV becomes less urban and more elite-oriented. The evidence for high levels of economic inequality among the different social groups, attested in the burial domains through unequal access to resources, points to the operation of elite groups in the area during the late part of the EBA.

The funerary contexts of Crete during the same period (EM III-MM I) have also yielded evidence for the existence of elite groups on the island, though within a setting of increasing complexity (Chapter 5). Mortuary practices indicate the established use of elaborate built tombs to accommodate collective interments together with the use of other facilities such as burial pithoi and clay coffins (*larnakes*) for a certain segment of the population (e.g. Mallia). Extensive disposal grounds are occupied either by built tombs (e.g. Mochlos, Mallia, Mesara Plain), or by burial pithoi (e.g. Sphoungaras). In some cases, pithoi and *larnakes* are found inside the built facilities (e.g. Mesara Plain, Mallia). Intra-cemetery variability is minimal, but inter-cemetery variability is substantial and indicates economic and social inequalities. Collective interment points to the beginnings of an urban society in late EBA Crete, but the apparent wealth differentials among the various tomb groups indicate that considerable distinctions existed among the different social groups on the island. Another indicator for the

identification of distinct social groups in Crete is the significant regional variation in tomb architecture. It points to less social integration in a society that was otherwise progressing along a trajectory of increasing complexity. The association between certain built tomb cemeteries and the first "palatial" units on the island (e.g. Mallia) during the MM I period is indicative of the relationship between certain social groups and the emergence of centralised economic and administrative mechanisms (Chapter 6.9). As EB IV southern Levant, Crete becomes an elite-oriented society, but the evidence for the emergence of the first "palatial" units on the island shows increasing sociopolitical integration among the various elite groups, as opposed to the fragmented nature of EB IV Levantine communities.

In Cyprus, the late phase of the EBA witnesses a number of changes in the burial record. A significant change is the consistent use of formal disposal areas outside the settlements (e.g. Bellapais, Lapithos), as opposed to the intra-mural burials in settlements of the earlier periods. In terms of funerary architecture the use of chamber tomb facilities becomes the norm for the whole of the Bronze Age in Cyprus. Single interment is replaced by a communal burial idiom that requires multiple inhumations of small numbers of individuals in each domain. Mortuary variability is minimal within the cemeteries, although as at EB IA Bab edh Dhra in Transjordan there is evidence for gender differentiation. Economic inequalities are still apparent in EC I-II cemeteries through the manifestation of unequal access to copper resources in particular. However, mortuary variability is generally low and indicates a tendency to minimise that differentiation. EC III-MC I tombs indicate distinctions on the basis of gender, but social differentiation is now emphasised by the use of different methods of disposal. Economic inequalities remain at the same levels as in the EC I-II periods.

The view from EC cemeteries bears some similarity to some EB I contexts from the southern Levant (e.g. Bab edh Dhra). In both areas, the evidence for communal burial in formal cemeteries which do not exhibit significant levels of variability points to

a developing trajectory of complexity. In comparison to the evidence from Bab edh Dhra, the data from EC cemeteries indicate a higher degree of economic inequality which obviously continued to function as an opposing mechanism to greater social integration.

The contemporary (EB IV) Levantine contexts are very different from their Cypriot counterparts, thus pointing to levels of greater social cohesion in Cyprus during this era than in the Levant. On the other hand, the contemporary (EM III-MM I) Cretan evidence is vastly divergent from the Cypriot one in that it indicates both the emergent, complex character of Cretan society and the establishment of empowered social groups.

Within the context of Cyprus, the marked changes in mortuary practices encompass some of the attributes of increasing social integration and complexity, like the use of formal cemetery grounds and the uniformity and standardisation in the execution of burial programmes. Economic inequalities are minimised in these contexts since they cannot be positively correlated to other aspects of mortuary variability. The conspicuous minimisation of social differentiation in the Cypriot contexts is of a very different character to minimisation in the EB II-III Levantine contexts. The collective character of the latter shows that this *ethos* may have been used to mask actual inequalities in the society, whereas the communal nature of Cypriot burials indicates that this *ethos* was at least partly a result of the size and scale of the social and political configurations on the island, much like the EB I configurations of the southern Levant.

Evidence for increasing social integration and complexity in Cyprus in the later part of the EBA comes from the study of Cypriot cemeteries. However, the communal character of EC burials points to the existence of small-size societal groups that did not conspicuously distinguished themselves like the EM III-MM I or the EB IV Levantine ones. It is hard to envisage how these small scale societal configurations can be characterised as "elite" in nature and orientation.

To summarise, the late phase of the EBA witnesses a disruption in the urbanisation process of the southern Levant, yet the trajectory of complexity is clearly

not interrupted. The evidence points to the qualitative change of previous sociopolitical configurations and fluctuation in the trajectory of sociopolitical development. For Crete this is a period of increasing complexity evident in the establishment of empowered elite groups which conspicuously display their wealth and foreign contacts. The rise of central economic and administrative units in the MM I period, the so-called "Minoan palaces", points to the idiosyncratic nature of social integration and complexity in Crete which was continuously filtered through the operation of these distinct social groups. For Cyprus this is a period of increased social cohesion evident in several aspects of mortuary variability. However, some of the most significant correlates of sociopolitical complexity are conspicuously absent (e.g. increased social differentiation, or collective interment). Within the framework of the East Mediterranean Cyprus seems to represent a divergent case in that it does not exhibit the usual correlates of complexity. However, a cross-cultural perspective in the examination of Cypriot society indicates that some of the traditional correlates of complexity (e.g. social stratification) may not necessarily be the appropriate criteria to detect complexity in a number of societies like Cyprus. As was shown, some of the alternative criteria used in this research (e.g. evidence for formal cemetery grounds, minimisation of mortuary differentiation, collective interments) effectively helped establish a set of archaeological correlates for the efficient detection of growing complexity in areas like the southern Levant and Crete. The evidence for some of these attributes of complexity in Cyprus attests to increasing sociopolitical integration which, however, does not lead to any radical transformation of the society towards more identifiable forms of complex sociopolitical organisation.

To reiterate, the cross-cultural examination of Crete, Cyprus and the southern Levant establishes the view that the nature and the idiosyncrasies of each society determine the attributes of complexity in each of them. In this research it was shown how different sets of correlates can be used to describe differential trajectories to complexity.

In particular, collective interment was established as a significant correlate of urbanism since some urban societies tend to exhibit higher levels of sociopolitical integration by masking social inequalities and minimising differentiation in their mortuary domains. Some EB II-III Levantine sites provide good examples of such societies. Similarly, social differentiation in most aspects of mortuary variability was shown to be a plausible correlate of elite-based societies, like EM III-MM I Crete. In such societies, the elite groups tend to display social distinctions and make a conscious effort to distinguish themselves in their burial contexts by manifesting distinct patterns of mortuary differentiation. Finally, communal interment can be considered as a correlate of small-scale societies that have not yet crossed the threshold of high sociopolitical integration and complexity. EC Cyprus provides a fair example of such a society where the size and scale of social and political configurations dictated a marked opposition to complexity. This dialectic relationship between the dynamics of sociopolitical change and mechanisms of resistance is evident throughout the EC record. The absence of any discernible form of sociopolitical organisation in EBA Cyprus corroborates the argument.

Conclusions

Two of the major aims of the present research relate to the validity of the mortuary evidence to provide a methodological tool for monitoring sociopolitical development and change, and the cross-cultural examination of divergent trajectories to complexity using this tool. In the previous chapters it was seen how the systematic study of ancient cemeteries can reveal information about the nature and organisation of past societies. Mortuary variability was used to detect patterns of social differentiation and changes in burial symbolism and ritual. These patterns were subsequently examined in relation to their wider social and political context. The overall information was then used to discuss trajectories of sociopolitical development.

One of the focal points of this thesis was the study of complexity in societies which presented divergent characteristics from the traditionally acknowledged complex societies of Egypt or Mesopotamia. This research focused on a number of small-scale, "middle-range" societies which did not exhibit clear cut levels of social and political formation, and complexity. It was, therefore, deemed necessary to adopt a cross-cultural perspective in order to facilitate the identification of differential correlates of complexity.

The results of this approach lead to the following conclusions:

a) Ancient societies demonstrate variable degrees of complexity in their sociopolitical organisation as a norm. The degree of complexity in each society is determined by the nature and the scale of the society itself.

b) Cross-cultural generalisations concerning the development of complexity in ancient societies cannot be made because of the highly idiosyncratic manifestation of complexity in each society.

c) "Middle-range" societies tend to display lower levels of complexity since they do not exhibit the usual archaeological correlates of complex sociopolitical organisation. For this reason it is necessary to develop flexible research designs that allow for the employment of alternative sets of correlates.

With particular regard to the EBA East Mediterranean region it becomes apparent that most societies can be characterised as small scale, or "middle-range" in character. In view of this, the manifestation of complex sociopolitical organisation in such societal configurations is obscured and requires the use of appropriate research schemes to detect it. Although it is beyond the scope of this thesis to discuss sociopolitical developments in the East Mediterranean in the later part of the Bronze Age, it is obvious that the picture of EBA societal configurations is revealing in this respect. Specifically, it is of note that the Middle and Late Bronze Ages in the southern Levant witness the re-emergence and establishment of urbanism in the area, and the adequate manifestation of attributes of large-scale state formation. In Crete, the establishment of the first "palatial" units leads to the subsequent modification of these centralised units into institutions of political control and authority. In terms of sociopolitical development the rise of palaces in Crete comprises a fair example of small scale state formation. Finally, in Cyprus the late Middle Bronze Age witnesses the beginnings of the international articulation of the island, and the Late Bronze Age yields evidence for an elite-based society with complex sociopolitical institutions.

All three areas undergo rapid social and political change in the later part of the BA resulting in the formation of a number of interacting small scale state societies. The pace and the dynamics of this change can undoubtedly be traced in the earlier Bronze Age when the foundations of these processes were laid.

It is hoped that the present thesis has adequately demonstrated how archaeological research on social evolution and change can be implemented using a distinct part of the archaeological evidence, the burial record. It is also hoped that future

research will encompass the study of a greater number of societies from the East Mediterranean and other regions as well, and that future archaeological fieldwork will further elucidate our knowledge on prehistoric social systems.